

# ( SUSTAINABILITY REPORT 2011 )









BA – Bahia state  
ES – Espírito Santo state  
MG – Minas Gerais state  
MS – Mato Grosso do Sul state  
RJ – Rio de Janeiro state  
RS – Rio Grande do Sul state  
SP – São Paulo state



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- ✓ Topics related to Sustainability Goals and Targets
- ★ Topics related to Materiality Matrix

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## The value of forests

As a contribution to the initiative of the United Nations International Year of Forests, we invited two experts from organizations that are involved with the forestry sector to present their views on forests and their value

### Forests – too precious to lose

WWF aspires to a future where humanity's global footprint stays within the Earth's ecological limits and the planet's natural resources are shared more equitably.

Forests are vital to this vision. They pulse with life, harbouring an enormous wealth of biological diversity. They sequester carbon from the atmosphere. Forests provide subsistence foods, medicine and materials for an estimated 1.6 billion people who live in and around them. They are intrinsic to the cultural identity of many indigenous peoples. Forests protect us from floods and soil erosion. They also provide us with natural resources, such as timber for furniture and construction, fuelwood for heating and cooking and paper fibre for packaging, learning and hygiene. Forest products are renewable and, when sourced from well-managed forests and plantations, tend to have a smaller footprint than fossil fuel-intensive alternatives like steel, concrete, and plastic.

#### Halting forest loss to maintain forest values

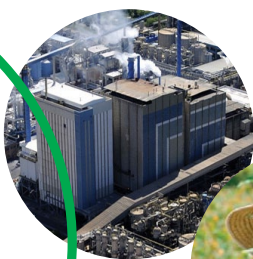
According to the United Nations Food and Agriculture Organisation's most recent statistics, every minute an area of forest is lost equal to the size of 36 football fields. WWF advocates "Zero Net Deforestation and Forest Degradation (ZNDD) by 2020" as a target that reflects the scale and urgency with which threats to the world's forests and climate need to be tackled.

Achieving ZNDD by 2020 would halt the depletion of forest-based biodiversity and ecosystem services, including critical habitats for iconic species such as tigers and gorillas. In advocating this target, WWF stresses the need to urgently reduce loss of natural forests to near zero. Thus in the net accounting for the target, plantations do not offset natural forest losses, as many values are diminished when plantations replace natural forests.

ZNDD by 2020 would also see the world's forests contributing to an early peak and decline in greenhouse gas emissions, transforming them from a net source of emissions to a net carbon sink. If we do not move quickly to eliminate emissions from forests, and cap industrial emissions, we face the prospect of runaway climate change. In that scenario, many forests will not survive and the carbon they store will be released into the atmosphere, further accelerating climate change in a disastrous downward spiral.

#### Can we stop forest loss and meet global demand for food, fuel and fibre?

WWF's Living Forests Report<sup>1</sup> explores opportunities to shift to a new model of sustainable forestry, farming, and consumption that will enable the human population to live within the earth's carrying capacity. The report concludes that, with better governance, the world would



have enough productive forest and land available for agriculture to meet current demand for food, fuel and fibre without further conversion of forests.

However, as we get closer to 2050, maintaining a near zero deforestation rate will require forestry and farming practices that produce more with less land, water and pollution, and new consumption patterns that meet the needs of the poor while eliminating waste and over-consumption.

### A role for plantations

The forest sector has two broad avenues for meeting projected higher future demand for forest products - expanded logging in natural forests or intensified wood production in plantations. Plantations generally have higher timber yields per hectare, than natural forests, and can, at least in theory, make more room on the planet for conservation of natural forests.

However, plantations are often criticised for their environmental and social impact. Without significant changes in policies and practices, the expansion of plantations in many regions will continue to cause controversy by threatening forest dependant peoples and high conservation value areas.

By contrast, plantations that do not replace natural habitats and help to recover over-grazed and degraded land could help build a greener future economy. Such plantations can potentially help supply the wood needed to meet future demand for timber, fibre and bioenergy without further depletion of the world's

natural capital. Commercial plantation forestry can also support conservation and restoration of natural forests within multi-functional land-use mosaics. In Brazil, for example, several plantation companies are supporting natural forest restoration and the creation of ecological corridors in highly fragmented remnants of the Atlantic Rainforest.

The premise that plantations can contribute positively to sustainable development is the cornerstone of the New Generation Plantations Project, a platform for WWF, companies and government agencies to work together to define pathways to better plantations. The term "new generation plantation" describes an ideal form of plantation that maintains ecosystem integrity, protects high conservation values and is developed through effective stakeholder participation, while contributing to economic growth and employment. The Project aims to identify and promote practices that are aligned with this concept.

### Saving forests – a major 21<sup>st</sup> century challenge

Forest loss must be halted before it is too late for forest peoples, the climate and endangered species and ecosystems. This requires urgent action on many fronts: stronger financial incentives to keep forests standing; better stewardship and governance of forests; better land-management and more efficient farming outside forests; and strategies to change consumption patterns that are wasteful, excessive or have a heavy ecological footprint. The planet will be healthier if build up valuable forest capital, not run it down.

1. See [www.panda.org/livingforests](http://www.panda.org/livingforests)
2. [www.newgenerationplantations.com](http://www.newgenerationplantations.com)

**Rod Taylor**

Director, Forests, WWF International

## Forests and their value

At a time of rapid climate change, the importance of forests and associated ecosystems is increasingly urgent. The link between forests and climate can be measured, but it can also be felt; their existence is refreshing, while their absence is sweltering. Where riparian forests cease to exist, rivers dry up and their waters become polluted. If we do not protect river sources, we can very easily end up without water. If forests no longer cover slopes, rain will wash away all that stands in its path, including houses built on vulnerable sites. If we lose our forests, we will no longer benefit from their environmental services, such as carbon capture and storage, water conservation, biodiversity, or the beautiful landscapes and trees that shelter the fauna.

Brazil houses some of the largest and richest forests in the world. This is both a great privilege as well as an enormous responsibility. What we do with our forests will have consequences not only for Brazil but for the entire planet. The two major Brazilian tropical forest biomes illustrate the complexity of the ecosystem challenges we face. In the Amazon Rainforest, we still have significant areas of primary forest which are often subject to deforestation. In the Atlantic Rainforest there is little remaining primary forest. Most of the forest here is secondary growth at various stages of regeneration, requiring care and support in restoration. More than 85% of Brazilians live in the area where these two biomes exist. This fact by itself should be sufficient to show the importance of our forests and the need to protect them.

We need to be more attentive and exercise greater care in planning our homes and landscapes. In planted forests, as well as other crop areas, it is important to plant species in mosaic landscapes, ensuring a balance between areas of intense use for economic production

and native areas. The goal must be to achieve sustainability. Without prompt action, clear alignment and projects that seek environmental balance as a goal, we will be wasting our best and perhaps last opportunity to set Brazil on a sustainable path.

It seems strange that these words have to be repeated again on the occasion of the International Year of Forests and on the eve of the Rio+20 summit in June 2012. However, the fact is there is still no plausible explanation why at a time when almost everyone is declaring that they understand the importance of nature and its conservation, actions are still so scarce to reverse the scenario of environmental degradation that is now in place worldwide.

Several industries, especially forestry, have already adapted to the circumstances, and sustainable practices have been adopted. It is hoped that others will follow suit and improve their awareness towards the environment. It is essential that good practices are publicized, built upon and expanded. Forest plantations have learned from past mistakes and now play an important role in conserving indigenous forests, either through conservation practices and monitoring of large native areas, or through exploitation of tree plantations as a source of raw material for manufacturing products for which only native trees were previously used. Furthermore, improved management techniques for tree plantations will greatly improve that contribution to preserving native forests.

Last but not least, let us recall a basic general fact about forest conservation. There is no point in accumulating information and knowledge about forests and their value, if they hold no value in our hearts.

### Miriam Prochnow

Public Policy coordinator for the Environment and Life Preservation Association (APREMAVI) and executive secretary of the Brazilian environmental group Diálogo Florestal (Forest Dialogue)



# Message from the management

In 2011 the global economic downturn started in the last half of the year affected demand and prices of key commodities abroad and mainly exchange rates in Brazil, strongly undermining Fibria's financial performance as it is mostly an exporter. Fortunately, this negative impact could be partially downplayed by our initiatives early in the year, seeking to cut costs and secure operating excellence.

As one of these initiatives, we completed the sale of CONPACEL, KSR and the Piracicaba Unit, thus consolidating the focus on pulp business and nurturing adjustments to our capital structure. We also decided to invest in production processes and in modernization of the installed structure, as in the case of the new bleaching line of Plant A, implemented in the Aracruz Unit in Espírito Santo. We also deepened the exchange of experiences and knowledge of different operating Units, with considerable productivity gains both in forest and in plants. In the second year of Fibria's activities, we had new and important wins, despite the unfavorable scenario.

We were granted the license to install project Três Lagoas II, at the Unit located in Mato Grosso do Sul and moved on to develop our forest areas so that we are poised to expand the production as soon as favorable market conditions return.

As it comes to technology highlights, our researchers developed new and more productive genetic materials for cultivation of eucalyptus to be introduced in all company plantations beginning 2012. We also developed an unprecedented biotechnological tool for the forest sector targeting the early identification of superior eucalyptus clones, whereby we anticipate projected productivity gains and quality of wood. We were also granted a license to start experiences with not-for-profit genetically modified trees out of our forest areas. In the upcoming years, we will continue to invest in this knowledge realm, in line with our mission as a company – develop the forest business as a renewable and sustainable source of life.

We believe that some of Fibria's key advances in 2011 regard our relations with stakeholders. We developed a closer relationship with the social players of all the regions we are active, either with commitment programs, community meetings, dialogues or regular visits to neighboring communities. In association with INCRA, the government of Bahia and the Landless Workers' Movement (MST), we developed a Sustainable Settlement project expected to be implemented soon in areas occupied by MST, benefiting more than one thousand families of farms. A similar project developed in association with public entities of Bahia and Espírito Santo, the Territorial Rural Development Program (PDRT) has benefited 760 families of 24 communities self identified as members of quilombola communities in both states. We will also hold an important meeting in Vitória (ES), Constructive Dialogues, when we will listen to representatives from various sectors of the society which keep relationship with the company.

Still at the relationship level, Fibria played its role as a citizen at various forums over the year. We actively participated in all the important debates and decisions involving the entities we are a member of, and national and international corporate and industrial associations. An example was our participation in the Brazilian Forest Dialogue, which designed and presented to congressmen a bill including 16 points on the Forest Code, in the name of companies of the industry and environmental NGOs. At the international level, a highlight was the World Business Council for Sustainable Development (WBCSD), which gathered more than 100 leading global companies in their related industries. We also took part in The Forests Dialogue (TFD) – a global forum on sensitive matters on forest, which brought together representatives from companies, NGOs, indigenous communities and multilateral entities.

We continued to seek new certifications for our forest and industrial operations, as in the case of the efforts made at the Aracruz Unit to obtain the certification by the Forest Stewardship Council® (FSC®). In May, we com-

pleted the first stage of the SmartStep program, supervised by the Forest and Agricultural Management and Certification Institute (IMAFLORA).

A highlight of the initiatives seeking environmental conservation was our participation in the Agreement for Restoration of the Atlantic Forest and in the project Ecologic Corridor of the Paraíba Valley, whereby the company invests in restoration of native areas in the states it is active, namely SP, ES, BA and MG. In 2011, Fibria started restoring 3,500 hectares of Atlantic Forest. Up to 2025, we have the challenge to start restoring 40 thousand hectares in own areas with the assistance of local communities, responsible for collecting seeds, keeping community nurseries and monitoring areas being restored, which allows generating income and improving quality of life.

During 2011, following a recommendation by our Sustainability Committee and delivering on our long-term commitment, we worked on setting goals for the next 13 years. As a result of successive rounds of discussion over three months, involving 40 professionals of all areas of the organization with the support of specialists from UNISINOS, in Rio Grande do Sul, we elected six targets for our sustainable strategy up to 2025 .

Worth noting is that all these achievements stemmed from the dedication and talent of our professionals and of all people who closely contributed to meet our objectives. We well know the value of our team and want to

keep and develop this asset: in the last year, we intensified therefore the Performance Management process, seeking to recognize talented professionals and prepare new leaders. We announced the Management Beliefs which should guide the attitudes of all our employees and which will certainly help build a company worthy of people's admiration.

Having a sustainable strategy in place, as it turned out evident in 2011, is especially important at a moment of market downturn. Our profit margins fell in the year as a result of the unfavorable scenario in Europe and in the United States, still riddled with uncertainties, and repercussion in other economies. All this reaffirms the need for us to widen our competitive edge to keep our leadership in the industry.

We are aware that the upcoming years will be very challenging in the global scenario of business in connection with the weakening of traditional pulp markets, crisis in global leadership and climate changes, among other factors. In this scenario, we present the main challenges of each area, as viewed by officers on the following pages. Despite an unfavorable scenario, we believe that Fibria is well set to face these transformations and move on in its way towards sustained growth, sharing richness and being admired for its value.

Finally, we would like to say thank you for the confidence of our employees, shareholders, customers, suppliers, society and other stakeholders.

**Marcelo Castelli**  
CEO



**José Luciano Penido**  
*Chairman of the Board  
of Directors*





## OUR COMMITMENT TO SUSTAINABILITY

### **João Felipe Carsalade, Director of Commercial and International Logistics**

*"The global pulp market is going through a challenging time, with falling consumption in Europe and the United States, since the second quarter of 2011. Due to our solid client base, however, we are prepared to face this unfavorable situation with continued investment. During the year we strengthened our logistical advantage by signing a contract to build twenty ships that will be used exclusively in shipping our products. It is a new concept, with a twenty-five year lease for vessels that are specially designed to meet our needs. With this fleet, which will be delivered in September 2012, our products will reach our clients in a more competitive manner, strengthening the attributes that are essential to loyalty in our industry: high quality products, delivered strictly in the volumes and deadlines agreed. Another distinguishing feature of Fibria is the concern with sustainability, which is already part of our corporate culture. This attitude will be crucial in the coming years in the pulp industry, given the growing interest of consumers for certified products. In this sense, our challenge for 2012 is to adapt operations in Espírito Santo and Bahia to the requirements of certification, a work that is underway with the SmartStep program."*

### **João Adalberto Elek Jr, CFO and Investor Relations Officer<sup>1</sup>**

*"Among the many challenges faced and overcome in 2011, emphasis must be given to the improved debt profile, obtained with the issuance of international bonds worth US\$5 billion, confirming that the market sees us with a good credit rating. Like everyone, we suffer the effects of exchange rate fluctuations and global economic crises, but we maintain our trajectory of debt reduction. Today the average maturity of our commitments is a little over six years, a comfortable period, since it is equivalent to the growth cycle of our forests. Another important achievement was the attraction of new investors thanks to the company's high potential of return on bonds in a backdrop of overall decline in world stock markets. We attract considerable resources from global funds and pension funds in Brazil, Peru, and especially Chile. The*

*fact that we are the only forestry company in the Dow Jones Sustainability World Index aided in this process, as investors increasingly look for best practice in governance and sustainability. Our strategy to consolidate the financial health of Fibria, sustain our competitive advantages, and resume our growth when conditions are favorable will be maintained. These opportunities often arise after a moment of crisis."*

1. João Elek left the company in January 2012.

### **Francisco Fernandes Campos Valério, Director of Industrial Operations, Engineering and Procurement**

*"We had a positive year in the industrial area in 2011, with production growth and stability in all operating units. I have no doubt that part of the reason for this was the result of the intense sharing of experiences and knowledge stimulated by the company. The annual maintenance shutdowns, which are essential for cleaning the equipment, carrying out repairs and adjustments were accompanied by representatives of all the factories, who collaborated with their experience and reinforced this synergy. We are seeking to reduce specific water consumption and our carbon footprint, with the modernization of the pulp bleaching plant of the Aracruz Unit and the progressive replacement of fossil fuels by biomass for energy generation. To continue improving our productivity, it is essential to invest in eco-efficiency and staff motivation. We cannot influence the exchange or the fluctuation of commodity prices, but we can work to improve our product quality, reduce emissions, save energy and increase production in all Units. We must also ensure that each of our technological plants, whatever their age, deliver the same quality of our final product. This is our focus and continues to be the biggest challenge for 2012."*

### **Aires Galhardo, Director of Forestry**

*"The past year was marked by the consolidation of good practices in Fibria's forest areas through advancing the exchange of experiences in a more efficient production process and in dialogue with communities, organizations and government agencies. We also intensified our activities in the Carbon Disclosure Project (CDP), making our*

inventory and monitoring our greenhouse gases emissions. Our greatest challenge today is to find ways to increase productivity, improve forest management and eliminate waste. In addition, we have a double challenge in logistics: reducing environmental impacts by decreasing CO<sub>2</sub> emissions, and social impacts by avoiding accidents and excess cargo. It is also crucial to shift towards greater use of rail and sea transportation. In 2012, we will work to improve our relationship with communities, seeking to include them in our supply chain. We know, however, that much remains to be done, in particular to ensure alternative employment options for families who give up the production of charcoal. It is necessary to promote formal education and create self-sustaining projects. Another important issue is the company's relationship with forest partners. We will seek to adopt a single model, using the Forest Savings program as a reference. We must conduct an awareness campaign and disseminate the benefits that many are unaware of because their contracts were originally developed with the former Aracruz Celulose. We must also go further and look at our forests in search of innovative solutions. Our greatest asset, after our clients and employees are our lands, which may have diverse uses in the future. We are well aware of future opportunities."

**Luiz Fernando Torres Pinto, Director of Human and Organizational Development**

*In the merging of two traditional companies into a young company such as Fibria, the greatest challenge in human resources is the consolidation of a new culture.*

*No cultural change is simple. It is always a delicate process that requires some years to finalize. Therefore, we have worked hard to prepare leaders. In 2011, all our general managers and managers underwent a training program to serve as multipliers in the dissemination of our management beliefs. We believe there is no more effective method for deploying a new culture than to lead by example. In 2012, the process of leadership development will be extended to coordinators, consultants and experts, to strengthen, the company's culture and support the process of retaining talent. Investment in skills will help us meet the challenge of maintaining a high performance team. Nearly 200 professionals will go through this process, which helps us to assess talent and identify and prepare potential substitutions and successions. Our role is to consolidate the foundation of human capital, by helping our current professionals and by seeking out new employees in the labor market who both meet the technical requirements and are aligned with our values. If we want to perpetuate our culture not only among our 4,000 direct employees but also among the other 14,000 indirect workers, we need to know how to develop leaders and partners that are aligned to our culture. It is worth mentioning that in 2011, 700 employees left the company; around 400 of these were through the sale of assets whilst the others were related to the process of adapting the business to a scenario of economic restrictions. Just as the success of an organization is achieved by people working in it, a company can only be sustainable if our professionals have sustainable attitudes, in work and life."*



## About this Report

Fibria Celulose S.A.'s Sustainability Report 2011 presents the company's performance in the areas of governance, economic and financial, social and environmental responsibility. The economic and financial data are disclosed pursuant to the rules of the Brazilian Securities Exchange Commission (CVM), based on international accounting principles. The reporting of non-financial data follows the Global Reporting Initiative Guidelines (GRI G3.1), with emphasis on the principles of materiality, relevance, balance, comprehensiveness, accuracy, clarity, context of sustainability, transparency, inclusion of stakeholders and comparability.

The information covers the Aracruz (ES), Jacaré (SP) and Três Lagoas (MS) Industrial Units; the Forestry Units and Offices in Bahia (Posto da Mata), in Espírito Santo (Conceição da Barra and Aracruz), in Mato Grosso do Sul (Três Lagoas), in Rio Grande do Sul (Capão do Leão) and in São Paulo (Capão Bonito and Vale do Paraíba), and the pulp loading operation at the Port of Santos (SP). The Piracicaba Industrial Unit (SP) and the graphics products distributor, KSR, which were sold in 2011, are not included in the Report.

The performance of Veracel, a Fibria joint venture with Stora Enso of Finland in Bahia, is also not addressed, since this company releases its own sustainability report ([www.veracel.com.br](http://www.veracel.com.br)). For its part, the private port terminal Portocel (ES), in which Fibria owns a 51% interest, is briefly mentioned. In addition to operations conducted throughout 2011, the Report mentions, in some cases, important decisions made in early 2012, shortly before this edition went to print.

To better satisfy the commitment to accountability and the expectations of stakeholders, the Report presents Fibria's long-term sustainability goal. These were de-

veloped through a systematic thinking process, which involved professionals from across the company. The publication continues to disclose our progress towards achieving short-term goals, covering a period of one year, and furthermore sets out its forthcoming challenges.

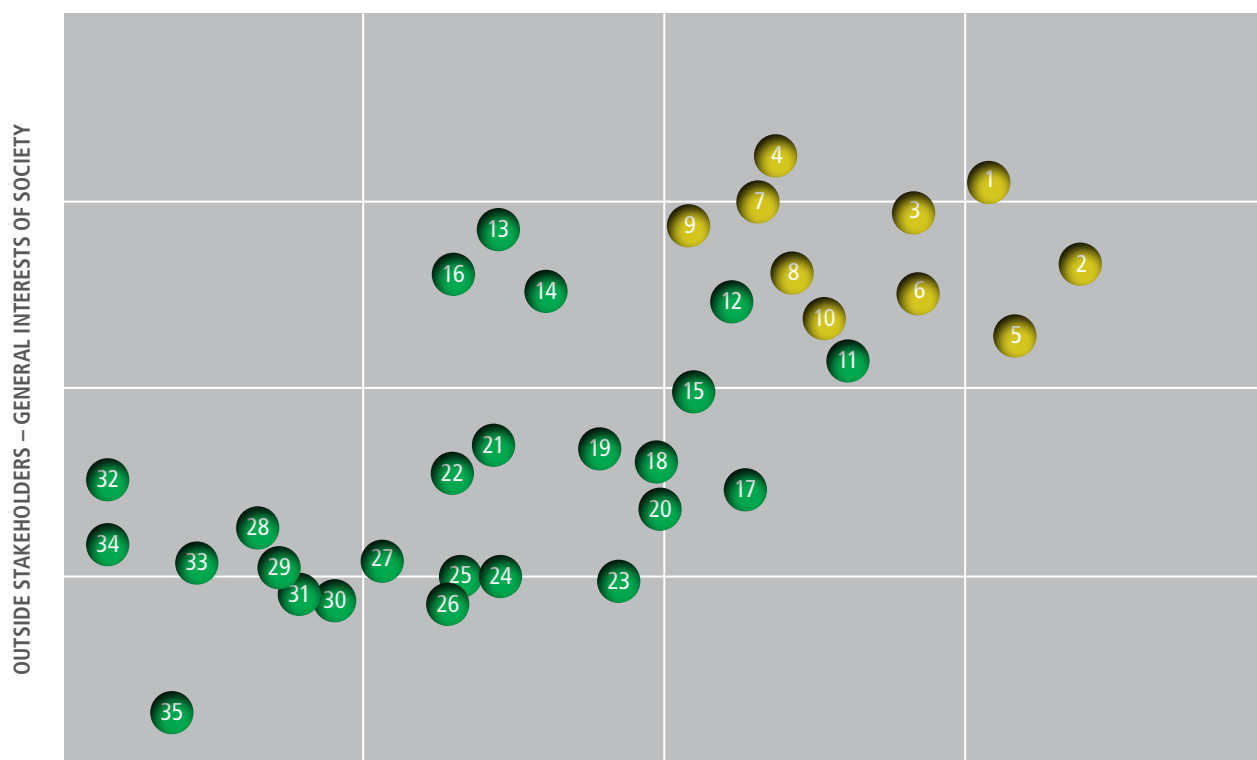
The independent external assurance of this Report has also evolved. This year the assurance team from Bureau Veritas Certification delved deeper into the subjects covered and how they match up to our long-term commitments in the ten themes identified as most material topics both by the company and its stakeholders in the Materiality Matrix. The process resulted in important recommendations to improve the balance, accountability and transparency of this publication.

Bureau Veritas Certification issued its evaluation regarding the company's compliance to the GRI G3.1 Sustainability Reporting Guidelines. We reached GRI Application Level A, with the disclosure of all core performance indicators.

The major themes in Fibria's sustainable strategy and accountability to its various stakeholders were established through our materiality analysis and, in order of importance, are the following:

- Impact of the eucalyptus plantations on biodiversity;
- Certification and voluntary commitments;
- Ethics;
- Use of water;
- Strategy / Commitment towards sustainability;
- Relationship with neighboring communities;
- Forest partners (wood suppliers);
- Environmental hazards;
- Emissions, effluents and waste;
- Relationship with specific communities.

## Materiality Matrix



### INTERNAL STAKEHOLDERS – PERSPECTIVE OF THE BUSINESS

- |                                                          |                                          |                                                  |
|----------------------------------------------------------|------------------------------------------|--------------------------------------------------|
| 1. Impact of the eucalyptus plantations on bio-diversity | 12. Forest technical management          | 24. NGOs                                         |
| 2. Certification and voluntary commitments               | 13. Energy use                           | 25. Complaints and Ombudsman                     |
| 3. Ethics                                                | 14. Product responsibilities             | 26. Customers                                    |
| 4. Use of water                                          | 15. Workplace health and safety          | 27. Attracting and retaining talent              |
| 5. Strategy/Commitment towards sustainability            | 16. Use of toxic products                | 28. Transport impact                             |
| 6. Relationship with neighboring communities             | 17. Economic results                     | 29. Diversity/fair treatment                     |
| 7. Forest partners                                       | 18. Climate change                       | 30. Antagonistic and/or anti-agribusiness groups |
| 8. Environmental hazards                                 | 19. Communication with employees         | 31. Press                                        |
| 9. Emissions, effluents and waste                        | 20. Compliance with laws and regulations | 32. Use of genetic modification                  |
| 10. Relationship with specific communities               | 21. Wood use                             | 33. Government                                   |
| 11. Corporate governance                                 | 22. Relations with outsourced workers    | 34. Suppliers                                    |
|                                                          | 23. Investors                            | 35. Labor unions                                 |

The Materiality Matrix was developed at the beginning of Fibria's activities – and remains valid and current – from the perspective of 85 representatives of the company's stakeholders in Brazil and abroad, including 45 direct and indirect workers and 40 representatives of suppliers, customers, investors and NGOs.

To facilitate access to information by all stakeholders, this Report has been produced in Portuguese and English, in different versions:

### Digital versions

- full HTML version, with additional content, such as videos, audio interviews (in Portuguese) and more detailed text (available at [www.fibria.com.br/rs2011](http://www.fibria.com.br/rs2011));
- full version in PDF;
- executive summary version in PDF;
- a PDF download centre, where stakeholders can define which chapters interest them and create their own report;
- a rich content version which includes videos and photographs accessible through a free iPad application [<http://itunes.apple.com/br/browse>].



### Printed versions

- a limited edition of the complete version, for a specialist audience;
- an executive summary version printed for distribution to a wider audience;
- a pocket version, for Fibria's employees and outsourced workers, distributed in the notice boards.

In order to facilitate understanding of the key issues that run through the Report, we have used a system of icons for the 10 priority issues of the Materiality Matrix, the company's sustainability goals and targets, the links between the chapters and content available on the Internet.

The Report also contains a glossary of technical and forestry industry-specific terms, to make it more accessible to different audiences.

Finally, the Report makes references to the International Year of Forests of the United Nations (UN): its layout follows the visual identity of Fibria's activities, reinforcing support for the UN's initiatives. The context for the year is framed by the chapter The Value of Forests, in which we have invited two experts to give a broad perspective on the challenges faced in shifting to a path of sustainable development for forests, in Brazil and globally.

Comments, suggestions and requests for additional information regarding this document should be sent to [comunicacaofibria@fibria.com.br](mailto:comunicacaofibria@fibria.com.br) or Comunicação Corporativa – Alameda Santos, 1357 – 10º andar – CEP 01419-908 – São Paulo – SP – Brazil.

## Understanding the Materiality Matrix

### Impact of the eucalyptus plantations on biodiversity –

Fibria's forestry activities are licensed by the relevant authorities and the subject of social and environmental planning. Significant portions of native forests are maintained interspersed with eucalyptus plantations. The existing biodiversity in Fibria's forest areas is researched, in order to understand, protect and enhance the species and populations of native flora and fauna as well as monitoring to track the environmental quality of areas held by the company. In this context, Fibria retains its protected areas in the form of legal reserves (LRs), Permanent Preservation Areas (APPs) and Private Natural Heritage Reserves (RPPNs), through protection, restoration, management and integration with the planted forests, also seeking to minimize the external pressures and degradation factors that may be acting on these fragments.

*Related sections: Biodiversity (p. 137), Forest protection (p. 133), Agroforestry (p. 135) and Ecosystem services (p. 144)*  
*GRI indicators: EN11, EN12, EN13, EN14 and EN15*

**Certifications and voluntary commitments** – Fibria's Units and offices are periodically subject to audit in order to verify compliance with quality standards and certification,

and support continuous improvement of management and operational processes. Fibria has quality management, environmental, occupational health and safety, and forest certifications. Among other benefits, certifications ensure the availability of forest resources and business longevity, differentiate the company in the market, improve the relationship with society and the image of Fibria as a socially and environmentally responsible company.

*Certifications (p. 50), Main commitments (p. 61), Government (p. 106) and Dialogue with NGOs and participation in forums (p. 101)*

*GRI indicators: 4.12 and 4.13*

**Ethics** – Fibria's Code of Conduct establishes the standards of behavior expected from its employees in their personal relations and at work, inside or outside the company. The document applies to all employees, either direct or indirect, irrespective of the hierarchical level. The company maintains an Ombudsman with three external communication channels (telephone, P.O. box and internet) and an internal channel (intranet) to receive grievances in relation to violations to the Code of Conduct, maintaining anonymity. To reaffirm the application of the Code of Conduct, an Ethics and Conduct Commission made up of executive directors and managers ex-

amines possible violations, checks whether reported concerns are valid, ensures that all cases are assessed according to uniform criteria, and indicates steps to be taken concerning matters not addressed by the Code. The Ethics and Conduct Commission oversees the Ombudsman services, taking the necessary steps in each case. Cases involving fraud, embezzlement or property damage are acted upon by the Internal Audit function, maintaining the anonymity of individuals raising concerns at all times.

*Related sections: Management (p. 35), Fines and legal claims (p. 44), Code of Conduct (p. 40), Internal audit (p. 41), Communication with stakeholders (p. 71), Government (p. 106), Relationship with labor unions (p. 121) and Public financing (p. 168)*  
*GRI indicators: 4.1, SO5, SO6, EN28, LA4, LA5 and EC4*

**Use of water** – Fibria continuously monitors watersheds within its operational areas to prevent or minimize potential impacts on forest management, as regards the quantity and quality of water. The latest monitoring results indicate that the company's forestry operations have not caused significant impacts on water resources in the regions where it operates. Reducing water consumption in the pulp production process is one of our most important environmental challenges. The water capture for the mills is carried out through grants and comply with environmental legislation of each location and the operating licenses of the Units. Each of the three Industrial Units consume less volume of water than international references of best available techniques. The company is part of the Water Footprint Network (WFN) and is developing its water footprint in all of its production phases, in order to optimize the consumption control and identify opportunities for improvement.

*Related sections: Water resource management (p. 131) and Industrial operations (p. 147)*  
*GRI indicators: EN8, EN9 and EN10*

**Strategy/commitment towards sustainability** – Fibria's sustainability strategy is based on the responsible use of natural resources, promoting the development and well-being of local communities and the restoration and conservation of native ecosystems. The governance for sustainability is enhanced by the Sustainability Committee, composed of company executives and professionals from different areas of knowledge that are not part of the company's management, and also by the

Internal Sustainability Commission (CIS), consisting of managers from different areas that monitor and ensure the implementation of commitments. Sustainability strategies are guided by a set of long-term targets, which were defined using a systems thinking methodology, which resulted in a set of variables that directly or indirectly affect forestry and production and sale of pulp and demonstrate the company's sustainability commitments to sustainability until 2025. Fibria also annually renews and accounts for its sustainability goals and targets.

*Related sections: Sustainability (p. 52), Main commitments (p. 61), Dialogue with NGOs and participation in forums (p. 101) and Government (p. 106)*  
*GRI indicators: –*

**Relationship with neighbouring communities** – Given its extensive area, Fibria maintains contact with communities of different economic, social and cultural realities which are affected positively or negatively and to different degrees by eucalyptus plantations. The relationship with neighboring communities follows a model with four types of approach: Engagement, Community Meetings, Operational Dialogue and Face-to-Face Agenda. These contacts are designed according to the forest operations and the intensity of the company's presence in these settlements. The company has a Prioritization Matrix that considers the socioeconomic vulnerability, the impact generated by the company's activities and the importance of the municipality to the company's operations.

*Related sections: Communication with stakeholders (p. 71), Communities (p. 74), Relationship with communities (p. 74), Theft of wood (p. 86) and Wood logistics (p. 127)*  
*GRI indicators: 4.14, 4.15, 4.16, 4.17, SO1, SO9, SO10, EC1, EC8, EC9 and EN29*

**Forest partners (wood suppliers)** – The wood supply by independent producers, or forest partners, corresponded in 2011 to 10% of the volume of raw material consumed for Fibria's production of pulp. This additional supply of wood was secured with 3,422 contracts with rural producers in seven states, corresponding to a total area of 106,891 hectares. Besides reducing the need for land acquisition, the forest partnership is a way to include the rural producers neighboring the pulp mills into the value chain, creating income and diversifying agriculture and labor. The Forestry Program (in Espírito Santo, Bahia, Minas Gerais and Rio de Janeiro) holds 85.74%



of Fibria's forest partnership. In other states where it operates (Rio Grande do Sul, Mato Grosso do Sul and São Paulo), the company's program to ensure the supply of timber by third parties is called Forest Savings, by which landowners are encouraged to produce wood for Fibria with long-term contracts with guarantees of funding, supply of seedlings and purchase agreement at the end of the harvest cycle, which on average lasts seven years. The good results of this program, which promotes the generation of income and employment in areas of the company, led Fibria to adopt it as a parameter in its new contracts for the purchase of wood.

*Related sections: Supply of wood by third parties (p. 125)*

*GRI indicators: –*

**Environmental risks** – Fibria has a Risk Management Policy that provides guidelines to the company, and Risk Management area, which helps the company map and analyze the significant risks and recommend proper treatment. Various types of risks are considered (factors that impact on corporate results and require constant monitoring because of growth targets and profitability expectations that the company is exposed to): market, operational, credit, reputational, social and environmental, of natural events, and regulatory. Climate change can impact on the company's economic and financial results by the very nature of the business of the company, which is based on the use of natural resources. There is a risk exposure due to climate change, which can affect the equilibrium of ecosystems, the productivity of the plantations and the availability of water and energy for the mills. Fibria adopts the precautionary principle in the management and operation of industrial and forestry activities, through the use of control measures and monitoring of production, such as agronomic studies, genetic improvement in the production of eucalyptus which includes the adaptation of species in different weather conditions, monitoring of water consumption in forest areas, among others. The development of a greenhouse gas (GHG) inventory is among Fibria's management activities.

*Related sections: Risk management (p. 42), Forest management (p. 123), Recovery and Utilities (p. 149) and Climate governance (p. 159)*

*GRI indicators: 4.11 and EC2*

**Emissions, effluents, and waste** – Fibria has a positive balance when considering carbon equivalent emissions in

forestry operations, production and logistics and sequestration of atmospheric carbon in its planted and native forests. Besides seeking to reduce and control the sources (equipment and processes) that generate odor, the company maintains an Odor Perception Network (RPO), formed by volunteers from neighboring communities who are trained to identify the odor and inform the company when odor is detected. Fibria has been making efforts to use waste from pulp that are coprocessed and transformed into products for use in correcting the soil acidity of eucalyptus plantations. This practice provides environmental and economic gains by reducing the disposal of waste to landfills and with the substitution of raw materials purchased by the waste reused in forestry operations.

*Related sections: Risk management (p. 42), Forest management (p. 123) and Recovery and Utilities (p. 149)*

*GRI indicators: EN16, EN17, EN18, EN19, EN20, EN21, EN22, EN23, EN24 and EN25*

**Relationship with specific communities** – Fibria maintains good relations with most of the communities neighbouring its operations. However, there are some unresolved conflicts with certain communities in the poorest regions of the north of Espírito Santo and the south of Bahia, stemming from problems that are often unrelated to the company and beyond the management's capacity to resolve, regardless of its good intentions. Despite the complexity of the challenge, settling these conflicts is a priority for the Fibria, which is working directly with the communities and engaging with other parties that might help to develop satisfactory solutions, such as the government, at all levels, NGOs and other companies. Some communities merit special attention from the company, which has been developing specific projects for social inclusion, often with the participation of government bodies and independent socio-environmental entities. This includes black communities, several of which have been recognized as quilombolas (descendants of runaway slaves who formed their own communities) or are in the process of claiming this status; Indian people of Tupiniquim or Guarani ethnicity; members of the Landless Workers' Movement (MST); and traditional fishing communities.

*Related sections: Relationship with specific communities (p. 80) and Theft of wood (p. 86)*

*GRI indicators: SO1, SO9, SO10 and HR9*

## External views

We invited two experts to make a critical reading of Fibria's Sustainability Report 2011

### Comments: Fibria Celulose's 2011 Sustainability Report

Upon reading Fibria's 2011 Sustainability Report, I am reminded of the popular aphorism that it is in adversity that the values governing the behavior of individuals, communities and organizations reveal their fragility or their strength. That is because the first thing that comes to mind when reading this document is the fact that the company has kept its commitment to sustainability in spite of adverse circumstances, both internally and externally. Internally, Fibria is still overcoming the challenges presented by its creation, given that the merger of Aracruz with VCP was no commonplace operation, especially in regard to the changes in corporate culture that, as we all know, take time to be assimilated and rarely coincide with the technical and procedural adaptations, which are far less dependent on the human factor. As for the external context, the new company had to assume all the legal obligations of its forerunners, which were not insignificant and extended into the social and environmental spheres, in the midst of a world economic crisis that had been affecting the markets since 2008 and was reflected in the financial performance data presented at the beginning of the report.

However, living up to the aforementioned aphorism, Fibria kept its organizational policies true to the values of sustainability, while implementing socioenvironmental programs and activities, maintained the social investments that had already been initiated, and sought to continue the management refinements, through monitoring, research and the hiring of specialists. The very issuing of this report, the preparation of which requires both considerable operational effort and, particularly, a commitment to the transparency and integrity of the information provided, is itself ample evidence of the strength of these values.

Among the positive aspects to be emphasized as I begin my analysis, following the sequence of the report, one should highlight the refinements to the organizational structure and management model. The establishment of the office of Forestry director and an area specializing in Corporate Governance, Risks and Compliance, and the distribution of the advisors in specific purpose committees – notably the internal Sustainability Commission – are all indications of the company's corporate development, not only in terms of the rational organization of areas, but also through the clear and intelligent allocation of duties, responsibilities and authority which, by decentralizing power, will make a significant contribution towards performance efficiency and effectiveness. Similar results can be expected from the enhanced socialization of information, through initiatives such as the Corporate Governance Portal and dissemination of the company's Code of Conduct.

In the environmental field, FSC® recertification has consolidated all the efforts that had been made in the past, while insertion in the SmartStep program, supported by IMAFLORA, suggests that these practices have become a part of Fibria's "way of being". Prominence should also be given to the guidance provided by the company for its forest partners to also obtain certification, which will establish coherent standards throughout the production chain, as well as contributing to the technical and managerial development of these undertakings.

It is important to emphasize that the increased maturity of Fibria's policies and activities with regard to its relations with the communities located within the vicinity of its operations, and the social investment in educational programs, the nurturing of local producers, the management of water resources and forest protection, have all helped the company to consolidate, in practice, a concept of socioenvironmental sustainability that is still all too rare in the agribusiness sphere.

Analysis of the text also draws attention to certain aspects of the management and of the Report itself that could be improved:



- The membership of the Board of Directors does not include a single female, while just 11% of the committee members are women. This same tendency is evident in the lack of women in executive positions and the always inferior numbers of females at other levels of the organization.
- Along similar lines, it can be seen that a significant number of workers are outsourced, particularly in the operational areas, yet the Report does not clearly state what guidance Fibria provides and control it exerts to ensure that the companies supplying this human capital follow the principles of social responsibility and sustainability.
- The Impact and Risk Matrix does not adequately explain what the negative externalities are, what the degree of impact and risk is on a scale running from low to critical and, above all, how they are monitored and what action the company has taken to mitigate them.
- Although the encouragement provided by Fibria for the employees to devote their efforts to innovation is praiseworthy, it is not clear just how much they stand to gain from this and, principally, what the gains have been, in terms of sustainability, from the introduction of these changes.
- On the Balanced Scorecard, only one of the strategic objectives under Sustainable Value is clearly aimed at sustainability, when it would be preferable to have a greater number of related objectives at this level of planning.
- Although the targets set by the Sustainability Committee for 2025 are very important, the Report is not clear about the results for 2011. The extensive tables are difficult to understand, when the goals haven't been met there is no explanation as to why, nor are they reformulated, and the indicators are insufficient for monitoring and evaluation.
- The information under the item Personnel Manage-

ment does not reflect adherence to the sustainability values, although it is known that the policies and procedures adopted for managing a company's human capital are the most effective instruments for legitimizing and strengthening the corporate beliefs. The sub-item Corporate Culture and Climate does not illustrate the efforts exerted, which should be a priority, in action to strengthen the cultural patterns and power relationships that stimulate the internalizing of these values.

- With regard to private social investment, it is not clear whether the amounts spent by the Votorantim Institute refer to the set of programs, projects and activities for the entire group of companies or just those on behalf of Fibria, the communities it deals with and respective stakeholders.
- One of the most laudable activities of the company, contributing to the sustainable development of the areas around its operations, is the Constructive Dialogues. However, it is hard to assess their results, since the timing, scope, methodologies, monitoring and evaluation are not made clear in the report.

The aforementioned observations are intended, exclusively, to assist Fibria as it continues on its path to becoming a benchmark for sustainability management, in spite of all the difficulties faced within a sociopolitical and economic system that is full of inequalities, a turbulent market and in the light of its own organizational complexity. I fully believe that these challenges will be faced with serenity and intrepidity when I see the commitment and faith of the management in the introduction to this Report. I thank you for the learning opportunity that you have given me through this work and for the confidence placed in me.

Prof. Rosa Maria Fischer  
Full professor at FEA/USP, director of CEATS – Center for Social Entrepreneurship and Third Sector Administration.

**Prof. Rosa Maria Fischer**

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## Fibria Celulose Sustainability Report

Fibria's current business involves harvesting a local fragile ecology on which many communities depend, to service the demands of global consumers. Its Sustainability Report describes the commitments, policies, oversight mechanisms, programmes and partnerships enacted by the company to effectively manage a value chain so fraught with challenges, alongside relevant data that sets out progress in practice. The Report amply demonstrates Fibria's success in optimising its current business model to sustainability parameters.

Sustainability provokes companies to go beyond 'doing less harm'. Three billion middle class consumers are expected by 2030, with six billion more aspiring to comparable consumption patterns. Fibria's current business model cannot be scaled linearly to meet this demand, even with a lightened environmental footprint and sensitized social benefits. Meeting vastly increased consumer demands will require disruptive technologies and co-beneficial productive arrangements that transform the fundamentals of land, water and energy use. A sustainable future will bring innovations in consumer products, services and behaviour, driven by policy developments and market competition, that are likely to devalue Fibria's current value chain.

Fibria's successful long-term strategy must factor in such sustainability drivers, actively shaping the disruptive pathway towards a sustainable future, and so its place within it. Its Sustainability Report must be judged by whether it provides a window onto the transformational aspects of the company's vision, strategy and practice. From this perspective, the current Report is lacking, despite its comprehensive coverage of the here and now.

Unclear is whether this omission is because the company's leadership believes that today's business model, further optimized, will work indefinitely. Or perhaps there is indeed a transformational vision that cannot be shared because of its commercial sensitivity. Whilst the Report does therefore stand as a robust statement of contemporary operational excellence, it does not set out the future basis for the company's own sustainability, or its contribution to our common future. It is to be hoped and expected that Fibria's considerable vision and ambition will ensure that this shortfall is overcome in future reporting.

Simon Zadek has provided this commentary in his personal capacity (email: [simon@zadek.net](mailto:simon@zadek.net), blog: [www.zadek.net/blog](http://www.zadek.net/blog), Twitter: @SimonZadek\_). He is senior visiting fellow of the Global Green Growth Institute and the Centre for International Governance Innovation, is an advisor on sustainability issues to the World Economic Forum as well as major global corporations.

**Simon Zadek**

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# Main results

## Financial-economic performance

### STATEMENT OF VALUE ADDED YEARS ENDED DECEMBER 31

In thousands of reais	Consolidated (in R\$)		
	2009	2010	2011
<b>Revenues</b>			
Gross sales of products and services (less sales returns)	6,540,879	8,625,441	6,183,939
Allowance for doubtful accounts	-19,863	-27,047	-22,237
Revenues from construction of own assets and other	3,965,167	1,497,968	1,549,160
	<b>10,486,183</b>	<b>10,096,362</b>	<b>7,710,862</b>
<b>Inputs purchased from third parties</b>			
Cost of products and services sold (including raw materials)	-3,381,006	-4,430,347	-2,756,456
Materials, electric power, third party services and other	-2,554,597	-1,871,116	-1,222,791
	<b>-5,935,603</b>	<b>-6,301,463</b>	<b>-3,979,247</b>
<b>Gross value added</b>	<b>4,550,580</b>	<b>3,794,899</b>	<b>3,731,615</b>
<b>Withholding</b>			
Depreciation, amortization and depletion	-1,330,266	-1,533,593	-1,838,827
Amortization of asset appreciation	-320,554	-49,686	-45,368
<b>Company value added, net</b>	<b>2,899,760</b>	<b>2,211,620</b>	<b>1,847,420</b>
<b>Value added received on transfer</b>			
Equity pickup	-1,133	-7,328	-414
Financial income	4,937,684	2,626,664	2,780,761
	<b>4,936,551</b>	<b>2,619,336</b>	<b>2,780,347</b>
<b>Total distributable value added</b>	<b>7,836,311</b>	<b>4,830,956</b>	<b>4,627,767</b>
<b>Distribution of value added</b>			
Personnel and social charges	655,896	601,497	571,419
Direct compensation	442,996	446,205	441,752
Fringe benefits	183,169	125,683	104,888
Government Severance Indemnity Fund for Employees (FGTS)	29,731	29,609	24,779
Taxes, charges and contributions	1,158,587	634,897	135,201
Federal	961,594	369,598	-40,076
State	189,066	246,103	148,748
Local	7,927	19,196	26,529
Accrued interest and rent	3,432,358	2,991,407	4,789,261
Retained income	1,929,225	598,647	-872,622
Non-controlling interest	660,245	4,508	4,508
<b>Distributed value added</b>	<b>7,836,311</b>	<b>4,830,956</b>	<b>4,627,767</b>



	2009 <sup>1 2</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>
Net sales (R\$ million)	5,293	6,283	5,854
Net income (R\$ million)	2,589	603	(868)
Assets (R\$ million)	32,239	30,163	27,854
Net equity (R\$ million)	15,075	15,404	14,540
EBITDA (R\$ million)	1,697	2,749	1,964
Pulp production (in thousands of tonnes)	5,188	5,231	5,184
Pulp sales (in thousands of tonnes)	5,248	5,061	5,141
Market value (R\$ billion)	18.3	12.4	6.5
Average list price of pulp (US\$/tonne)	565	848	822
Production cash cost (R\$/tonne)	444	452	471
Share value – FIBR3 (R\$)	39.1	26.5	13.9

1. In order to better understand the results, Fibria's performance analyses for the years ended 2009, 2010 and 2011 draw on consolidated financial information before the reclassification of CONPACEL's and KSR's results. In the financial statements and notes there to, the results of these operations are presented in "Net income for the year from discontinued operations", after net income for the year. The individual results of these operations are presented in Note 37 to the financial statements.

2. The results for EBITDA, pulp production, pulp sales and cash cost consider the results of CONPACEL and KSR for the year ended 2009.

Note: Includes 50% of Veracel.

## Social performance

Direct employment (GRI LA1)	2009	2010	2011
Employees	4,749	5,037	4,006
Outsourced workers	9,518	11,919	14,523
<b>Total</b>	<b>14,267</b>	<b>16,956</b>	<b>18,529</b>

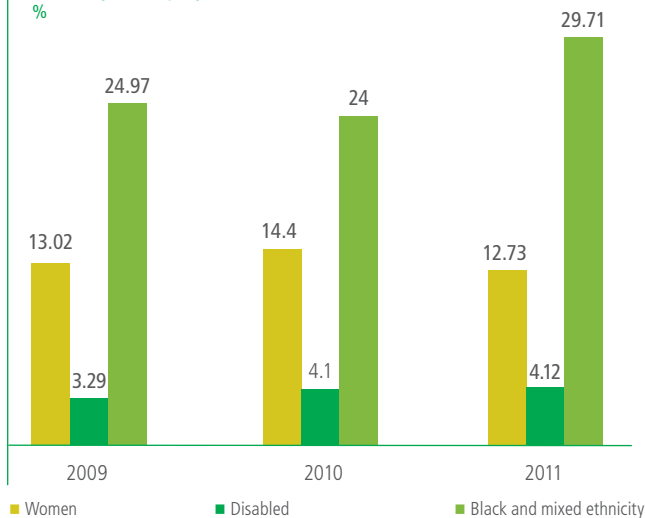
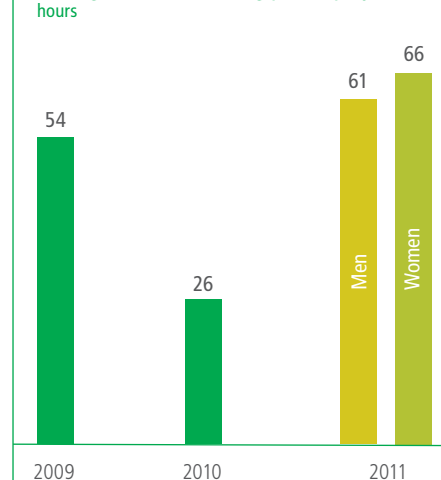
	2011		
Company staff	Men	Women	Total
Aracruz Unit (ES/BA/MG)	1,515	164	1,679
Três Lagoas Unit (MS)	807	90	897
Jacaré Unit (SP) <sup>1</sup>	1,021	128	1,149
Piracicaba Unit (SP) <sup>2</sup>	0	0	0
Central Administration	117	95	212
KSR <sup>2</sup>	0	0	0
Capão do Leão Forestry Unit (RS)	17	10	27
<b>Total – Brazil</b>	<b>3,477</b>	<b>487</b>	<b>3,964</b>
International offices	19	23	42
<b>Total</b>	<b>3,496</b>	<b>510</b>	<b>4,006</b>
<b>Percentage</b>	<b>87.3%</b>	<b>12.7%</b>	<b>–</b>

1. Capão Bonito and Vale do Paraíba.

2. Units sold in 2011.

## EMPLOYEES

Age	2009			2010			2011		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Average age	—	—	36.40	37.79	34.31	37.29	38.25	34.42	37.76
Up to 30 years	997	271	1,268	1,047	279	1,326	797	195	992
From 30 to 50 years	2,644	369	3,013	2,726	397	3,123	2,218	278	2,496
Over 50 years	436	35	471	538	50	588	481	37	518

Diversity of employees (GRI LA 13)  
%Average hours of training per employee  
hours

## HEALTH AND SAFETY (GRI LA7)

	2009	2010	2011
Injury rate (IR)	0.89	0.47	0.23
Occupational diseases rate (ODR)	0.012	0.034	0.004
Number of fatalities	2	3	1

## ETHICS

## Grievances received by the Ombudsman (GRI HR11)

	2011
Total number of grievances received	309
Grievances related to human rights <sup>1</sup>	105
Grievances related to human rights considered improper and were filed	44
Grievances related to human rights considered founded and were treated	55
Grievances related to human rights that were still pending at the end of the year	6
Grievances related to human rights received before 2011 that were considered founded and were treated	4

1. Of which 72 were cases of moral or sexual harassment and abuse of power, 16 were disciplinary measures, 11 were related to discrimination, 5 retaliations of managers towards subordinates and one related to a labor union.

INVESTMENT IN NEIGHBORING COMMUNITIES (GRI EC1)<sup>1</sup>

	2009	2010	2011
Fibria	R\$13,922,901.55	R\$13,506,816.42	R\$20,615,000.00 <sup>3</sup>
Incentivized projects	R\$347,310.00	R\$587,910.00	R\$1,993,138.00
Votorantim Institute	R\$2,182,000	R\$3,200,000.00 <sup>2</sup>	R\$3,098,000.00
<b>Total</b>	<b>R\$16,104,901.55</b>	<b>R\$16,941,274.42</b>	<b>R\$25,706,138.00</b>

1. Refers to donations to and investments in the community in benefit of people outside the company. These include contributions to charity organizations, NGOs and research institutes (unconnected with the company's own technology area), funding support for community infrastructure projects and the direct cost of social programs. It also includes the cost of managing the projects.

2. Updated value.

3. Including the project Sustainable Settlements, in partnership with the Landless Workers' Movement (MST), the Constructive Dialogues event, investment from BNDES, among others.

## TOTAL VALUE OF FINANCIAL AND IN-KIND CONTRIBUTIONS TO POLITICAL PARTIES, POLITICIANS, AND RELATED INSTITUTIONS (GRI SO6)

2009 <sup>1</sup>	2010	2011 <sup>1</sup>
0	R\$7.125 million	0

1. Because there were no election campaigns in 2009 and 2011, Fibria did not make any political donations during those years.

## PARTNERSHIP FORESTS

Unit	Hired area (hectares)
Aracruz	78,982
Jacareí <sup>1</sup>	11,762
Três Lagoas	1,431
Capão do Leão	14,716
<b>Total</b>	<b>106,891</b>

1. Vale do Paraíba and Capão Bonito.

- Municipalities reached: 214, 69 in Espírito Santo, 15 in Bahia, 44 in Minas Gerais, 13 in Rio de Janeiro, 43 in São Paulo, 27 in Rio Grande do Sul and 3 in Mato Grosso do Sul.
- Number of contracts: 3.422
- Average area per contract: 31 hectares
- 10% of the wood consumed in Fibria's Industrial Units in 2011 is from partnership programs (Forest Savings and Forest Producer)

## Environmental performance

## TOTAL WATER WITHDRAWAL, BY SOURCE (GRI EN8)

Forest operations				
Unit	Type of withdrawal	2010	2011	Number of points of withdrawal
Jacareí <sup>1</sup>	Surface water (m <sup>3</sup> )	201,312	77,541	14
	Ground water (m <sup>3</sup> )	204,660	144,470	17
Aracruz <sup>2</sup>	Surface water (m <sup>3</sup> )	307,487	386,252	136
	Ground water (m <sup>3</sup> )	—	—	—
Três Lagoas	Surface water (m <sup>3</sup> )	198,558	482,566	185
	Ground water (m <sup>3</sup> )	125,940	31,535	2

1. Vale do Paraíba and Capão Bonito.

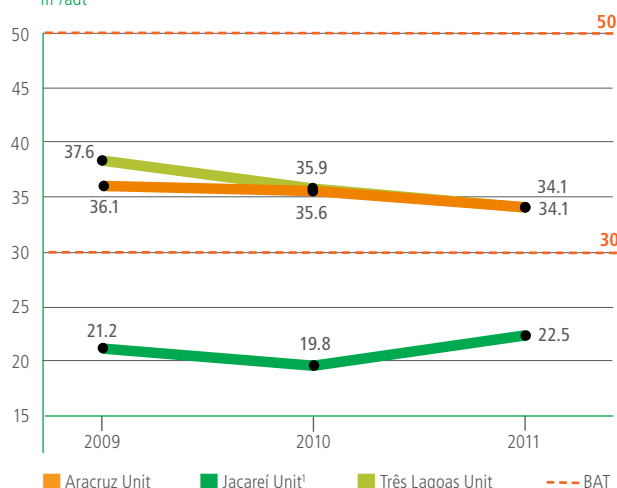
2. License to capture surface water is only granted in the nursery of Aracruz (ES). We do not have licenses for groundwater capture, which is not required by law.



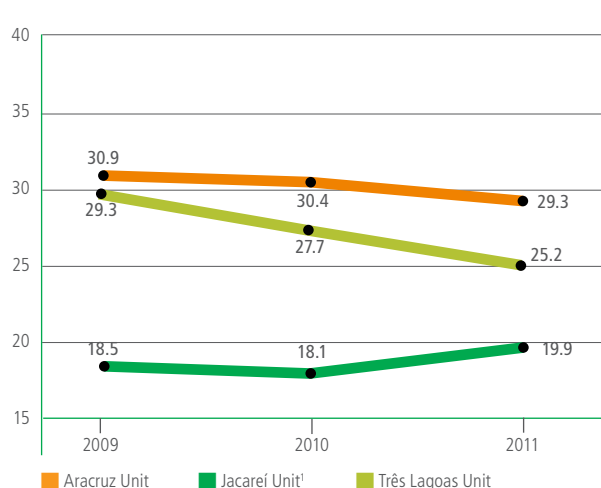
Industrial operations<sup>1</sup>

	Aracruz Unit			Jacaré Unit			Três Lagoas Unit			Total Fibria (2011)
	2009	2010	2011	2009	2010	2011	2009	2010	2011	
Total (m <sup>3</sup> )	108,394,560	110,395,296	107,325,576	26,654,814	25,535,665	28,591,030	NA	47,553,023	45,740,070	181,656,676
Volume consumed (m <sup>3</sup> /day)	217,965	219,705	217,116	73,027	69,961	78,332	NA	129,926	125,315	420,763

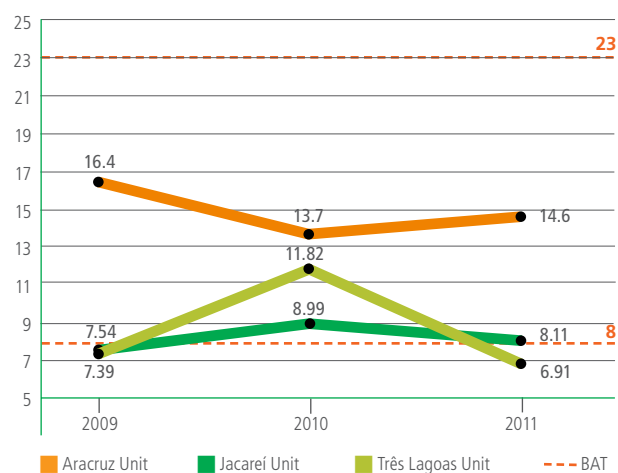
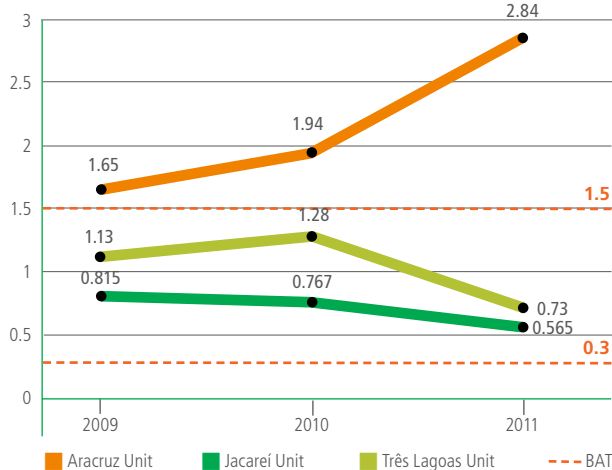
1. All water consumed by Fibria's Industrial Units is from surfacewater sources.

Specific consumption of water  
m<sup>3</sup>/adt

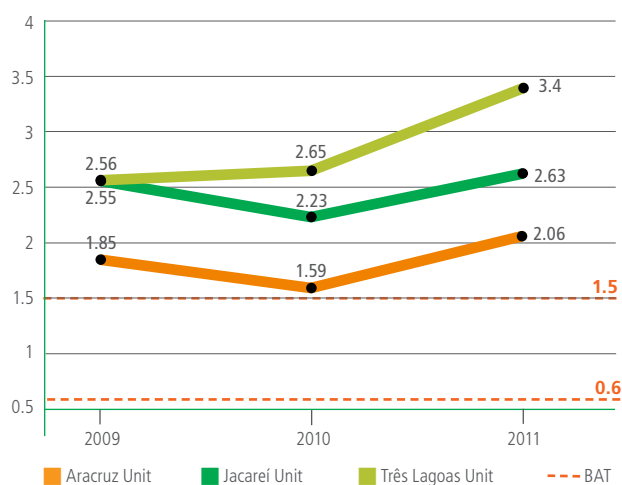
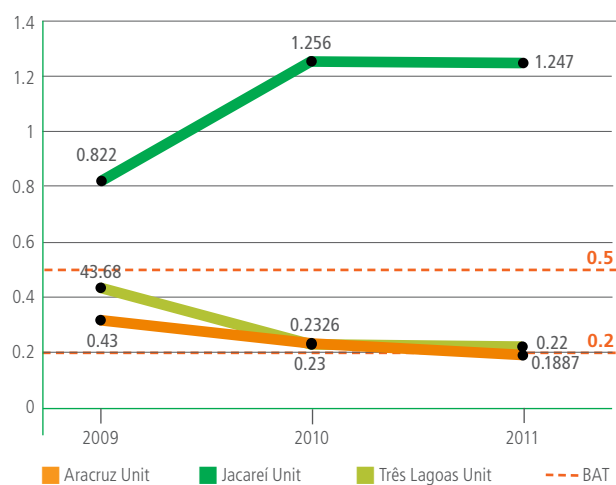
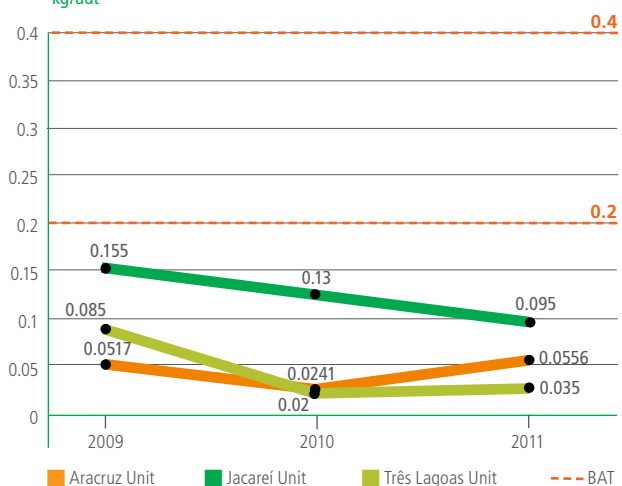
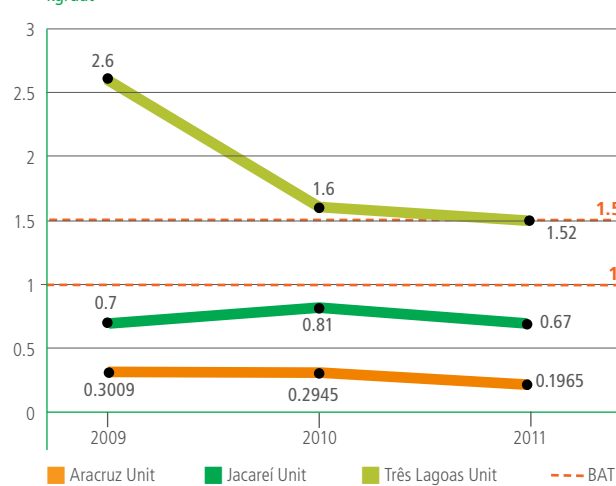
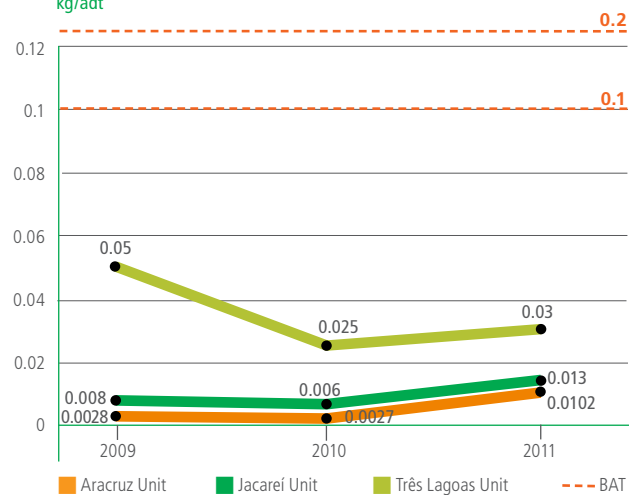
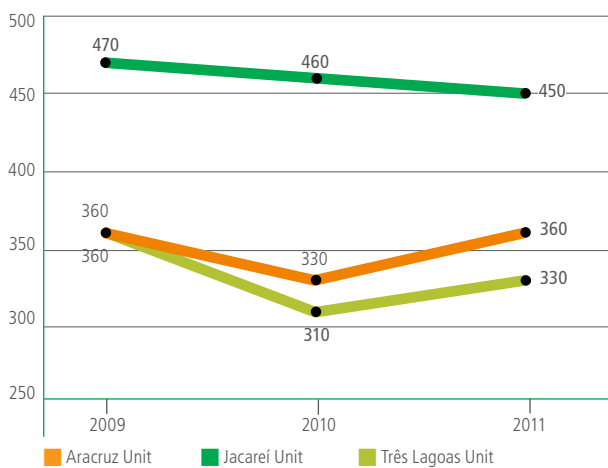
1. Includes the specific consumption of water of the paper mill located in the same site.

Volume of effluents  
m<sup>3</sup>/adt

1. Includes the effluent of the paper mill located in the same site.

COD  
Kg/adtBOD  
Kg/adt

Specific consumption – volume consumed per tonne of pulp produced  
adt – air dried tonne  
COD – chemical oxygen demand  
BOD – biochemical oxygen demand  
SO<sub>2</sub> – sulphur dioxide  
NO<sub>x</sub> – nitrous oxides  
TRS – total reduced sulphur  
CO<sub>2</sub> – carbon dioxide  
BAT – Values according to the publication Best Available Techniques (BAT) by the Integrated Pollution Prevention and Control (IPPC) (2001), used by the industry as a reference for bleached hardwood Kraft pulp.

Suspended particulates  
kg/adtParticulate matter  
kg/adtSulfur dioxide  
kg/adtNOx  
kg/adtTRS  
kg/adtCO<sub>2</sub>  
kg/adt

## WASTE (IN T) (GRI EN22)

	2009 <sup>2</sup>	2010	2011
Total waste generation	721,492.10	981,402.48	940,380.37
Hazardous waste	741.10	1,022.36	390.38
Non-hazardous waste	720,751.00	980,380.12	939,989.99
Waste reutilized (reuse, recycled, reprocessed and compost)	546,380.00 (75.7%)	717,179.75 (73.1%)	639,610.72 (68.0%)
Disposal of hazardous and non-hazardous waste in landfills (internal and external)	174,371.00 (24.2%)	261,848.68 (26.7%)	280,287.45 (29.8%)

1. Data refer to industrial operations. The generation of waste from forest operations do not impact significantly, representing about 0.6% of total waste generated by Fibria in 2011. Data regarding waste from forest operations are available on page 146.

2. Does not include the Três Lagoas Unit, that began operations in 2009.

## Certifications

CERTIFIED FOREST AREA (2011)<sup>1</sup>

Unit	Total area (ha)	Area certified by the FSC®	Area certified by CERFLOR (PEFC)
Três Lagoas <sup>2</sup>	350,201	226,659.24	238,373.90
Jacareí	161,086	158,512.71	—
Aracruz	355,288	—	364,885.80
Capão do Leão	107,841	—	—
<b>Total</b>	<b>974,417</b>	<b>385,171.95</b>	<b>603,259.70</b>

1. In hectares. Does not include 50% of Veracel.

2. The certified area includes new land bought and leased for the formation of forests that will supply wood to the new factory to be built in Três Lagoas.

## Environmental risks

## CONSERVATION AREAS RESTORED (IN HECTARES)

2010	2011	2012 target	Target 2012-2025
3,374	2,800	2,000	40,000



## RESTORED AND PROTECTED HABITATS (GRI EN13)

	(in hectares)	Aracruz	Jacarei <sup>1</sup>	Três Lagoas	Capão do Leão
Size of protected habitats	<b>Atlantic Rainforest</b>				
	2010	123,570.0	55,767.2	6,282.0	—
	2011	124,060.0	55,620.0	10,980.0	—
	<b>Savanna</b>				
	2010	—	7,420.0	65,576.0	—
	2011	—	7,690.0	88,620.0	—
	<b>Mangrove</b>				
	2010	—	—	—	—
	2011	—	—	—	—
	<b>Restinga biome</b>				
	2010	4,785.6	—	—	—
	2011	5,270.0	—	—	—
	<b>Pampa biome</b>				
	2010	—	—	—	59,725.2
	2011	—	—	—	60,210.0

1. Vale do Paraíba and Capão Bonito.

## NUMBER OF SPECIES (GRI EN15)

		Jacarei <sup>1</sup>	Três Lagoas	Aracruz <sup>2</sup>	Capão do Leão	Total Fibria
<b>Total species</b>	Plants	490	283	864	517	1,786
	Birds	387	307	519	256	742
	Mammals	50	67	79	51	155
	Amphibians	0	33	48	26	95
	Reptiles	0	36	52	38	108
	Fish	0	0	85	57	134
	Crustaceans	0	0	25	0	25

1. Vale do Paraíba and Capão Bonito.

2. Forest partnership areas have been included in the Aracruz Unit.

## CARBON BALANCE

	2008	2009	2010
<b>Emissions (CO<sub>2</sub>eq)</b>			
Forest operations	318,348	298,265	340,611
Industrial operations	1,074,606	1,205,170	758,952
Logistics	409,293	627,147	525,138
Total 1	1,802,247	2,130,582	1,624,701
<b>Burning of biomass (CO<sub>2</sub>eq)</b>			
Total 2	7,388,444	9,060,139	11,072,468
<b>Capture (CO<sub>2</sub>eq)</b>			
Planted forest	15,867,205	24,985,243	20,261,632
Native forest	—	1,049,946	1,049,946
Total 3	15,867,205	26,035,189	21,311,578
<b>Balance [total 3 – (total 1 + total 2)]</b>	<b>6,676,514</b>	<b>14,844,468</b>	<b>8,614,409</b>

# About Fibria

**Mission** – To develop the renewable forest business as a sustainable source of life.

**Vision** – Consolidate the planted forests as a producer of economic value. To generate admired profits, together with environmental conservation, social inclusion and improved quality of life.

**Values** – Strength, ethics, respect, entrepreneurship and harmony.

Fibria Celulose S.A. is the global leader in short fiber pulp, operating three plants and a forest base of 974,400 hectares, of which 352,000 is intended for environmental conservation. The company also draws on independent wood suppliers, with 3,422 active contracts in 2011 accounting for 107,000 hectares of additional eucalyptus production.

The company has approximately 18,900 workers, including direct employees and outsourced workers, and is active in 254 municipalities of seven states in Brazil. Its operations include forest areas and plants in Espírito Santo, Mato Grosso do Sul and São Paulo, as well as plantations in Bahia, Minas Gerais, Rio de Janeiro and Rio Grande do Sul, Caravelas (BA) maritime terminal and Barra do Riacho specialized terminal, Portocel, in Aracruz (ES), in which it holds 51% of shares in a partnership with Cenibra. The company also has a joint venture Veracel, in the municipality of Eunápolis in Bahia. This is operated together with Swedish and Finnish group Stora Enso. Most

of the pulp produced at Veracel flows through roads to Belmonte maritime terminal, nearly 60 km away, and carried by barges with a capacity for 7,000 tonnes of pulp to Portocel.

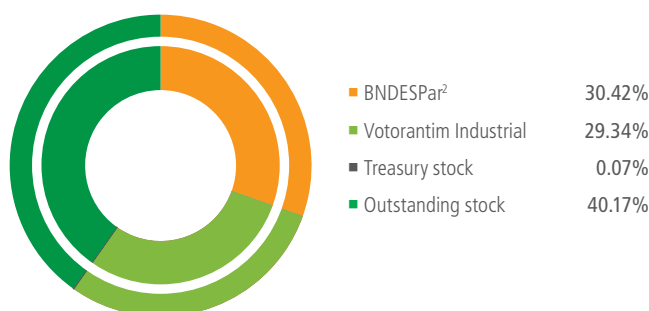
Traded on the São Paulo BM&FBovespa and the New York Stock Exchange (NYSE), Fibria's shares<sup>1</sup> are held by BNDESPar<sup>2</sup> (30.42%) and by Votorantim Industrial (29.34%), with 0.07% treasury stock and 40.17% outstanding stock. In 2011, the company completed the sale of operations involving the production and sale of paper – paper distributor KSR, holding a 50% interest in Consórcio Paulista de Papel e Celulose (CONPACEL), in São Paulo, and Piracicaba (SP) Unit –, concentrating their activities on the pulp segment.

Fibria serves customers in 42 countries through seven distribution centers and six commercial and representation offices in cities in Europe, Asia and South and North Americas. The offices are located in São Paulo (seven), Nyon (Switzerland), Csomád (Hungary), Miami (USA), Hong Kong and Beijing (both in China). In 2011, 89.9% of Fibria's pulp was exported, and used to produce tissue paper (54%), printing and writing paper (22%) and specialty papers (24%).

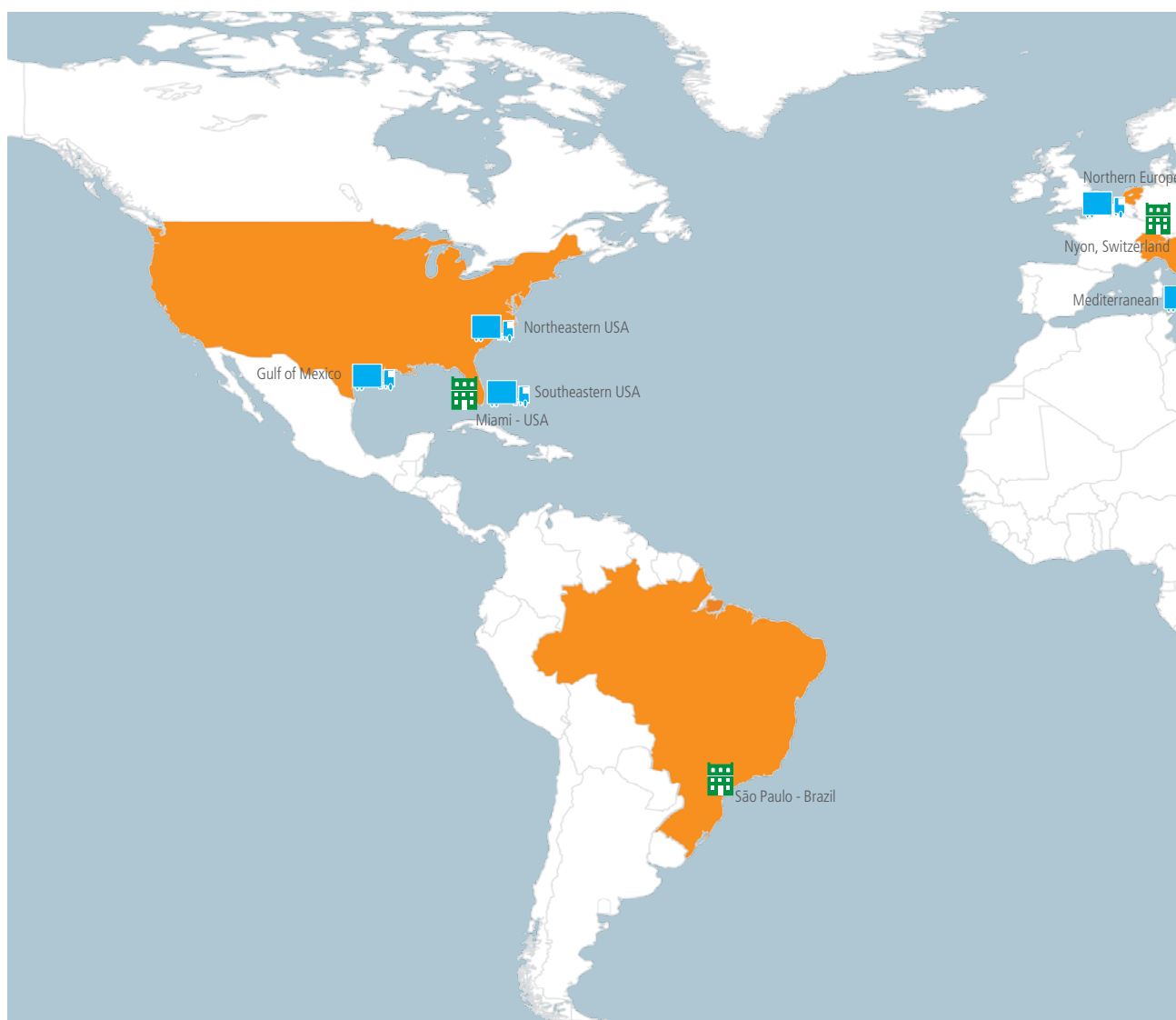
<sup>1</sup> Data as of 12/31/2011.

<sup>2</sup> BNDES Participações S.A. (BNDESPAR) holds a 21% interest in connection with a shareholders agreement with VID during the first 3 years, and 11% in the following years.

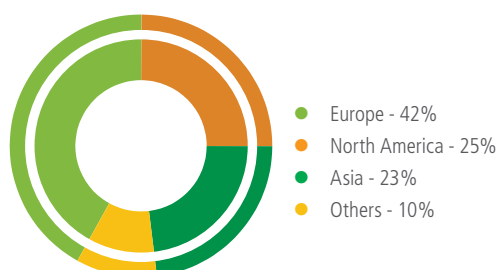
## Shareholder structure



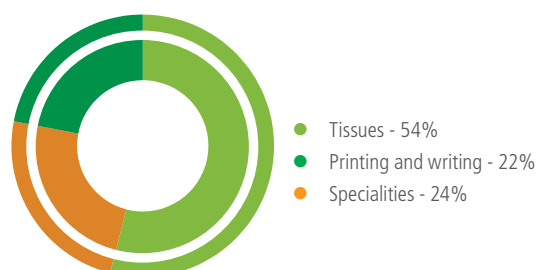
## Global presence



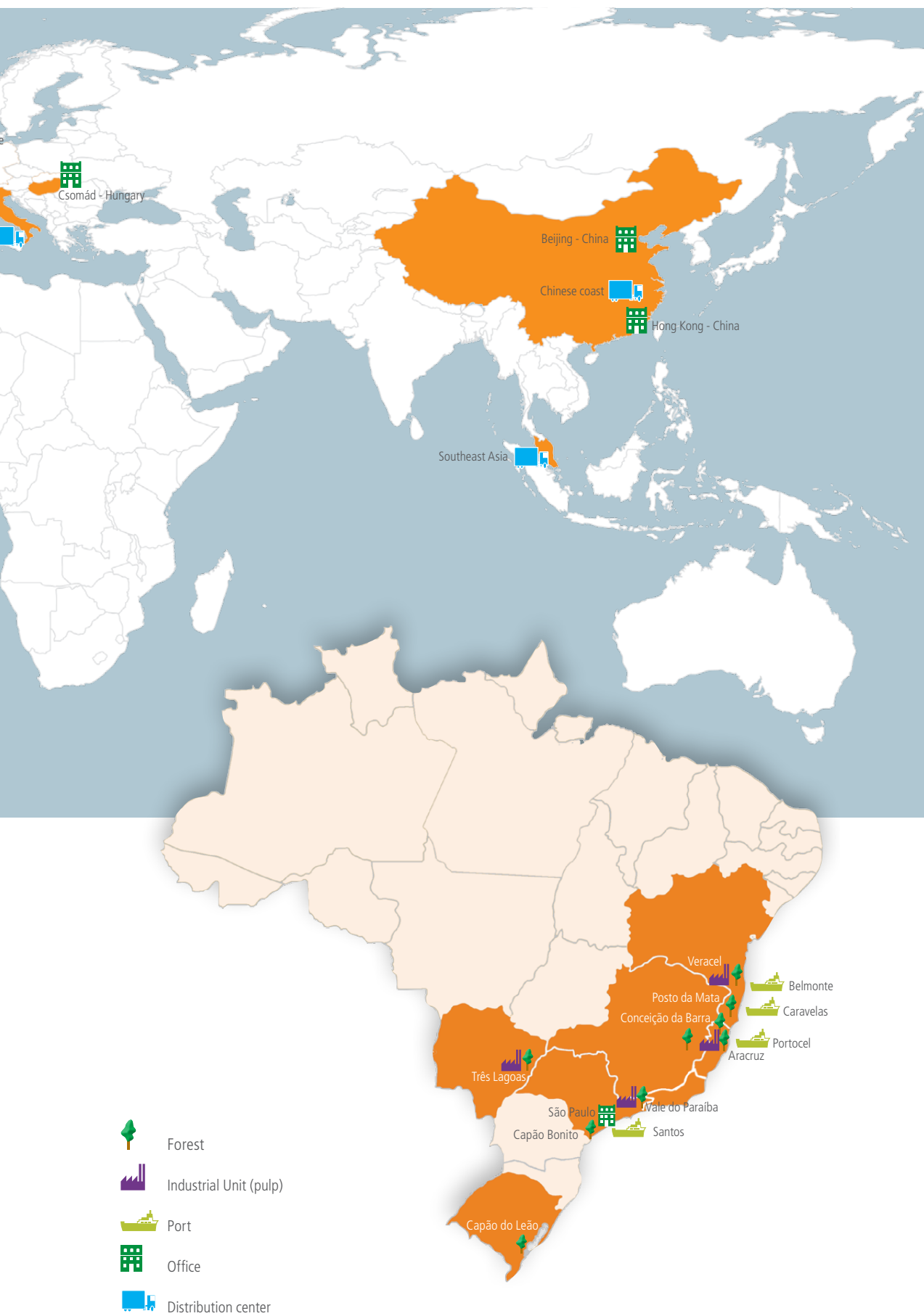
## 2011 Sales distribution by region



## 2011 End use







Fibria has mapped its main stakeholders, as shown in the table below.

#### STAKEHOLDER ENGAGEMENT (GRI 4.14)

Stakeholders	Tools and engagement processes	Most material issues (taken from the ten most material issues from Fibria's Materiality Matrix)
Employees	Code of Conduct, publications ( <i>Vital</i> newspaper, <i>Informe-se</i> , <i>EcoCiente</i> ), online communication (Fibria Net, electronic bulletins), Meet the CEO, organizational climate survey	Ethics Strategy/commitment to Sustainability
Suppliers	Code of Conduct, participation in the CDP Supply Chain, programs for development of local suppliers (PRODFOR and PQF-Avançado), evaluation questionnaires, <i>Na estrada com segurança</i> magazine (for truck drivers)	Ethics Strategy/commitment to Sustainability
Clients	Contact with commercial and technical assistance offices, partnership for technology development, satisfaction survey	Certifications and voluntary commitments
Investors	Quarterly results, investor relations website, calls with Investor Relations area	Ethics Strategy/commitment to Sustainability
Shareholders	Quarterly results, investor relations website, Governance Portal	Ethics Strategy/commitment to Sustainability
Government / public authorities	Representations in forums and associations (eg. ABRAF, ABAF), development in projects with other organizations (eg. Costa das Baleias Development Plan)	Ethics
NGOs and discussions forums	Participation in forums and associations (eg. The Forest Dialogue, the Brazilian Forest Dialogue and the WBCSD), development of projects in partnerships with other organizations (eg. New Generation Plantations)	Ethics Certifications and voluntary commitments Strategy/commitment to Sustainability
Neighboring communities	Engagement, Operational Dialogue, Face-to-Face agenda, Community Meetings, social and development projects, Constructive Dialogue, publications Programs for socioeconomic education, Speak with Fibria, and <i>Fibria and You</i> .	Relationship with neighboring communities Impact of the eucalyptus plantations on biodiversity Certifications and voluntary commitments Ethics Use of water Strategy/commitment to Sustainability Environmental risks Emissions, effluents, and waste
Specific communities	Engagement, Operational Dialogue, Face-to-Face agenda, Community Meetings, social and development projects, Constructive Dialogue, publications Programs for socioeconomic education, Speak with Fibria, and <i>Fibria and You</i> .	Relationship with specific communities Impact of the eucalyptus plantations on biodiversity Certifications and voluntary commitments Ethics Use of water Strategy/commitment to Sustainability Environmental risks Emissions, effluents, and waste
Forest partners (Wood suppliers)	Forest Producer and Forestry Savings programs	Impact of the eucalyptus plantations on biodiversity Forest partners (Wood suppliers)
Industry associations	Involvement in boards and committees (eg. BRACELPA, ABRAF, ABAF)	Certifications and voluntary commitments Ethics Strategy/commitment to Sustainability
Press	Press Relations	Certifications and voluntary commitments Ethics Strategy/commitment to Sustainability

1. The Ombudsman, the Fibria Notícias and Fibria News newsletters, the institutional website and the Sustainability Report are intended for all stakeholders, in Brazil and abroad.

FIBRIA'S INDUSTRIAL AND FOREST OPERATIONS<sup>1</sup>

Unit	Municipalities where Fibria is present	Workers			Production <sup>3</sup>		Forest base <sup>4</sup>			
		Em- ployees	Outsourced <sup>2</sup>	Total	Capacity	Pro- duction 2011	Planta- tions <sup>5</sup>	Reserves <sup>6</sup>	Other uses <sup>7</sup>	Total
Aracruz	134	1,679	9,050	10,729	2.3	2.32	201,228	129,332	23,461	355,288
Jacareí	87	1,149	2,726	3,875	1.1	1.10	84,942	63,304	10,465	161,086
Três Lagoas	6	897	2,590	3,487	1.3	1.23	167,909	99,602	19,194	350,202
Capão do Leão	27	27	101	128	—	—	40,761	60,210	4,513	107,841
Offices abroad	—	42	0	42	—	—	—	—	—	—
Central management office	—	212	56	268	—	—	—	—	—	—
<b>Fibria</b>	<b>254</b>	<b>4,006</b>	<b>14,523</b>	<b>18,529</b>	<b>4.7</b>	<b>4.66</b>	<b>496,840</b>	<b>352,447</b>	<b>57,614</b>	<b>974,414</b>

1. Data as of December 31, 2011. To identify its plants, Fibria took the name after the municipalities where they are located. Thus, the former Barra do Riacho Unit was renamed Aracruz Unit.

2. Exclusive outsourced workers: outsourced workers who serve Fibria only.

3. In millions of tonnes. Not including Veracel's 50% interest.

4. In hectares. Own, leased and partnered areas. Not including Veracel's 50% interest. Not including forest fostering areas. Rounded figures.

5. Renewable plantations of eucalyptus.

6. Areas intended for environmental conservation.

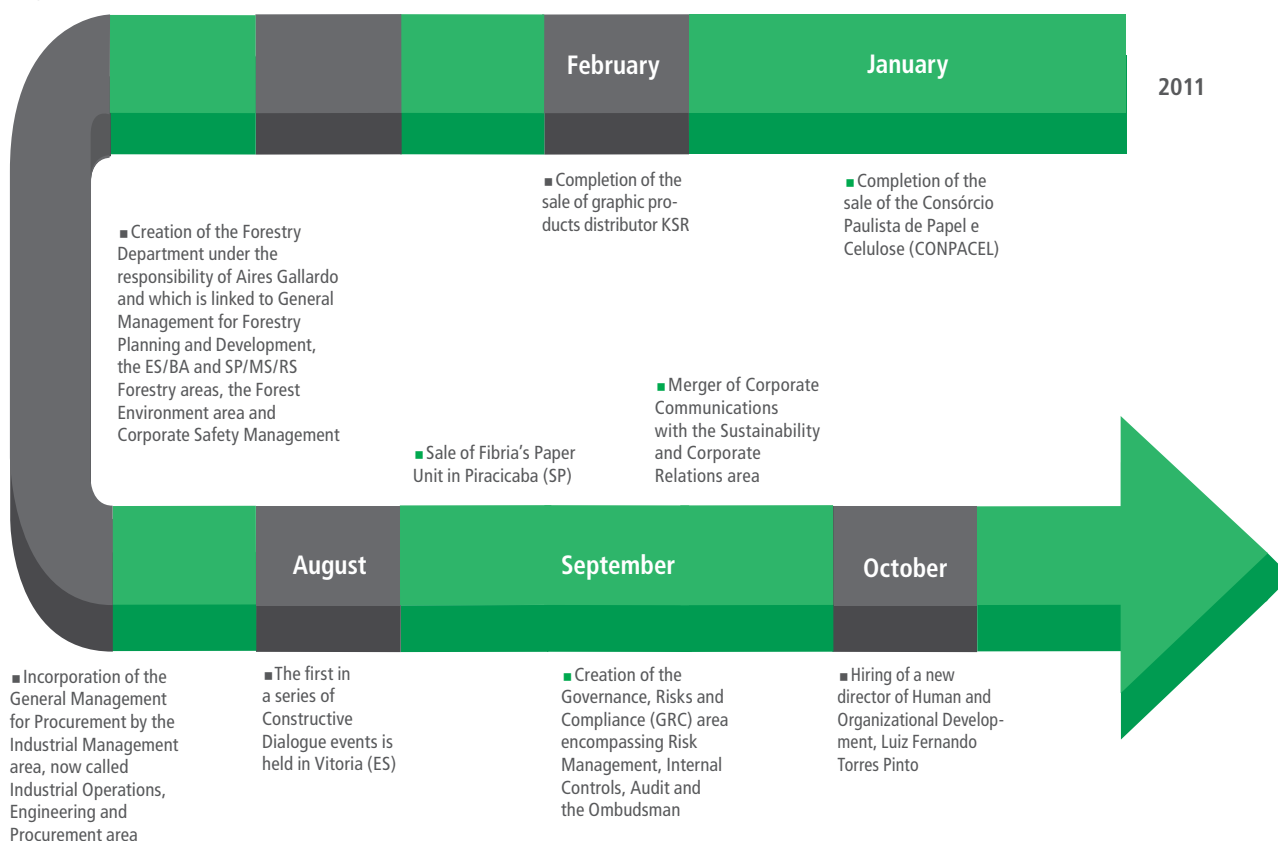
7. Roads, firebreaks, buildings etc.

## Timeline

■ Carlos Aguiar leaves the presidency of Fibria and executive Marcelo Castelli is named to the position

■ Start up of operation of the new pulp bleaching operation at Fiberline A at the Aracruz Unit (ES)

■ Fibria signs up to support the International Year of Forests, declared by the General Assembly of the United Nations (UN)

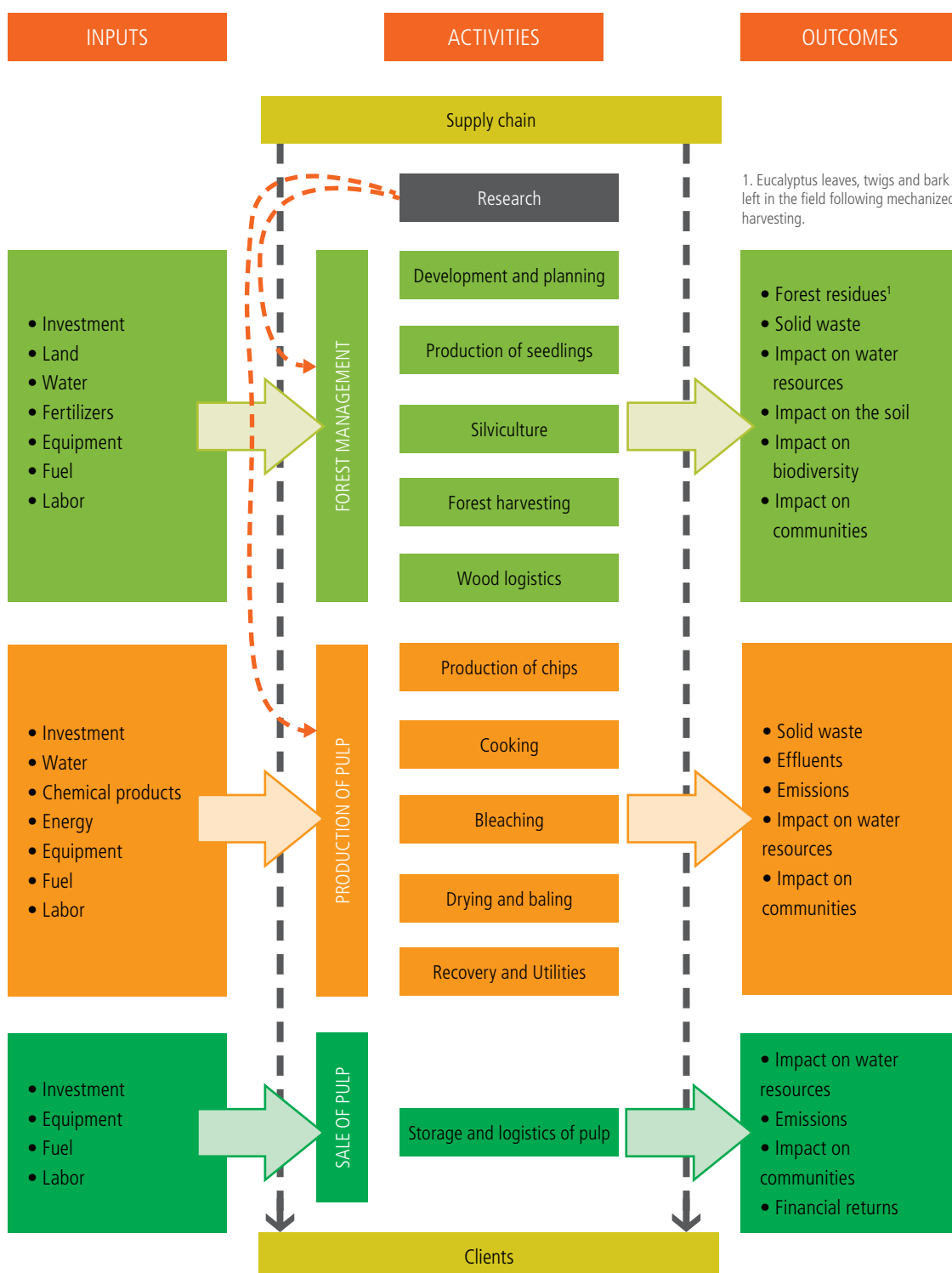




**Business model** – To facilitate the understanding of the connection between our financial and nonfinancial performance, we present a simplified diagram of the Fibria's business model, following the proposal of the International Integrated Reporting Committee (IIRC)<sup>1</sup>. According to the IIRC, integrated disclosure must address the relevant

externalities affecting the company, as well as resources and relationships used and affected, and how the business model interacts with externalities and the resources and relationships to create and maintain value over time.

1. Towards Integrated Reporting – communicating value in the 21<sup>st</sup> century – Discussion Paper, available at [www.theiirc.org](http://www.theiirc.org).





2

## Governance

### Management<sup>1</sup>

**Board of Directors<sup>2</sup>** – made up of nine members, two of whom are independent (with no links to signatories to the shareholders' agreement, in compliance with prevailing legislation), and an equal number of substitutes, to ensure a full complement at all Board meetings. These meetings take place at least four times a year and members should be present on all occasions, as well as all meetings of the committees on which they serve. The minutes of the Board meetings, and those of the Fiscal Council and Executive Board, are available at <http://fibria.infoinvest.com.br/enu/s-31-enu.html?idioma=enu>.

#### Members of the Board of Directors

##### Titular

Alexandre Gonçalves Silva – independent member  
Alexandre Silva D'Ambrosio – nominated by Votorantim Industrial  
Eduardo Rath Fingerl – nominated by BNDESPar  
Julio Cesar Maciel Ramundo – nominated by BNDESPar  
João Carvalho de Miranda – nominated by Votorantim Industrial  
José Armando de Figueiredo Campos – independent member  
José Luciano Duarte Penido – Chairman  
Raul Calfat – nominated by Votorantim Industrial  
Wang Wei Chang – nominated by Votorantim Industrial

##### Substitute

Maurício Aquino Halewicz  
Eduardo Borges de Andrade Filho  
Sergio José Suarez Pompeo  
Laura Bedeschi Rego de Mattos  
Mario Antonio Bertoncini  
Antonio Luiz Pizarro Manso  
Paulo Henrique de Oliveira Santos  
Gilberto Lara Nogueira  
Samuel de Paula Matos

**Fiscal Council** – made up of three titular members and an equal number of substitutes, chosen at a General Meeting of the Shareholders, according to the pertinent legislation. Its prime function is to supervise the action of the Management, in addition to the duties assigned under article 162 of Brazilian Corporate Law. The members meet at least once every three months, at the end of each quarter.

José Écio Pereira da Costa Júnior – Chairman  
João Carlos Hopp  
Sérgio Ricardo Lopes de Farias  
Osvaldo Ayres Filho – Secretary

**Audit & Risk Committee** – responsible for ensuring the quality and integrity of the financial reports, observance of the legal, statutory and regulatory norms, the appropriateness of the risk management processes and supervising the activities of the internal and independent auditors.

Samuel de Paula Matos – Coordinator and Financial Specialist

Antonio Luiz Pizarro Manso

Maurício Aquino Halewicz

Adrienne Soave – Secretary

**Finance Committee** – assists the Board of Directors and the Executive Board in analyzing the Brazilian and world economic situation and the potential repercussions for the company's financial position, as well as in working out possible scenarios and trends, assessing opportunities and risks, and determining which financial policy strategies should be adopted.

João Adalberto Elek Júnior<sup>3</sup> – Coordinator

João Carvalho de Miranda

Sergio José Suarez Pompeo

Wang Wei Chang

Samuel Saldanha Teixeira – Secretary

**Personnel & Remuneration Committee** – has the task of analyzing the human resources policies, structures and practices put forward by the Executive Board, in the light of the best practices adopted by Brazilian and foreign companies, as well as the opportunities and risks to which the company is exposed. In addition it proposes the remuneration policy for the executive officers and Board members, taking into consideration the salaries and benefits.

Gilberto Lara Nogueira – Coordinator

Alexandre Gonçalves Silva

José Armando de Figueiredo Campos

José Luciano Duarte Penido

Victoria Christina Bloch

Luiz Fernando Torres Pinto – Secretary

**Sustainability Committee** – advises the Board on all aspects relating to sustainability, as well as identifying, and handling matters that represent a risk or potential impact on the operations, long-term results, relations with stakeholders, or the company's reputation. The Sustainability Committee has five independent members and three executives – two of them executive officers – in addition to two representatives from majority shareholders, one of which is the chairman of the Board.

José Luciano Duarte Penido – Coordinator

Ailton Alves Lacerda Krenak

Aires Galhardo

Cláudio Benedito Valladares Pádua

Francisco Fernandes Campos Valério

Ignacy Sachs

Ricardo Young Silva

Sérgio Besserman Vianna

Sergio Eduardo Weguelin Vieira

Carlos Alberto de Oliveira Roxo – Secretary

**Executive Board** – comprises a minimum of three and a maximum of ten executive officers chosen by the Board of Directors, for a one-year term, with the possibility of re-election. One member is the CEO, while the others have no specific designation. The Executive Board meets at least once a month, or whenever necessary, and its decisions are made on a collective basis.

Marcelo Strufaldi Castelli – CEO

Aires Galhardo – Forestry Operations

Francisco Fernandes Campos Valério – Industrial Operations, Engineering & Procurement

João Adalberto Elek Júnior<sup>3</sup> – Finance & Investor Relations

João Felipe Carsalade – Commercial & International Logistics

Luiz Fernando Torres Pinto – Human & Organizational Development

**Internal Sustainability Commission (CIS)** – supports the Executive Board in integrating strategic sustainability policies and guidelines into the company's management and operations. This committee also assesses which socio-environmental themes are most critical to the company, the processes for relating to and engaging with local communities and other stakeholders.

**Internal Auditing** – oversees the company's controls and risk management, and compliance with the applicable legislation, policies, rules and procedures. It also assesses risk management parameters, the risk and resource management policies, the maximum tolerance determined by the management and the appropriateness of the resources allocated to risk management (see Independent Auditors).

**Office of the Ombudsman** – handles issues relating to the Code of Conduct (see Code of Conduct), dealing with them in an impartial, open and yet confidential manner, while protecting the identity of the people involved. This office is available to deal with accusations of corruption, bribery, fraud, environmental abuse, inappropriate use of assets, unethical behavior and discrimination, whether it be in terms of ethnicity, religion, gender, physical or social status (see SEC Form 20-F and CVM Reference Form).





## Composition of governance bodies (GRI LA13)

### Board of Directors

Titular and Substitute members: 18

Gender (male / female): 17 men (94.5%) and 1 woman (5.5%)

Minorities (handicapped, Asian, indigenous, black and mixed): 1 = (5.5%)

Age groups:

Under 30: 1 (5.5%)

Between 30 and 50: 7(39%)

Over 50: 10 (55.5%)

### Board advisory committees

Members: 26

Gender (male / female): 23 men (88.5%); 3 women (11.5%)

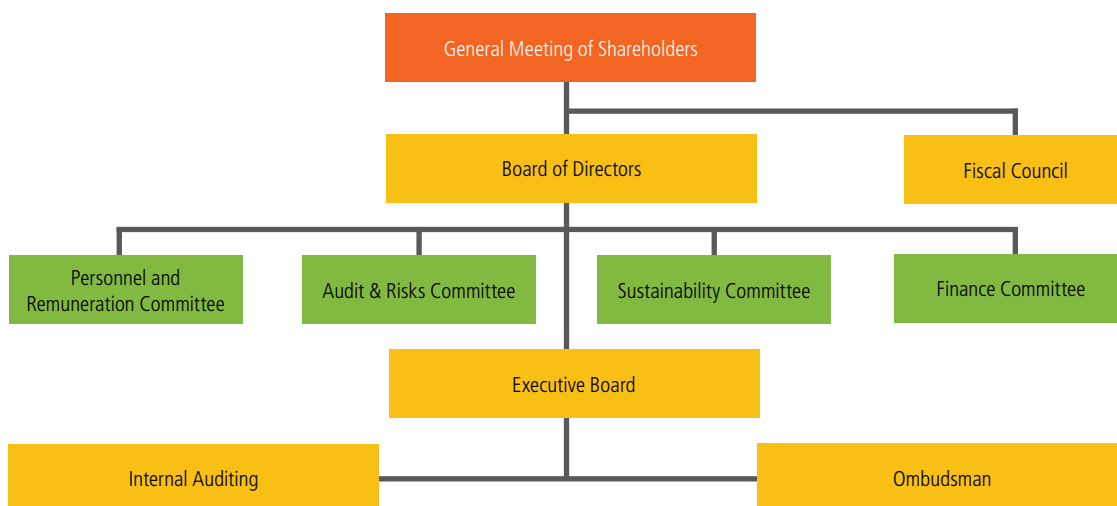
Minorities (handicapped, Asian, indigenous, black and mixed): 2 (7.7%)

Age groups:

Under 30: 1 (3.8%)

Between 30 and 50: 6 (23.1%)

Over 50: 19 (73.1%)



**Remuneration policy** – the members of Fibria's Board of Directors receive fixed remuneration based on: (i) a fixed monthly amount; and (ii) participation in statutory committees. The members elected to the Fibria Board of Directors who were nominated by Votorantim Industrial and BNDES Participações renounce their right to receive remuneration for performing this function, in accordance with the terms of the Shareholders' Agreement signed on October 29, 2009. In the financial year 2011, no variable remuneration or remuneration based on the company's share price was paid. The amount of the fixed remuneration for the members of the Board of Directors was based on a market survey carried out by an independent external company, which used organizations the same size as Fibria, operating in Brazil and abroad, as the parameter. After defining the global amount, the individual remuneration policy and amount assigned to each member were determined and approved at a General Meeting of shareholders.

The total remuneration of the company's Board members in 2011 came to R\$2,136,633.90, not including members of the Auditing & Risk, Finance, Personnel & Remuneration, and Sustainability Committees. The total remuneration of the Board members comprises: employer contribution of the social security system (INSS), in accordance with the Standard Technical Committee for Accounting Standard CPC 05 (R1) – Disclosure of Related Parties, available in Portuguese at [www.cpc.org.br/pdf/CPC05R1\\_final.pdf](http://www.cpc.org.br/pdf/CPC05R1_final.pdf). The total remuneration of the Executive Board members comprises: (i) fixed remuneration; (ii) benefits; (iii) variable remuneration; and (iv) long-term incentives. The Board of Directors may also grant exceptional rewards to executives, as a result of meeting specific targets or in relation to major projects or certain events.

The company regularly participates in surveys of total executive remuneration, conducted by specialized external consultants, and uses the survey results to adjust, if appropriate, the amount of fixed remuneration and benefits paid to its executives in line with average remuneration paid in the market. Fees, variable remuneration and long term incentives are adjusted in line with the third quartile – 75% – of the results obtained in the market.

Payment of the short and long term variable amounts aligned to the market's third quartile is subject to meeting targets set in the company's business plan at performance level 400, which is the average of the 'target' and maximum exceptional performance level, or 'stretch target'.

The Executive Board's variable remuneration is based on the profit sharing concept, where there is a reward target (performance level 300), associated with predetermined targets and using salary multiples aligned with the company's remuneration philosophy. The performance level 500 corresponds to the exceptional or 'stretch' target and offers a reward that is 50% higher than meeting the performance level 300 target. The targets are determined in terms of weighted financial and strategic indicators for the categories: (i) company; (ii) department or area; and (iii) individual. The indicators are reviewed on an annual basis, in accordance with the company's business strategies. The total remuneration of the executive officers in 2011 amounted to R\$27,312,213.87.

Learn more about the company's remuneration policy at <http://fibria.infoinvest.com.br/ptb/s-14-ptb.html?idioma=ptb> (GRI 4.5).

**Corporate Governance Portal** – this is an interactive tool that presents good corporate governance practices and can be accessed from any location, within or outside Fibria, to facilitate consultation by Board members and executives of the information necessary to carry out their legal and statutory duties in the best possible manner.

1. As of December 31, 2011.

2. Sustainability is a regular topic of the bi-monthly Board of Directors meetings (GRI 4.9). Self-assessment of the performance of the Board of Directors and its committees has been conducted on an annual basis, since 2010 (GRI 4.10). Pursuant to the Fibria Celulose S.A. Shareholders' Agreement, signed by BNDES Participações S.A. (BNDESPar) and Votorantim Industrial S.A. (VID) on October 29, 2009, the controlling shareholders should, under certain circumstances, hold meetings before: (i) each general meeting; and (ii) the meetings of Fibria's Board of Directors whose agenda involves discussing any matter listed in clause 4.3 of the aforementioned agreement, available at <http://fibria.infoinvest.com.br/static/enu/acordo-de-acionistas.asp?idioma=enu> (GRI 4.4).

3. Left Fibria on January 31, 2012. According to the Material Fact published by Fibria on January 30, 2012, the Board of Directors elected Guilherme Perboyre Cavalcanti for the position of director, without specific designation, to act as the company's Financial and Investor Relations Officer as of February 1, 2012.

## Code of Conduct

Fibria's Code of Conduct establishes the standards of behavior expected from its employees in their personal relations and at work, inside or outside the company. The document applies to all employees, either direct or indirect, irrespective of the hierarchical level. A copy of the document is delivered to each new employee, who signs a proof of receipt on the date of hire, which is later attached to their employment records. The contents of this document, delivered to all employees are affirmed monthly at the results meetings of all Forest and Industrial Units. In 2011 98% of the employees had signed the Code of Conduct (GRI SO3).

In 2011, 412 employees (10.3% of total) were formally trained on the policies and procedures of the organization on human rights (GRI HR3) during the integration of new employees and debriefing meetings when Code of Conduct matters are discussed.

Within the Corporate Security area, one permanent professional (2% of total of the area) and 116 outsourced professionals (35% of total) were trained on human rights (GRI HR8).

The company maintains three external communication channels (phone, voicemail service and Internet) and an intranet channel to enable confidential reporting of any violation of the Code of Conduct.

### Whistleblowing channels:

<b>Phone</b>	0800 891 1730 (Brazil) For other countries: <a href="https://secure.ethicspoint.com/domain/media/en/gui/27629/phone.html">https://secure.ethicspoint.com/domain/media/en/gui/27629/phone.html</a>
<b>Letter</b>	Ouvidoria Fibria Celulose S.A. Caixa Postal Nº 72696 Brazil
<b>Internet</b>	<a href="http://www.fibria.com.br">www.fibria.com.br</a> > Institutional > Ombudsman <a href="http://www.fibria.com.br/web/en/institucional/ouvidoria.htm">http://www.fibria.com.br/web/en/institucional/ouvidoria.htm</a>
<b>Intranet</b>	(exclusive for employees) Fibria Net > International Offices > Code of Conduct

To reaffirm the application of the Code of Conduct, an Ethics and Conduct Commission made up of executive directors and managers examines possible violations, checks whether reported concerns are valid, ensures that all cases are assessed according to uniform criteria, and indicates steps to be taken concerning matters not addressed by the Code. The Ethics and Conduct Commission oversees the Ombudsman services, taking the necessary steps in each case. Cases involving fraud, embezzlement or property damage are acted upon by the Internal Audit function, maintaining the anonymity of individuals raising concerns at all times.

**Ombudsman services** – In 2011, 309 compliance concerns were raised to Fibria's Ombudsman, of which 288 (93% of the total) have been closed and 21 (7%) are pending analysis. Of all cases recorded, 33.7% concerned abuse of power and conduct of management, 13.3% concerned inappropriate relationships with business partners and communities, 11.4% concerned violation of policies, 8.4% concerned irregularities involving environment, health and

safety, 4.5% concerned matters involving company reputation and conduct out of the work environment, and 2.5% concerned other miscellaneous matters. The remaining 26.2% of concerns raised were questions of clarification or requests for information.

The cases deemed to have grounds resulted in 46 recommendations for revision of policies and procedures or suggestions for improvement of internal controls. In 60 other cases, the company took disciplinary steps considered appropriate in the circumstances, from verbal warnings up to the termination of the contract of parties involved (GRI HR4).

**Human rights** – 105 reports received by the Ombudsman in 2011 regarded human rights (34% of total), classified as follows: 11 cases of discrimination and prejudice; 72 reports of bullying, sexual harassment and abuse of power; 1 report related to relations with a labor union; 16 reports on disciplinary actions and 5 reports on retaliation (related to the attitude of managers). Of the 105 reports, 44 were deemed to have no grounds and filed (all involved permanent or outsourced professionals). The remaining 55 reports were deemed to have grounds and were acted on 53 of these cases regarded permanent or outsourced professionals and 2 regarded suppliers (GRI HR11).

**Discrimination** – Eleven reports of discrimination were made to the Ombudsman in 2011, and all were acted on and closed in the same year. Eight reports were analyzed and deemed to have no grounds, and feedback was given to the whistleblowers through the Ombudsman system. The 3 remaining cases involved misconduct, in two of which disciplinary actions were taken (one written and one verbal warning) with a change in procedure in the third case to correct the deficiency (GRI HR4).

## Internal Audit ★

Fibria's Internal Audit team is responsible for evaluating processes in an independent way and checking their compliance with policies, standards and procedures in a systematic and disciplined fashion, seeking to improve the effectiveness of operations and add value to the business.

In 2011 the Internal Audit team carried out 14 services involving corporate, forest and industrial processes, as well as conducting 11 special services required by Fibria's Ombudsman. The results of the analyses and action plans are reported to the CEO and to the Audit and Risks Committee.

The Internal Audit team monitors the status of action plans on a monthly basis, aiming at ensure their effective implementation.

**Anticorruption practices** – Corruption risks are evaluated on a regular basis by Fibria's Internal Audit team across all Units and addressed in the Code of Conduct.

Of the 11 suspicions of fraud and corruption investigated by the Internal Audit in 2011, 7 were closed, 3 considered to have grounds (2 resulting in dismissals and one currently pending final decision) and 4 not to have grounds. At year end, 4 cases were still being evaluated (GRI SO2 and SO4).



## Management risks

**Governance, Risks and Compliance** – In 2011, Fibria created the Governance, Risks and Compliance (GRC) area, integrating activities concerning Risk Management, Internal Audit, Internal Controls and Ombudsman. Accordingly, Fibria sought to secure synergy among the areas, contributing to the business alignment and strengthening the company's governance.

The GRC area is linked to the CEO and reports to the Audit and Risks Committee, a body assisting Fibria's board of directors. The same applies to the link between governance and the control activities, measuring and monitoring the effectiveness and alignment between these structures.

For the fifth consecutive year, Fibria is listed in the Dow Jones Sustainability Index (DJSI) World, the most important global index of this type. The company was placed first among the companies of the industry, for the second consecutive year, in criteria such as Code of Conduct, Risk Management and Compliance. In 2011 these processes attained the highest possible score.

**Risk management** – Fibria's Risk Management Policy has been approved by the Board of Directors, which provides guidance and details on the related activities.

The Risk Management area assists Management in mapping the significant risks (such as strategic, reputation, financial, operating, legal and tax), analyzing and recommending the appropriate treatment.

A number of different types of risk are considered in Fibria's risk management strategy – factors which impact on corporate results and require ongoing monitoring in light of the growth goals and expected profitability the company is exposed to – which runs the gamut from variables traded in the financial market in view of the business (market risks) to those arising from the production process (operating risks). The company also manages the risks from obligations undertaken with third parties (credit risks), negative exposure of the company trademark (reputation risks), environmental impacts from operations (social and environmental risks), impacts to production or to the business caused by natural physical phenomena (events risks) and also problems from actions in disagreement with the regulations in force in countries and markets (regulatory risks).

**Internal controls** – The company has been SOX certified since 2006 – applicable to the organizations regulated by the Securities and Exchange Commission (SEC); as from 2009, the Brazilian Securities and Exchange Commission (CVM) published CVM Rule No. 480, which, as with SOX, requires the officers of companies trading shares at BM&FBOVESPA attest to the effectiveness of the company's internal controls at each year end. These certifications are planned and rendered operational by the Governance, Risks and Compliance area and address Fibria's main processes, considering both onshore and offshore, falling under the "significant" category, in accordance with the SOX/CVM requirements and regulations. The services are reported to the Audit and Risks Committee, and to the Finance Committee, bodies directly assisting the Board of Directors, which strengthens Fibria's Governance levels.

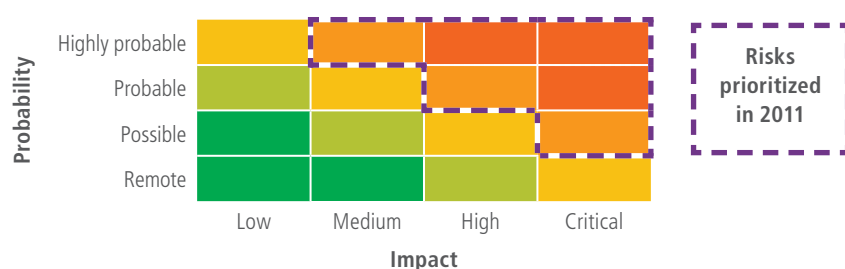
Fibria obtained recertification on the Internal Controls for 2011 in compliance with Sarbanes-Oxley (SOX) Act – Section 404 – and CVM Rule No. 480/09, under the independent evaluation of PricewaterhouseCoopers.

The consolidated financial reports were certified, with an unqualified opinion, by the independent auditors, as in prior years.

**Enterprise Risk Management (ERM)** – In 2011, Fibria continued to develop its strategic risk management through the ERM project, aimed at prioritizing and treating the risks found and analyzed in 2010. The ERM process is coordinated and integrated for risk management, in order to encompass the organization at all hierarchical levels, encouraging communication and cooperation among the functional areas.

One of the ERM goals is to embed the risk prevention culture across the business and show Fibria's current exposure level and how prepared it is to deal with the consequences, if risks materialize.

In 2011, of the 306 strategic risks found, 80 were considered to be priority and grouped into 13 types of primary risks.



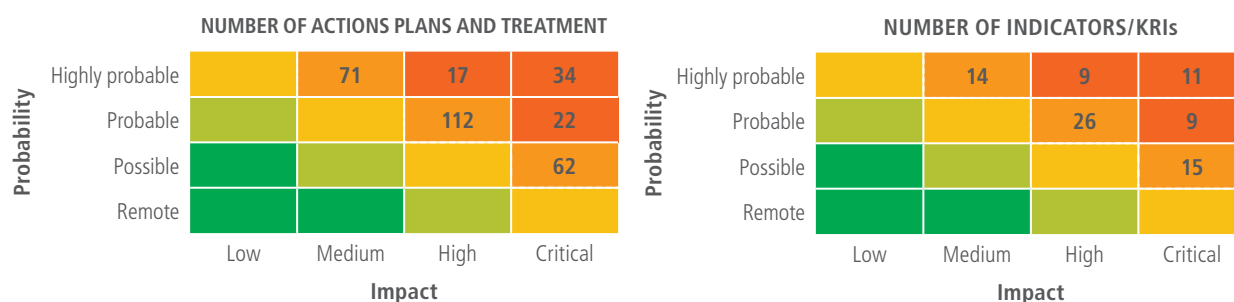
Risks are classified in accordance with their impact and probability.

Specifically when evaluating the impact, a given risk may generate consequences at different levels. At Fibria, every risk is analyzed at the following impact levels:

#### RISK IMPACTS

Impact Levels							
Levels	Financial	Health and security	Environmental	Social / cultural	Image/ reputation	Organizational climate	Legal
Critical							
High							
Medium							
Low							

The matrix of Fibria's priority risks was then validated with the Executive Board, the Audit and Risks Committee and the Board of Directors. Since then efforts have been made towards involving the business areas in the design of action plans and key risk indicators (KRIs).



This process enables a systemic and in-depth view of Fibria's actions and risks with special attention given to areas with intangible consequences, such as social and environmental risks which depend on the ongoing relationship with the parties involved as well as compliance with stringent certification standards and international agreements.

### A real case

One of the issues highlighted in the matrix regarding sustainability, is the risk of disruption to dialogue with traditional communities, where there is a high chance of the risk materializing in the north of Espírito Santo and in the far south of Bahia. This risk is one of the issues identified in the Materiality Matrix as "relationship with specific communities".

Nine actions for mitigation of this risk are currently in progress at Fibria, recorded in the risk register of the ERM project, including its deployment status.

The following initiatives are highlights: 1) face-to-face dialogue with the communities, 2) creation of engagement programs for the 32 communities priority for Fibria's operations, and 3) creation of Local Relationship Commissions to speed up actions and responses.

The various plans to treat social and environmental risks are evidence of a comprehensive approach to prevention of such threats.

### Risks matrix versus Materiality matrix

By checking the Materiality Matrix with the Matrix of risks identified by the ERM project, one finds that many topics deemed to be key for internal and external stakeholders are also very similar to those Fibria prioritizes in its actions from the risk management viewpoint.

For example, the Environmental Risk relating to at least four material issues, including: a) impacts of plantations on biodiversity, b) use of water, c) emissions, effluents and waste and d) climate change. These consist of subjects whose actions have already been mapped with indicators of risk monitored by Industrial Environment and Forestry Environment areas, supported by the GRC area.

## Fines and legal claims 🌟

**Legal claims for unfair competition, trust and monopoly** – In 2011 Fibria was a party to a legal claim on violation of antitrust laws<sup>1</sup> (GRI SO7).

<sup>1</sup> Preliminary Assessment No. 08012.002921/2007-64 (Respondent: Aracruz Celulose). Matter: Determination of establishment of price fixing by chlorine and by-products producers and distributors. Status: On December 15, 2008, Decision No 909 was handed down by the National Economic Law Office supporting a Preliminary Secret Assessment to determine the alleged antitrust conduct.

### Monetary value of fines and number of non-monetary sanctions arising from non-compliance with laws and regulations (GRI SO8)

**Tax assessments:** Fibria was a party to five tax assessments with significant fines during 2011, four of which were pending from previous years, amounting to R\$641,654,195.45, of which R\$50,000,000 represents a fine in relation to an assessment initiated in 2011. The fines mentioned in pending assessments may continue to be discussed in the years to come, such that the same fine may be included in the figures for different financial years. No fines were paid, nor were there any non-monetary sanctions in 2011.



The following tax assessments are currently underway:

**IRPJ/CSLL – Normus** – the subsidiary Normus Empreendimentos e Participações Ltda. was served a tax notice in December 2007, by the RFB (Brazilian Internal Revenue Service), for having supposedly failed to pay corporate income tax (IRPJ) and social contribution (CSLL) on income earned abroad by a subsidiary and recognized in Brazil as a presumed dividend payout, relating to the financial years 2002 to 2006. The adjusted amount of the fine applied under this notice was R\$470 million.

In October 2011, the decision handed down by the Administrative Council for Tax Appeals (CARF) was published, which opted, based on the casting vote, following a split decision amongst the six members, to uphold the tax notice. The management is awaiting the formal notification of the agreement to enter a suitable appeal while the case is still in the administrative sphere.

In September 2011, the subsidiary Normus Empreendimentos e Participações Ltda. received another tax notice from the RFB, involving a fine of R\$50 million, for alleged failure to pay corporate income tax and social contribution on income earned abroad by a subsidiary and recognized in Brazil as equity adjustment, relating to the 2007 financial year. The subsidiary in question, which was founded and operates in Hungary, is responsible for selling pulp in the world market.

It is our understanding, and the opinion of our independent legal advisors, that the Hungarian subsidiary is subject to full taxation on its operations in the country where it was set up, and that, consequently, the position adopted by the RFB is in direct contravention of certain rules of national judicial procedure, notably the treaty between Brazil and Hungary to avoid double taxation, which exempts from taxation in Brazil any profits earned by subsidiaries established in Hungary.

A Procedure for a Declaration of Unconstitutionality (ADI) No. 2,588, brought by the CNI (National Confederation of Industry) was submitted to the STF (Federal Supreme Court) in 2001. The aim of this legal procedure is to question the constitutionality of article 74 of Provisional Measure No. 2,158, which introduced the levying of corporate income tax and social contribution on income earned by a foreign-based subsidiary or affiliate, independent of whether that income is available to the parent or associated company in Brazil.

On August 17, 2011, the STF held a new session to judge the ADI in question, with five votes cast in favor of the constitutionality of article 74 of Provisional Measure No. 2,158 and four votes against. The session was suspended, to await the decision of the head of the STF, Minister Joaquim Barbosa, who has yet to vote on the case.

Given the outcome of the aforementioned judgment session, the company's internal and external legal advisors decided to adopt a more conservative stance in regard to the possibility of incurring losses, previously classified as remote and now considered to be possible, as of 2011.

**IRPJ/CSLL – Newark** – Two tax notices were issued against the company, in December 2007 and 2010, demanding payment of corporate income tax and social contribution on income earned by the subsidiary Newark and recognized by Fibria as equity adjustment. However, this income, considered to be earned by the subsidiary, was in fact a dividend distribution by a Brazilian company, so the amount has already been taxed in Brazil. The current adjusted value of the fines imposed under the two tax notices amounts to R\$71 million. Based on the opinions of the company's internal and external legal advisors, the possibility of incurring losses in relation to the first tax assessment (December 2007) is remote, and in relation to the second (December 2010) is possible. As a result, no provisions have been made.



**IRPJ – BEFIEIX** – The company has been served notice for having offset tax losses, calculated during the validity of the BEFIEIX program, following over six years of said losses. The adjusted value of the fine imposed under this notice is R\$50 million and, based on the opinion of its internal and outside legal advisors, the company has made no provision for losses.

All these fines are considered to be significant and they are always disclosed in the company's financial statements. Since they are the result of different interpretations of the tax legislation, they have all been contested and are awaiting a decision in the administrative sphere.

Every quarter, the legal area sends the accounting area a report on all civil, labor and environmental claims against the company, indicating the probability of success in each case, the amounts involved and the amounts that should be provided for. The accounting aspects of the report are verified by outside auditors. With regard to legal information that is put into the GR-5 system, the company's legal area is also subject to external auditing that verifies compliance with the Sarbanes-Oxley Act (SOX), which aims to protect companies against fraud and minimize business risk.

**Labor claims** – The company is a party to 54 administrative claims currently in progress, filed by the Ministry of Labor and Employment and by the Labor Department of Justice, estimated at R\$1,137,484.67. The matter consists mainly of an investigation of compliance with, and adoption of health and labor safety procedures, work environment and provision of Personal Protective Equipment (PPE), regular status of hours of work established in law and grant of break for rest and meal, compliance with the legally required number of minor apprentices and people with special needs or re-qualified and outsourced professionals.

The main matters are as follows:

**Ousourcing:** Fibria is a defendant party to three administrative law suits filed in Mato Grosso do Sul, Bahia and Minas Gerais claiming corrective actions on hiring the manpower required for plantation, dressing, forest handling, felling and transportation of wood.

**Minor apprentices, people with special needs and re-qualified professionals:** Fibria is a defendant party to administrative law suits filed at its regional offices to verify compliance with the legally required number of minor apprentices, people with special needs and professionals requalified by the National Institute of Social Security (INSS).

**Lawsuits regarding Aracruz Celulose losses** – Fibria is a party to two legal claims on derivative losses by Aracruz Celulose (one of the companies which formed Fibria) which occurred in 2008, namely:

1) Class action filed with a federal court in the United States of America by purchasers of Aracruz Celulose shares between April 7 and October 2, 2008, claiming non-specified compensation and reimbursement of expenses, on an alleged Company's failure to disclose derivative operations. Fibria has already tendered its defense and awaits the completion of the search of evidence stage.

2) Claim filed by the Aracruz Celulose shareholders, formulated in view of the resolution made by the General Special Meeting held on 11/24/2008, against Isac Roffé Zagury, former CFO of the company, as the party responsible for losses on derivative operations in 2008, allegedly without observing the limits set in the financial policy of Aracruz Celulose. The Brazilian Securities and Exchange Commission (CVM) initiated administrative proceedings, presently in progress, to determine the ultimate responsibility of directors, officers, members of the Fiscal Council, independent auditors and shareholders on those losses.

**Legal claims in the interior of the State of São Paulo** – Fibria is a party to three legal claims in connection with its forest activities carried out in specific areas of two municipalities of the State of São Paulo. The status of these claims at 12/31/2011 was as follows:

1) Claim No. 0001195-88.2007.8.26.0579, initiated on 11/13/2007 at the Judicial District of São Luiz do Paraitinga (SP) by the Public Defender's Office of the State of São Paulo against Votorantim Celulose e Papel (a company which formed Fibria); Municipality of São Luiz do Paraitinga; Suzano Papel e Celulose, and the State of São Paulo. The claim questions the plantation and felling of eucalyptus by the aforesaid forest companies in consideration that an Environmental Impact Assessment (EIA) study be carried out and a related report be issued. Fibria questions the existence of environmental risks and damages, alleging that it is not right to submit the plantation activities to the preparation of EIA, since there is no potential significant degradation pursuant to article 225, paragraph 1, item IV of the Federal Constitution, as certified by both the Ministry of Environment (Regulatory Procedure No. 03/2009) and the former DEPRN (Administrative Ruling No. 16/1993). Current status: after a preliminary injunction was granted at lower courts, suspending new plantations of eucalyptus in the Municipality of São Luiz do Paraitinga, an inspection is to be made to determine damages, if any. The case records are with the Higher Court of Justice (STJ) and with the Federal Supreme Court (STF) awaiting the reporting justice's conclusion.

2) Claim No. 0000519-38.2010.8.26.0579 (Calipso Farm), initiated on 07/29/2010 at the Judicial District of São Luiz do Paraitinga (SP) by the State Public Prosecution Office against Fibria Celulose S.A. The petitioner alleges that eucalyptus has been planted in Permanent Preservation Areas located at the top of hills and river banks, and that the Calipso Farm's Legal Reserve is insufficient, since it is not at least 20% of total size of the property. Current status: on 10/13/2011 Fibria filed an appeal against the Federal Prosecution Office MPF interpretation of the regulations, which define a Permanent Protection Area at the top of a hill, whereupon it understands that no corrective action is required in its plantations in the aforesaid areas; it also indicated unconstitutionality of CONAMA Resolution No. 303/2002 and CETESB Directors' Decision No. 148/2010/L; alleged to have complied with Environmental Recovery Liability Commitment No. 109/2007, regarding the recovery of 3.57 hectares of a Permanent Protection Area at river banks, reason for which it has already taken corrective actions on plantations which allegedly covered the protected river bank; and reaffirmed that the registered Legal Reserve area does abide by the required minimum of 20% of total size of the property.

3) Claim No. 0000950-48.2011.8.26.0220, initiated on 02/03/2011 at the Judicial District of Guaratinguetá (SP) by the Public Defender's Office of the State of São Paulo, whose defendants are Fibria Celulose S.A., the Public Finance Office of the Municipality of Guaratinguetá and the Public Finance Office of the State of São Paulo. The claim questions the plantation and felling of eucalyptus by Fibria, based on the understanding that these activities depend on the Environmental Impact Assessment (EIA) study, besides considering that these activities are being carried out in a Permanent Preservation Area, with no Legal Forest Reserve and damages to the water, soil and other environmental assets. Fibria alleges it is not right to submit the plantation activities to the preparation of a EIA study, since there is no potential significant environmental degradation pursuant to article 225, paragraph 1, item IV of the Federal Constitution, as certified by both the Ministry of Environment (Regulatory Procedure No. 03/2009) and the former DEPRN (Administrative Ruling No. 16/1993), and also by the fact that none of its farms in Guaratinguetá is larger than 1,000 hectares, which removes the application of Resolution No. 01/86. Current status: after a preliminary injunction was granted to suspend the plantation of eucalyptus in the municipality of Guaratinguetá, and this decision was upheld by the appeal filed by Fibria, the company filed an appeal by way of case stated on 07/22/2011.

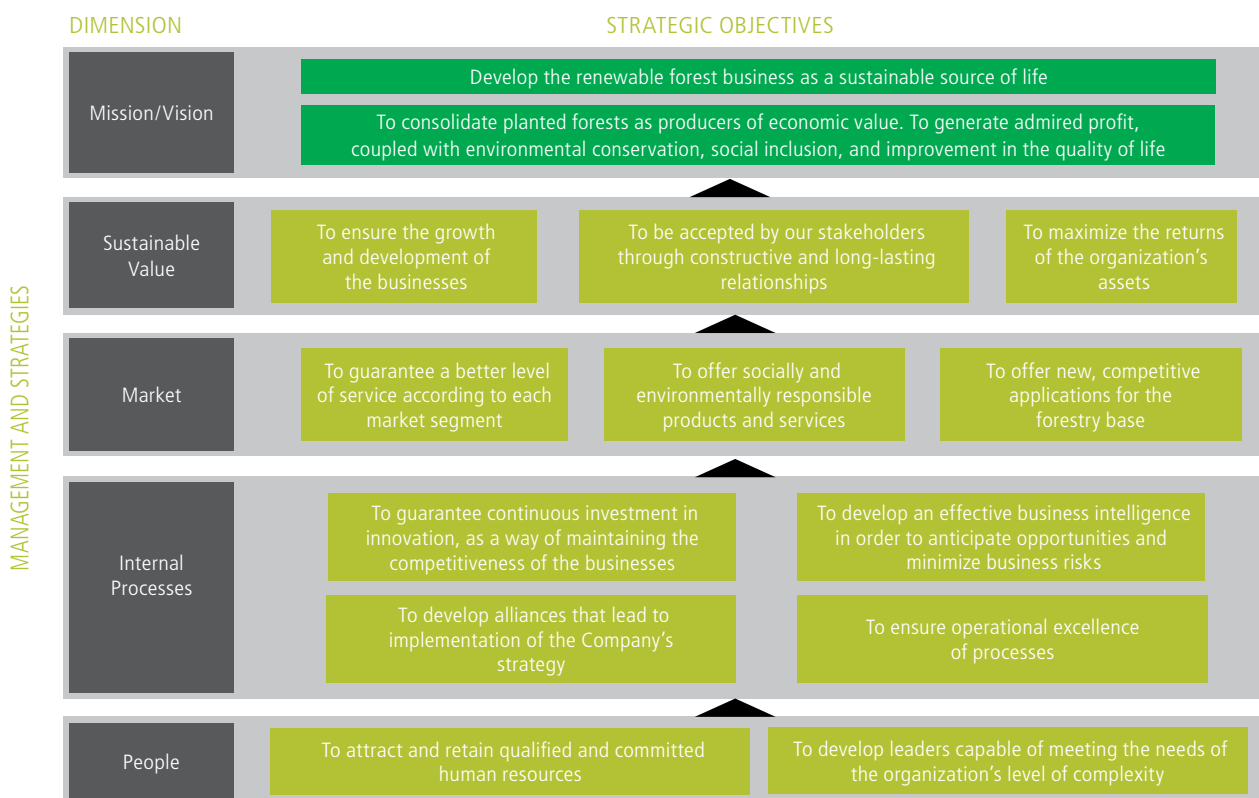


## Strategic planning

Fibra adopts the Management by Guidelines concept, which prioritizes the achievement of results, supported by performance evaluation tools. The company's management is guided by the Balanced Scorecard (BSC) methodology, which takes into account four different perspectives in the search for optimum results: financial capacity, client portfolio, internal business processes and the potential for learning and growth. Fibria adopted the BSC principles in 2011 and is in the process of validating management indicators related to strategic objectives, which will be published in 2012.

In the implementation of projects, Fibria uses the Lean Six Sigma program. The model is based on a project management methodology for the review and simplification of administrative and industrial processes. The goal is to reduce waste and failures, and promote improvements in high-impact results for the business. In 2011, 100 professionals dedicated themselves to the Lean Six Sigma program, conducting 69 projects that provided an additional R\$50 million in EBITDA (earnings before interest, taxes, depreciation and amortization).

Fibra's management indicators are derived from two goals presented in the company's strategic map.



The Balanced Scorecard was the methodology chosen.

#### Balanced Scorecard (BSC)

System for measuring performance in implementing the company's strategy, in relation to its strategic goals, mission, vision and its stakeholders' aspirations.



- Clarify and translate the vision and strategy to the company
- Communicate and associate goals and strategic measures
- Plan and establish targets aligned with strategic initiatives
- Improve the strategic learning process

The BSC does not indicate the path, but the destination (vision, mission and aspirations). What defines the path is the strategy, the BSC will measure the progress along the path (by systemic indicators linked to strategic objectives) if the company is moving away from or approaching that destination.

Fibra is currently validating the BSC indicators, as well as defining their targets. The goal is that in 2012 all of the strategic indicators are implemented with their respective targets agreed on and disclosed. These systemic indicators should transmit the information in a clear and reliable way.

## Integrated Management Policy

Fibria identifies and manages business risks and their impacts on the environment, society, health and safety professionals and the quality of its products and services with a commitment to:

- Act ethically and with respect for people (striving to always be open to dialogue and in accordance with applicable laws, rules and commitments);
- Deploy the strategic guidelines (in order to meet the needs and expectations of clients, suppliers, professionals, communities, governments, shareholders and other stakeholders);
- Build lasting relationships (particularly with suppliers and clients involving demand and supply of differentiated products, services and business skills, with perceived value);
- Ensure the solidity and sustainability of the business (through the dominion and control of processes, acting in the prevention and reduction of operating risks and environmental and social impacts, with emphasis on health and safety);
- Act in an entrepreneurial and innovative manner (to promote continuous improvement of the management model and processes, products and services);
- Ensure the excellence of its practices and outcomes (through the constant qualification and valuation professionals of the joining of internal and external efforts and the responsible exercise of leadership).

Compliance with these guidelines is monitored in monthly meetings that review the results in Industrial and Forestry Units, offices, and in Fibria corporate headquarters.

## Certification ★

Fibria's management systems are certified by independent institutions, which endorse the company's environmental conservation efforts and its adoption of responsible practices in its pulp production. Fibria's Units are periodically audited by the certification bodies, to verify that the standards are being met and ensure the continual improvement of the process.

Among other benefits, certification guarantees the availability of forest resources and the perpetuity of the business, distinguishes the company in the market, boosts its relations with society and strengthens and consolidates Fibria's reputation as a socially and environmentally responsible company.

### Fibria's Certifications

Fibria has been awarded the following certifications:

#### ■ Quality Management System – ISO 9001

Valid certification for the Aracruz (all activities, since 1993), Jacaré Industrial (2000), Capão Bonito Forestry (2006), Vale do Paraíba Forestry (2006), and Três Lagoas Forestry (2008) Units and the Central Administration in São Paulo (2006). In 2011, all these Units were recertified and the Três Lagoas Industrial Unit initiated its certification process.

#### ■ Environmental Management System – ISO 14001

Valid for the Aracruz (all activities, since 1996), Jacaré Industrial (2004), Capão Bonito Forestry (2006), Três Lagoas Forestry (2008), and Vale do Paraíba Forestry (2006) Units, and the Santos Port Terminal (2004). In 2011, the certification of these Units was renewed and the process of certification of the Três Lagoas Industrial Unit was begun.



### ■ Occupational Health & Safety Management System – OHSAS 18001

Valid certification for the Santos Port Terminal (since 2006). The terminal was recertified in the fourth quarter of 2011.

### ■ Forest Management

This certification seeks to attest to the fact that the forest management is environmentally sound, socially equitable and economically viable. There are two forest certification schemes in Brazil:

- Forest Stewardship Council® (FSC®)
- Brazilian Forest Certification Program (CERFLOR) that is recognized internationally by the Programme for the Endorsement of Forest Certification Schemes (PEFC)

The Capão Bonito (since 2005), Vale do Paraíba (2006) and Três Lagoas (2009) Forestry Units have all been certified and awarded the FSC® seal. All three were also recertified in 2010, for a period of five years, and continuing certification was confirmed by independent audits carried out in 2011. In order to obtain this same certification, the Aracruz Unit joined the SmartStep program (see item 7.3.2) in 2011.

The CERFLOR seal, approved by the PEFC (Program for the Endorsement of Forest Certification Schemes), certifies the forest management at the Aracruz (in Bahia and Minas Gerais since 2004 and in Espírito Santo since 2005) and Três Lagoas Forestry (2009) Units. To see Fibria's CERFLOR (PEFC) certificates, go to <http://register.pefc.cz/search1.asp>. For information about Fibria's FSC® certifications, go to <http://info.fsc.org>.

### ■ Chain of Custody

In Brazil, the Jacaré (since 2006) and Três Lagoas (2009) Industrial Units, the Santos Port Terminal (2010) and Central Administration (2010) are all certified under the FSC® seal. All these Units were recertified in 2010, valid for a period of five years, and continuing certification was confirmed by independent audits carried out in 2011. Outside Brazil, Fibria Trading International Kft (2008), Fibria Celulose USA Inc. (2008), and the Central Administration (2010) are all certified by the FSC.

CERFLOR (PEFC) Chain of Custody certification has been awarded to the Aracruz (2006) and Três Lagoas (2009) Industrial Units, Fibria Trading International Kft (2006), and Fibria Celulose USA, Inc (2006).

## SmartStep Program

Under its strategy of obtaining certification for all its Units and activities, Fibria is working to obtain the FSC® seal for its forest management and Chain of Custody at the Aracruz Unit. To this end, in January 2011, the company signed a contract with IMAFLORA (Institute for Agricultural and Forest Management and Certification) to align the production processes of that Unit with the Principles and Criteria of the FSC. This program, called SmartStep, was developed by the international organization Rainforest Alliance, which is represented in Brazil by IMAFLORA.

Based on IMAFLORA's own assessment, that identified gaps in relation to the Principles and Criteria Fibria drew up an action plan for the Aracruz Unit that involves around 500 steps for alignment in the environmental, social, and operational spheres and with respect to workers' rights. Implementation of these measures, under the scrutiny of IMAFLORA, is being carried out to the letter. The most recent audit of the Aracruz SmartStep program took place in October 2011, with approval of all the actions carried out and confirmation of the timetable to seek FSC® certification in 2013.

CERTIFIED FOREST AREA (2011)<sup>1</sup>

Unit	Total area (ha)	Area certified by the FSC®	Area certified by CERFLOR
Três Lagoas <sup>2</sup>	350,201	226,659.24	238,373.90
Jacareí	161,086	158,512.71	—
Aracruz	355,288	—	364,885.80
Capão do Leão	107,841	—	—
<b>Total</b>	<b>974,417</b>	<b>385,171.95</b>	<b>603,259.70</b>

1. In hectares. Does not include 50% of Veracel.

2. The certified area includes new land bought and leased for the formation of forests that will supply wood to the new factory to be built in Três Lagoas.

In order to trace the origin of the uncertified wood provided by suppliers, Fibria set up the Verification Program of Controlled Wood / Wood from Controversial Sources, placing on the company's forest partners a set of responsibilities and procedures to be followed, such as training requirements, listing wood sources, making a public commitment not to purchase illegal wood and setting up a whistleblowing hotline for reporting any irregularities. In 2011, the company completed an analysis of the forest partnership areas, with a view to identifying any gaps in relation to the FSC® Principles and Criteria and pursuing their future certification.

## Forthcoming challenges

Among Fibria's targets for the coming years are FSC® certification of the Aracruz Unit's forest areas, ISO 9001 and ISO 14001 certification of the Três Lagoas Industrial Unit and ISO 18001 certification of all the company's Units. Another challenge is to contribute towards enhancing the forest management adopted by its forest partners (independent producers supplying wood to the company), so that they too can obtain FSC® and CERFLOR certification.

## Sustainability

### Sustainability context

Fibria's sustainability strategy is based on the responsible use of natural resources, promoting the development and well-being of local communities and the restoration and conservation of native ecosystems. It also involves continual investment in training and motivating the company's professionals, administrative transparency, a rendering of accounts and keeping the channels for communication with society permanently open.

We understand that, by directing the management of our business in such a way, we are developing customer loyalty, making employees proud of their company, enhancing the confidence of investors, suppliers, partners and neighbors, and sharing the values of all our stakeholders. Our commitment to the future, spelt out in the company's mission – to cultivate forests as a renewable and sustainable source of life – enables us to earn respectable profits while meeting societal expectations increasingly aware of the delicate state of equilibrium of the planet Earth.

To that end, back in 2009, we defined a set of Sustainability Goals and Targets and created an Internal Sustainability Commission, comprising managers from different areas of the company, to monitor the performance in relation to the commitments undertaken. We also established a Sustainability Committee, comprising company representatives and professionals from different areas of expertise who are not members of staff, under the coordination of Fibria's chairman, José Luciano Penido. Fibria publishes the results of the Sustainability Goals and Targets, which are revised on an

annual basis, at the end of each fiscal year. The 2011 results can be seen on pages 55 to 59 of this report, or on the company website, at: [www.fibria.com.br](http://www.fibria.com.br).

## Sustainability strategy

### Long-term commitment ★ ✓

In 2011, upon the recommendation of the Sustainability Committee, Fibria reinforced its commitment to this issue by introducing a set of Long-Term Targets that signal the company's path to 2025. The definition of these targets was based on a systems thinking methodology, carried out through a series of workshops over three months involving 40 executives from 12 different areas of the company with the coordination of experts from the University of the Vale dos Sinos (UNISINOS).

The discussions, took into consideration priority issues outlined in Fibria's Materiality Matrix and social and environmental risks identified in the Enterprise Risk Management (ERM) tool, and identified a set of 90 variables that directly or indirectly affect the management of forests and the production and sale of pulp. These variables have been grouped and form six key themes that will guide Fibria's activities towards 2025: market and return to shareholder; ecoefficiency; forest management model; relationship and communication with stakeholders; social acceptance and legitimacy; management of personnel and organizational culture.

The intersection of these issues led the company to establish Long-Term Targets for 2025. These targets are not exhaustive or static and can evolve or include new commitments, as the market, company or society demand it. Additionally, the Long-Term Targets do not replace the conventional tools of management, including Short-Term Targets, which will be aligned with the Long Term.

The 2025 Long-Term Targets are the following:

#### Goal: optimize the use of natural resources

*Target: reduce by one-third the amount of land required for the production of pulp*

**How:** increasing productivity from 10 tonnes of pulp per hectare per year, in 2011, to 15 tonnes of pulp per hectare per year in 2025, through:

- traditional genetic improvement
- improvement in forest management
- increase in industrial productivity

#### **Benefits:**

- lower concentration of land
- greater availability of land for other purposes
- increased competitiveness and greater return to shareholders

#### Goal: contribute to the mitigation of the greenhouse effect

*Target: double the carbon absorption from the atmosphere*

**How:** increasing net capture from 5.5 million tCO<sub>2</sub>eq, in 2011, to 11.1 million tCO<sub>2</sub>eq, in 2025, through:

- increase in forest areas (eucalyptus plantations and native reserves)
- restoration with native species of degraded pasture areas

**Benefit:** reducing atmospheric concentrations of greenhouse effect gases

*Note: net annual capture is defined by the difference between the total capture by planted and native forests and the direct and indirect carbon emissions from forestry, industrial and logistics operations throughout the cycle of production of pulp, from the nursery to the customer.*

**Goal: protect biodiversity**

*Target: promote environmental restoration in 40 thousand hectares of own land, between 2012 and 2025*

**How:**

- plantation of native species
- stimulate the natural regeneration of native species

**Benefits:**

- enrichment of fauna and flora, including endangered species, in the Atlantic Rainforest and the Cerrado biomes
- expansion of environmental services – carbon capture and water availability and quality, among others – areas whose original features have been altered due to human activity

*Note: target does not consider Fibria's support in restoration projects in third party land, developed in partnerships with other organizations.*

**Goal: increase ecoefficiency**

*Target: reduce by 91% the amount of industrial solid waste disposed at landfills*

**How:** decrease from 60 kg per tonne of pulp in 2011 to 5 kg per tonne of pulp in 2025

- reduction in the generation of waste by the mills
- reuse of waste in the soil

**Benefits:**

- reduction of the impacts and risks caused by industrial landfills
- increase in ecoefficiency of the company's production processes
- reduction in costs for the disposal of waste and substitution of supplies

**Goal: strengthen the interaction between business and society**

*Target: reach 80% of approval rate in neighboring communities*

**How:** elevating the approval rate in neighboring communities from 50%, in 2011, to 80%, in 2025, through:

- improvement in the quality of relationship with the communities
- support for local development projects
- inclusion of the community in the company's value chain

**Benefits:**

- harmonious coexistence with the neighboring communities
- enabling environment for local development

*Note: approval rate measured through research*

## Goal: strengthen the interaction between business and society

*Target: help the community make self-sustaining 70% of income generation projects supported by Fibria*

**How:** increasing self-sustaining projects from 5% in 2011 to 70% in 2025, through:

- expansion of the Rural Territory Development Program (PDRT)
- promotion of technical and management training, through partnerships and support of consultants
- attraction of other partners

### Benefits:

- social inclusion of communities, reducing their socioeconomic vulnerability
- protagonism of the community in its development
- increased managerial and technical skills of community members
- autonomy of the communities in relation to the private and public sectors
- stimulation of the construction of social capital
- reduction of conflicts and maintenance of good relations with neighboring communities

"Fibria's long-term targets were built using the systems thinking model. It is a scientific methodology that involves a set of steps and has been applied to complex situations. Through systems thinking it is possible to reach a convergence of ideas and make adjustments, for example, to strategic planning. Fibria has innovated by using systems thinking to define tangible sustainability targets. In addition, the targets were defined with the company's employees. Systems thinking gives meaning to people who are involved in building this vision from the beginning. This methodology is important, including to minimize natural resistance to change. People are more resistant when they do not understand the reasoning. In the end, we came to the synthesis, the convergence between the parties."

*Luis Henrique Rodrigues, UNISINOS professor and technical coordinator for Fibria's Long-Term Targets*

## Short-term goals and targets ✓

In addition to its long term commitments, Fibria established short term goals. These were also created based on the company's Materiality Matrix and are complementary to and support long-term commitments. The goals are:

- Goal 1 – Improve community relations through engagement and measures that promote their economic and social development.
- Goal 2 – Develop activities related to the climate change process.
- Goal 3 – Review forest development models by adapting them to new guidelines.
- Goal 4 – Restore natural forest areas.
- Goal 5 – Promote Fibria's supply chain development, awareness and engagement.
- Goal 6 – Increase eco-efficiency.
- Goal 7 – Certify Fibria's forest areas.
- Goal 8 – Strengthen ties with civil society.
- Goal 9 – Consolidate sustainability in Fibria's governance.

In 2011, 23 targets were defined based on the sustainability goals, of which 9 were fully achieved, 11 partially and 3 not achieved, as described in the table below.



Goals	2011 targets	Results	Related Materiality Matrix theme	Related long term target
<b>1 - Improve the relationship with neighboring communities through engagement and measures that promote their social and economic development.</b>	Help finalize and implement the Sustainable Development Plan in northern Espírito Santo and southern Bahia State Coasts (Costa das Baleias Development Plan, under the leadership of the Bahia State Government, and North Coast Development Plan, under the leadership of the Espírito Santo State Government).	<b>Partially achieved target:</b> The Sustainable Development Plan of the Whale Coast and officially launched by the government of Bahia – planned for early 2012. But the North Coast Development Plan still depends on government decisions by the Espírito Santo state.	5 – Strategy / commitment to sustainability  6 – Relationship with neighboring communities  10 – Relationship with specific communities	Reach 80% of approval in neighboring communities.  Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Carry out the 2011 Community Relationship Plan by establishing a dialogue with neighboring communities around Fibria's mills in five Brazilian States at different levels, to discuss the impact of the company's forestry and industrial operations on those communities. Direct engagement with 10 communities is expected in 2011, in addition to operational dialogue with 75 other communities and development of a face-to-face agenda with the remaining communities.	<b>Target fully achieved,</b> with the engagement of 28 communities (2 in São Paulo State, 1 in Mato Grosso do Sul, 9 in Espírito Santo and 16 in Bahia). The operational dialogue in another 87 communities (SP, MS, ES, BA and RS). Learn more in the Chapter Relationship model, p. 76.	5 – Strategy / commitment to sustainability  6 – Relationship with neighboring communities  10 – Relationship with specific communities	Reach 80% of approval in neighboring communities.  Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Devise and implement a benchmark settlement project model in agroforestry production with biodiversity benefiting 800 families.	<b>Fully achieved target.</b> The Project was implemented in August 2011, benefiting over a thousand families in Southern Bahia. Learn more in the Chapter Relationship with Landless movements, p. 82.	10 – Relationship with specific communities	Reach 80% of approval in neighboring communities.  Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Implement the Rural Territory Development Program (PDRT) in 16 traditional communities (12 from Bahia State and 4 from Espírito Santo State) and priority groups based on integrated agricultural production in conjunction with local partners, aimed at improvements in production, technical assistance, cooperative partnership, agricultural certification and differentiated sales.	<b>Fully achieved target,</b> with the Program implemented in 25 communities (9 in Espírito Santo and 16 in Bahia), directly benefiting 712 families. Learn more in the Chapter Relationship with black communities, p. 53.	10 – Relationship with specific communities	Reach 80% of approval in neighboring communities.  Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Expand the Votorantim Partnership Project for Education from 7 to 13 municipalities, 2 of which in Espírito Santo, 3 in Bahia, 4 in São Paulo, 2 in Mato Grosso do Sul, and 2 in Rio Grande do Sul states.	<b>Partially achieved target,</b> with participation in 14 municipalities, although not with the planned distribution. Learn more in the Chapter Relationship with communities, p. 74.	6 – Relationship with neighboring communities  10 – Relationship with specific communities	Reach 80% of approval in neighboring communities

Goals	2011 targets	Results	Related Materiality Matrix theme	Related long term target
<b>2 – Develop activities related to the climate change process.</b>	Engage Fibria's supply chain in the carbon footprint inventory through the Carbon Disclosure Project (CDP) Supply Chain.	<b>Target fully achieved.</b> Critical suppliers participated in a workshop and committed to adopt measures to reduce GHG emissions. Learn more in the Chapter Suppliers, in p. 102.	9 – Emissions, effluents and waste	Double the carbon absorption from the atmosphere
	Update the carbon inventory across the entire production process, from seedling nurseries to the ports of destination (Carbon Footprint).	<b>Fully achieved target.</b> Fibria updated its carbon inventory. Learn more in the Chapter Climate governance, p. 159.	9 – Emissions, effluents and waste	Double the carbon absorption from the atmosphere
<b>3 – Review the forest development models by adapting them to new guidelines.</b>	Establish a methodology and certify agricultural products originated from these systems.	<b>Fully achieved target.</b> Fibria collaborated in the creation of an agricultural product certification methodology of IMAFLORA. Learn more in the Chapter Agroforestry, p. 135.	6 – Relationship with neighboring communities 10 – Relationship with specific communities	Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Develop and implement a family forest model.	<b>Target partially achieved.</b> The family forest model was developed, but has not yet been implemented.	6 – Relationship with neighboring communities 10 – Relationship with specific communities	Help the community make self-sustaining 70% of income generation projects supported by Fibria
<b>4 – Protect and enhance natural resources.</b>	Improve the quality of natural habitats through restoration of biodiversity in 4,000 hectares of degraded areas in São Paulo, Espírito Santo, Bahia and Minas Gerais states.	<b>Target not achieved:</b> 2,800 hectares of degraded areas were restored. Learn more in the Chapter Biodiversity, p. 137.	1 – Impact of eucalyptus plantations on biodiversity	Promote environmental restoration in 40 thousand hectares of own land, between 2012 and 2025
	Identify and assess the environmental services for natural ecosystems in Fibria's properties.	<b>Target partially achieved.</b> The ecosystem services were valued experimentally, capturing value only for a few services related to Fibria's operations. Learn more in the Chapter Ecosystem Services, p. 144.	1 – Impact of eucalyptus plantations on biodiversity	Promote environmental restoration in 40 thousand hectares of own land, between 2012 and 2025
<b>5 – Promote the development, awareness and engagement of Fibria's supply chain.</b>	Implement a new sustainability questionnaire model for approval and conduct audit in 50 suppliers according to the sustainability criteria established by the Global Compact principles and FSC® Principles and Criteria.	<b>Target partially achieved.</b> The new sustainability questionnaire for suppliers was approved in September 2011 and is being trialled in 15 companies that supply the Jacaré Unit. Learn more in the Chapter Suppliers, p. 102.	5 – Strategy / commitment to sustainability	–
	Assess, develop and implement a socioenvironmental investment fund for suppliers to be applied to Fibria's priority environment projects and actions.	<b>Target not achieved</b> and transferred to 2012.	6 – Relationship with neighboring communities 10 – Relationship with specific communities	Help the community make self-sustaining 70% of income generation projects supported by Fibria
	Raise awareness of and educate incentivized partners with regard to the FSC® standards and criteria, based on 2010 diagnostic tests.	<b>Target not achieved.</b> A diagnostic test was made and critical certification groups were identified. The awareness process has not yet started.	2 – Certification and voluntary commitments	–

Goals	2011 targets	Results	Related Materiality Matrix theme	Related long term target
	Develop in conjunction with the WWF Brazil a national standard for FSC® certification of groups of small forest producers and service providers.	<b>Target partially achieved.</b> WWF and FSC® Brazil hired a service for the development of a document and are finalizing the timeline for public hearing sessions, field trials and validation with FSC® International. The delay is related to the need to await approval of the new FSC® Principles and Criteria. The official document that kickstarts this process was sent to FSC® in November formalizing the start of the process.	2 – Certification and voluntary commitments	–
<b>6 – Increase eco-efficiency.</b>	Identify the water footprint for wood pulp.	<b>Target partially achieved.</b> In 2011 Fibria developed a Project to evaluate its water footprint throughout its value chain; measuring the usage of water in its entire production cycle, from the nurseries to delivery to clients. Fibria is part of the Water Footprint Network, a group composed of companies that voluntarily measure their water footprint, and was the first forestry company in Brazil to implement this project. Learn more in the Chapter Main commitments, p. 61.	4 – Water use	–
	Implement solid waste facilities (dregs, grits, lime mud and ash) at Jacaré and Três Lagoas Units, so they can be applied as soil amendments in the company's forests thus reducing waste disposal in those Units' landfills by 30%.	<b>Target partially achieved.</b> The facilities have received environmental licenses, but have not yet been implemented. Fibria hired Proactiva to transform inorganic waste in soil acidity amendments. The operation will start in the first semester of 2012 in Jacaré and Três Lagoas, with the expectation of processing 30 thousand tonnes of waste per year in each Unit. Learn more in the Chapter Soil Management, p. 134.	9 – Emissions, effluents and waste	Reduce by 91% the amount of solid waste at landfills
	Prepare a Life Cycle Analysis (LCA) of pulp, from the seedling nursery to the ports of destination.	<b>Target partially achieved.</b> In a partnership with the University of São Paulo (USP) and the NGO Fundação Espaço Eco, Fibria began the LCA study, demonstrating all environmental impacts in the production process up to the ports in Europe, Asia and North America, but this analysis has not been finalized. This study will be finalized in the first quarter of 2012.		–
<b>7 – Certify Fibria's Forest areas.</b>	Implement 100% of the actions planned for 2011 contained in the SmartStep Program Action Plan at the Aracruz Unit.	<b>Target fully achieved.</b> All the actions planned were implemented, and in October IMAFLORA conducted a monitoring process of the Action Plan which showed the company is following the plan. Learn more in the Chapter Certifications, p. 50.	2 – Certification and voluntary commitments	–

Goals	2011 targets	Results	Related Materiality Matrix theme	Related long term target
<b>8 – Strengthen the relationship with civil society.</b>	Continue to participate in study groups of best forest management practices in WWF's New Generation Plantations Project (NGPP).	<b>Target fully achieved.</b> The NGP Project continued with site visits and the publication of a paper "NGP Bioenergy and Carbon Report 2011". Fibria will host a conference of the group in March 2012. Learn more in the Chapter Dialogue with NGOs and forums, p. 101.	5 – Strategy and commitment with sustainability	
	Continue to actively participate in national and international forums for best practice in forest management and sustainability, particularly in The Forests Dialogue (TFD), the Brazilian Forest Dialogue, the Sustainable Forest Products Industry Working Group of the World Business Council for Sustainable Development (WBCSD) and the Global Compact.	<b>Target fully achieved,</b> with Fibria representatives nominated to executive functions in these organizations. Learn more in the Chapter Dialogue with NGOs and forums, p. 101.	5 – Strategy and commitment with sustainability	–
<b>9 – Consolidate sustainability in Fibria's governance.</b>	Develop and implement the "Educating for Sustainability" Program with Fibria's employees and permanent outsourced personnel, in order to disseminate concepts and promote sustainability actions at all company levels, as well as other areas of Fibria.	<b>Target partially achieved.</b> The Program developed and approved by the Executive Board and will begin in 2012.	5 – Strategy and commitment with sustainability	–
	Conduct a discussion panel with Fibria's stakeholders.	<b>Target fully achieved.</b> The Constructive Dialogues event happened in August 2011 with the participation of community members. Learn more in the Chapter Relationship with communities, p. 74.	5 – Strategy and commitment with sustainability	–

## 2012 Targets

Considering the same goals and sustainability targets, we have 22 targets for 2012.

### Goal 1 – Improve the relationship with neighboring communities through engagement and measures that promote their social and economic development.

#### Targets

- Reach 55% favorability in communities neighboring Fibria's operations (related to the long term targets).
- Ensure that 70% of the local development projects supported by Fibria are self-sustaining (related to the long term targets).
- Expand in 30% (from 22 to 29) the number of rural communities involved in the Rural Territory Development Program (PDRT) (continuity from 2011).
- Implement the Sustainable Settlements Project with Agroforestry and Biodiversity in the extreme south of Bahia, benefiting approximately 1,000 families distributed in five farms with a total of 11,000 (continuation of target from 2011).

**Goal 2 – Develop activities related to the climate change process.***Targets*

- Increase the rate of respondents in the Carbon Disclosure Project (CDP) Supply Chain from 71% to 90%.
- Determine and consolidate quarterly results of the carbon footprint, supporting the operational management with immediate actions, as well as internal and external disclosure.

**Goal 3 – Review the Forest development models by adapting them to new guidelines.***Targets*

- Develop and implement a family forest model, aimed at the inclusion of small landowners in the supply of wood for Fibria's forest operations in São Paulo, Mato Grosso do Sul, Espírito Santo and Bahia (target not achieved in 2011).

**Goal 4 – Protect and enhance natural resources.***Targets*

- Start the process of environmental restoration in 2 thousand hectares of conservation areas in the company's properties (related to the long-term goals).
- Develop a pilot-project for the application of valuation of ecosystem services to the company's management practices.
- Begin implementation of the Forest Management Plan of the Private Natural Heritage Reserves (RPPN) Restinga of Aracruz.
- Develop a case study for the exploitation of non-wood forest products in Fibria's conservation areas .

**Goal 5 – Promote the development, awareness and engagement of Fibria's supply chain.***Targets*

- Assess, develop and implement a socioenvironmental investment fund for suppliers to be applied to Fibria's priority socioenvironmental projects and actions (target not achieved in 2011).
- Create and launch a Code of Conduct for suppliers, including sustainability concepts.

**Goal 6 – Increase eco-efficiency.***Targets*

- Finalize the water footprint identification for pulp in the Industrial and Forest Units (target not achieved in 2011).
- Develop a Life Cycle Assessment from the plant nursery to the ports of destination (target not achieved in 2011).
- Reduce in 6.5% the generation of solid waste, from the Industrial Units to industrial landfills, with the start of the operations of treatment units in the Jacaréi and Três Lagoas mills (target not achieved in 2011).

**Goal 7 – Certify Fibria's forest areas.***Targets*

- Ensure FSC® certification of Fibria's forest management areas in Espírito Santo, Minas Gerais and Bahia, of the Aracruz Unit.



## Goal 8 – Strengthen the relationship with civil society.

### Targets

- Continue to participate in study groups of Best Forest management practices in WWF's New Generation Plantations (NGP) (continuity from 2011).
- Continue to actively participate in national and international forums for best practice in forest management and sustainability, particularly in The Forests Dialogue (TFD), the Brazilian Forest Dialogue, the Sustainable Forest Products Industry Working Group of the World Business Council for Sustainable Development (WBCSD) and the Global Compact (continuity from 2011).

## Goal 9 – Consolidate sustainability in Fibria's governance.

### Targets

- Conduct the second discussion panel with Fibria's stakeholders (Constructive Dialogues), in a regionalized manner (continuity from 2011).
- Develop and implement the "Educating for Sustainability" Program with Fibria's employees and outsourced personnel, in order to disseminate concepts and promote sustainability actions at all company levels, as well as other areas of Fibria (target not achieved in 2011).
- Conduct public consultations and disseminate strategic plans for conservation of biodiversity and water resources and to plan for environmental education using the internet.

## Main commitments undertaken (GRI 4.12 and 4.13) ★

**Global Compact** – In 2011, Fibria reaffirmed its commitment to the Global Compact, a UN initiative that seeks to reinforce, within the business community, the adoption of the basic values of human rights, equitable labor relations, respect for the environment and fighting corruption. Fibria's activities in 2011, which are aligned with the ten principles of the Global Compact, are identified in this Report's Content Index (p. 175). More information about the Global Compact can be seen at: [www.unglobalcompact.org](http://www.unglobalcompact.org).

**CDP Investors** – Fibria has participated, in the Investor program of the Carbon Disclosure Project since its inception in 2009. The CDP is an international organization that aims to provide information and guide investors interested in understanding the risks and opportunities associated with climate change. The organization brings together 551 institutional investors and every year invites more than 6,000 listed companies to voluntarily provide information about their climate governance. Learn more about Investor CDP at <https://www.cdproject.net/en-US/Programmes/Pages/CDP-Investors.aspx>.

**CDP Supply Chain** – Fibria was the first forestry sector company in the world to join the Supply Chain program of the Carbon Disclosure Project [see: Suppliers]. In 2011, the company invited 91 of its main suppliers to align themselves with its strategy of restricting greenhouse gas emissions, thereby committing themselves to the best management practices in relation to climate change. The response rate was 71%, an improvement of 29% compared to 2010. Besides disseminating its climate governance practices, Fibria intends to embrace the assessment of risk, actions and opportunities practiced by its main suppliers within its pulp business. Learn more about the CDP Supply Chain at <https://www.cdproject.net/en-US/Programmes/Pages/CDP-Supply-Chain.aspx>.

**New Generation Plantations (NGP)** – This project, created in 2007 by the World Wide Fund for Nature (WWF), involves companies and government agencies evaluating and introducing the best forest management concepts and techniques in silviculture, with a view to conserving biodiversity and meeting human needs. Fibria signed up to the project, pledging to promote the conservation of the ecosystems, the effective participation of stakeholders, economic growth and job creation through its new forest plantations. In 2011, the document NGP Bioenergy and Carbon Report 2011, a compilation of the practices of the participating companies in relation to the issues of bioenergy and carbon, was published. Learn more about the NGP at [www.newgenerationplantations.com](http://www.newgenerationplantations.com).

**Water Footprint Network** – The Water Footprint Network (WFN) is an international foundation that brings together companies that voluntarily assess their "water footprint", which is the volume of water consumed, directly or indirectly, in their production process. Fibria joined the WFN in March 2010, demonstrating its commitment to sustainable development through the strategic management and rational use of water. In 2011, the company became the first in the Brazilian forestry sector to develop a project to assess the water footprint of its value chain, measuring water use throughout the entire production cycle, from the plant nursery to the delivery of the final product to the customer. Learn more about the WFN at [www.waterfootprint.org](http://www.waterfootprint.org).

**Carbon Footprint** – The Fibria Carbon Footprint 2011 report revealed that the company captured, over the course of 2010, a total of 20 million tonnes of carbon in its planted and native forests. The same study estimated that the forestry, industrial and logistics operations of the Jacaré (São Paulo), Aracruz (Espírito Santo) and Três Lagoas (Mato Grosso do Sul) Units emitted approximately 1.6 million tonnes of carbon in the pulp production process, plus another 11 million tonnes from the burning of biomass for power generation. Fibria's carbon balance therefore shows that the company absorbs 1.8 tonnes of carbon for every tonne of pulp produced. The sale of the Guaíba Unit helped to reduce the emission of greenhouse gases (GHGs) per tonne of pulp, which in 2010 was 0.35 tCO<sub>2</sub>/tonne of pulp, by 25% [see: Climate Governance]. In August 2011, Fibria received the final report on the audit to endorse its greenhouse gas emissions inventory, certified by BRTÜV (part of the TÜV NORD Group). Carbon Footprint certification ensures that the inventory is aligned with the international methodologies ISO 14064 and GHG Protocol. Learn more about the Carbon Footprint at [www.carbonfootprint.com](http://www.carbonfootprint.com).

Other commitments can be seen on the website: [www.fibria.com.br](http://www.fibria.com.br).

## Intangible assets

2011 marked the consolidation of the corporate identity after a campaign to embed the Fibria Values (Sense of Ownership, Growing Talent, Excellence, Meritocracy, Pragmatism, Alliance and Open Dialogue) throughout the company. These values were defined through a collective process involving presidents, directors and professionals from various levels of all companies linked to the Votorantim Group.

Presented to the general managers of Fibria in September 2011, the embedding of values was supported by a communication campaign to all employees during the last quarter of the year, using videos, banners, posters and other internal communication, in addition to workshops for the presentation and discussion of the concepts.

The main goal of this process was to strengthen the organizational culture guidelines.

## Image assessment

In December 2011, Fibria held its third assessment survey of its institutional image in order to understand the perception of the local population. In this survey, 1,718 people (above the age of 16) were consulted across the areas where the company operates in Espírito Santo, Bahia (the extreme South), São Paulo (Capão Bonito and the Vale do Paraíba) and Mato Grosso do Sul (Três Lagoas region). The research has a margin of error of 2.4 percentage points, with a confidence interval of 95%.

Some results of this research are presented below in the column 2011, compared to the results of research conducted in March (column 2010/1) and December 2010 (2010/2):

### WHAT IS THE NAME OF THE COMPANY THAT PLANTS EUCALYPTUS / PRODUCES PULP IN YOUR STATE (% OF RESPONDENTS)?

Options	BA			ES			MS			SP			Total		
	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011
Fibria	8.8	10.3	19.5	13.7	19.9	29.7	15.0	37.1	64.4	2.5	21.9	35.3	8.0	18.2	35.9

2010/1: research conducted in March 2010.

2010/2: research conducted in December 2010.

2011: research conducted in December 2011.

- In all states surveyed, there is a tendency to increase the level of knowledge about Fibria as a pulp production / eucalyptus planting company.

### HOW DO YOU EVALUATE FIBRIA WITH RESPECT TO THE IMAGE OF THE COMPANY (% OF RESPONDENTS)?

Options	BA			ES			MS			SP			Total		
	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011	2010/1	2010/2	2011
Excellent or good	62.4	67.4	62.3	67.8	73.4	68.1	79.5	81.7	85.5	81.3	73.7	78.5	72.3	74.4	73.1

2010/1: research conducted in March 2010.

2010/2: research conducted in December 2010.

2011: research conducted in December 2011.

- In terms of overall image, the percentages of "excellent" and "good" improved in São Paulo and Mato Grosso do Sul and decreased in Espírito Santo and Bahia.

## Media Exposure

**Print media** – Fibria was quoted in 6,134 Brazilian and foreign newspaper articles in 2011; most of those articles and reports were positive. News that reported favorable aspects concerning the company represented 67% of the total, while 23% of the news could be classified as neutral, 4% as neither positive or negative (with positive and negative aspects that counter each other) and 6% as negative. The average annual quantitative and qualitative exposure in printed media was 8.6 compared to 7.2 in 2010 (on a ten-point scale).

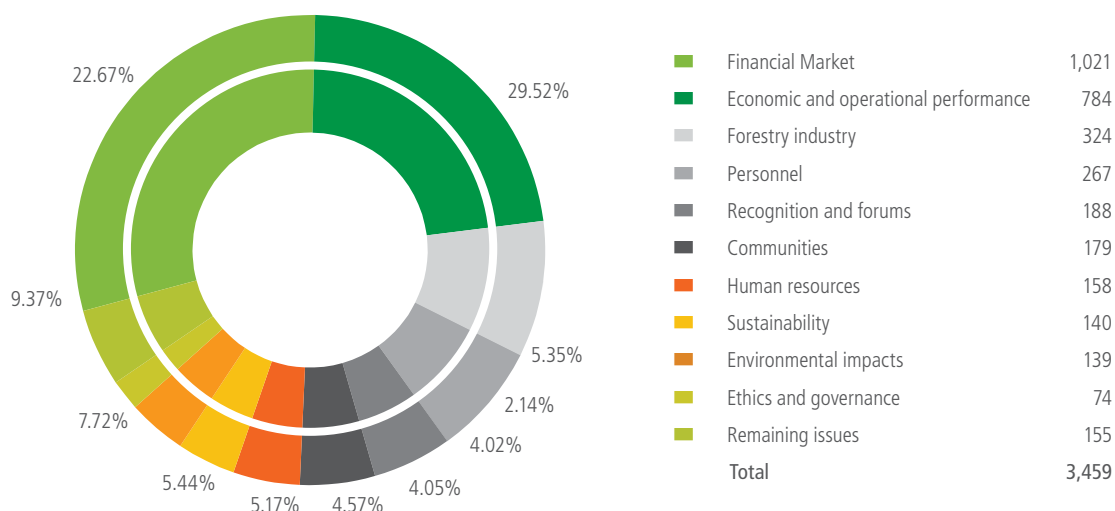
Among the articles evaluated, 4,194 were published via the Internet, 3,166 appeared in regional online vehicles and 1,078 articles appeared in national publications. In the print media, there were 1,898 articles – 413 of which appeared in the national media. For the second year in a row, Fibria was quoted as a model company in the Exame Magazine Sustainability Guide. This year it was mentioned for promoting the integration of food crops and animal breeding into eucalyptus plantations.

**Social media** – In 2011 Fibria was mentioned 3,459 times in social media. 64% of these were positive, 27.7% negative and 8.3% neutral. Of the mentions 89.1% were on Twitter, 7.1% on Facebook, 2.6% on blogs and 1.2% on YouTube.

Over 50% of the references relate to economic topics: “Financial market” (29.5%) and “Economic and operational performance” (22.7%).

### Top 10 issues

Period: 1/1/2011 a 31/12/2011



The videos available on Fibria's YouTube page Fibria no YouTube ([www.youtube.com/fibriacelulose](http://www.youtube.com/fibriacelulose)) were viewed 5,266 times in 2011. The company's institutional video was the most seen with 32.3% of the views.

## Advertising

**Support for the International Year of Forests** – Between December 2010 and late 2011 Fibria participated in a campaign for the International Year of Forests, created by the United Nations (UN). With a view to raising society's awareness of the importance of forest conservation – a foundational principle underpinning Fibria's philosophy – the company was authorized by the UN to display the campaign seal in its communication materials. Throughout 2011 the company addressed forest issues in events, advertising campaigns, publications and social media. The theme is also highlighted in this Report. Learn more at [www.fibria.com.br](http://www.fibria.com.br).

**Value of the Forest Blog** – In September 2011 Fibria launched the blog Value of the Forest ([www.valordafloresta.com.br](http://www.valordafloresta.com.br), in Portuguese only), with the aim of fostering the dissemination and discussion of forestry issues. The purpose of this channel – open to all audiences – is the sharing of information and views on the subject, which can be sent to the e-mail address: [valordafloresta@fibria.com.br](mailto:valordafloresta@fibria.com.br), or posted in the comment fields of the blog.



**"More Forest, More Life" Campaign** – Seeking to promote communication activities that raise awareness of internal and external audiences to the importance of the forestry business and the company's initiatives for sustainable development in the regions where it is present, in 2011 the company embraced the campaign "More Forest, More Life." With one nationwide and several regional versions, the initiative sought to strengthen the relationship with the forests and underscore the interaction between the elements that comprise them.

## Innovation

### "i9 (Innovate\*)" Program – stimulus to and recognition for innovation

Fibria encourages its employees to develop innovative ideas, offering financial rewards to those whose proposals are approved under the "i9" program, which was introduced at all of the company's Units in 2010. All those holding non-executive posts may participate in the program.

During 2011, a total of 543 suggestions were made for reducing costs, increasing revenue, raising productivity, simplifying operating procedures or making some kind of improvement in the work process. Of these, 199 were considered to be viable and 283 individuals were awarded prizes. Quantifiable proposals that lead to financial gains for the company earn the originators between 5% and 7.5% of the net calculated return. Qualitative proposals, which cannot be measured in monetary terms, earn a fixed reward of R\$150. The total rewards paid out in 2011 amounted to R\$455,000. For every R\$1 invested the return amounted to approximately R\$50.97.

At the Jacaré Forestry Unit, for example, the idea put forward by logistics technician Luciano Aparecido Venancio yielded important financial gains from an improvement in the transportation of wood chips. Luciano suggested that the existing weight control structure be set upon a platform, thereby enabling the cargo to be adjusted quickly and safely. As a result, the average wood chip volume transported increased from 50m<sup>3</sup> to 54m<sup>3</sup> per trip, representing annual gains of R\$2,983,304.64 from the increase in volume to 52m<sup>3</sup> and R\$4,383,208.38 from the increase to 54m<sup>3</sup>.

At the Aracruz Unit, Edson Vander Deambrozi, an operator in the Drying Area, had the idea of creating a device that would reduce the dryer restart time, prevent flaws, align the pulp and prevent productivity losses. Edson's idea has generated an annual gain of R\$297,914.67.

Josimar dos Santos Silva, an operator in the Drying Area at the Três Lagoas Unit, suggested changing the set point of the pump outlet and opening of one of the valves, with a view to reducing the dryer restart time. By adopting the new settings, a pulp sheet cross section was obtained that was suitable for restarting the process while avoiding breaks caused by shifting within the dryer, as well as productivity losses. The annual gains totaled R\$879,949.

The "i9" Program seeks to strengthen the culture of innovation, creating value for the business and making the working environment more stimulating and entrepreneurial. Professionals from any area of the company may put forward their ideas, either individually or as a team. The suggestions are evaluated by the management, taking into consideration the benefits to be derived and the technical and economic viability of each proposal.



There are four strategic aims underlying the “i9” Program:

- to reduce fixed and variable costs;
- to increase productivity and the efficiency of the equipment;
- to generate value for the customer; and
- to increase revenue.

\* i9 is pronounced /inove/ in Portuguese, the same as the imperative meaning “innovate”

## Technological innovation

In 2011, our Technology Center developed a series of innovative projects in Forestry Improvements and Management, Biotechnology and the Development of Processes and Products. One of the most important projects led to new genetic materials (see glossary) for the growing of eucalyptus, which will be introduced by the company in all of its plantations in 2012. 30 clones were tested over three years, with five selected for the best combination of performance, safety, quality, efficiency and resistance to the main eucalyptus diseases. These new clones demonstrated good potential for boosting the Annual Average Increase in Pulp (Imacel), measured by the volume of pulp produced in 1 hectare.

Research into genetic improvements (see box on page 67) was also strengthened during the year through the creation of a new biotechnological tool, known as Wide Genomic Selection, which permits the early identification of superior eucalyptus clones through DNA traces (or molecular markers). With this new selection method, never previously used in the forestry sector, Fibria anticipates gains in the productivity and quality of the wood compared to classic genetic improvement projections. Furthermore, there were significant advances in the identification of clones that are more adapted to dry regions.

To be able to comparatively analyze the water conditions in its plantation areas, Fibria merged its monitoring and water resources study methodologies of all of its Units during 2011. The Aracruz Unit’s Micro Watershed Project, which had been reactivated the previous year, was expanded through the construction of a second experimental micro watershed, making it possible to conduct comparative studies between the use of land for pasturing and for eucalyptus plantations. The Project seeks to study the water cycle in detail, the environmental impacts and ecological interactions in a model-landscape that is representative of Fibria’s forest areas in the states of Espírito Santo, Bahia and Minas Gerais.

Regarding Forest Protection, research activities gave priority to the biological control of the Bronze beetle, an insect recently introduced into the country which has already become one of the main eucalyptus pests. The Technology Center analyzes the effectiveness of potential natural enemies of this pest, one of which could be imported from Australia. On another work front, our researchers evaluated the genetic resistance of eucalyptus clones to main diseases. New herbicides were identified and the technical recommendations for management of pests, diseases and weeds were updated. Another important advance was the molecular diagnosis of *Ralstonia sp.*, one of the main pathological agents found in eucalyptus crops.

Studies to determine the critical level of all organic material in the soil involving forest residues were also expanded over the past year. New models were developed to quantify compacting and soil and water losses along with tools for recommending fertilization and studies of controlled-release fertilizers. The company showed gains in the logistics, costs and safety of the application of fertilizers with a reduction in the formulations of nitrogen, phosphorus and potassium (NPK) in the plantations along with increased use of an automated fertilizer management system.

Fibria created a Biodiversity Data Bank in 2011 designed to systematise the studies of fauna and flora in its Units. Methodologies for the collection and storage of data were standardized and a new “Biodiversity Monitoring Plan” for the Aracruz Unit was established. Moreover, field experiments were conducted using birdlife as a bio-indicator of the functionality of the eucalyptus corridors and native vegetation between plantation fragments. Two species, the White-shouldered Fire-eye antbird (*Pyriglena leucoptera*) and Plain-winged Woodcreeper (*Dendrocincla turdina*) were reintroduced into an area of the Aracruz Unit to help recompose the bird community there.

In the industrial area, some projects contributed to optimizing the production of cooking liquor and to deepen knowledge about the cooking and bleaching processes. Models were established for the different stages of pulp production, including advanced cooking controls, seeking greater product yields. There were advances in the understanding of new bleaching technologies, resulting in reduced consumption of chemicals.

The study of the generation of biofuels and bioproducts through biomass, using different technologies, was also conducted. The projects in this sector, which Fibria conducts with strategic partners, are quite promising and make use not only of in natura forest biomass but also the biomass that circulates in the kraft process (see glossary). The Product Development area, which has focused on more and better use of raw materials and energy, has strengthened partnerships between the company and its customers, suppliers and research institutes in Brazil and abroad.

#### Forestry improvements and biotechnology

Fibria’s commercial plantations are made up of highly productive and resistant eucalyptus trees, developed using the conventional genetic improvement technique – the crossing and selection of species and their hybrids that present characteristics that are desired for forest management and the industrial production of pulp. With the adoption of cloning (a technique that permits the multiplication of identical plants from the genetic point of view), many superior trees that result from the improvement program were selected and propagated on a large scale through this method. As a result, the clonal forests have led to significant and continuous gains in wood productivity, uniformity and quality.

In the past decade, with advances in applied biotechnology in the field of forestry development, new technological opportunities have been opened up. This has allowed for greater precision in the selection of the desired characteristics of a new generation of trees more adapted to forestry and industrial processes. Within this line of research, in 2011 new results were obtained through biotechnological techniques, notably the planting of a field experiment with eucalyptus trees genetically modified by Fibria, which represents a new frontier in the development of pulp eucalyptus.

Among the main lines of research in biotechnology developed by Fibria, the highlights are genetic transformation, in which significant advances have been made in recent years. After more than a decade of research with genetically modified eucalyptus in laboratory and greenhouse, 2011 marked the beginning of the first field trials of approximately 5 hectares, located outside areas that are certified or undergoing certification. This type of experiment is an important step in confirming laboratory results, with special focus on issues of biosafety. All research in this area is first reviewed and approved by the National Technical Commission on Biosafety (CTNBio) in accordance with Brazilian law. For more information visit the link [www.ctnbio.gov.br](http://www.ctnbio.gov.br) (in Portuguese).

## Pulp sales

### Pulp logistics

Of the 5.1 million tonnes of pulp produced by Fibria in 2011, 4.7 million (or 92% of total) was exported. Our main market is still Europe, accounting for the purchase of 2.1 million tonnes of pulp last year – followed by North America and Asia, with orders reaching 1.3 million tonnes each.

The production of the Três Lagoas (MS) Unit and Jacaré (SP) Unit is carried by trains to the Port of Santos (SP) and then shipped to Europe and Asia. The pulp from the Aracruz (ES) Unit is carried 4.5 kilometers by trucks to the shipping terminal of Portocel, and then by sea to Asia, Europe and to the United States of America. In 2011, the geographic distribution of Fibria's pulp sales was 41.44% to Europe, 25.17% to North America, 23.35% to Asia and 10.04% to Latin America.

Currently, sea transportation is in charge of shipping companies. In the future, Fibria will rely on a fleet of 20 ships specializing in the transportation of pulp, which will allow an even better service to customers and increase the company's competitiveness. Projected to meet Fibria's specific needs, the new fleet will be used solely by the company. The first ships are expected to start operating in September 2012, using the Port of Santos and Portocel as platforms. The new transportation contract with a dedicated fleet was signed with South Korean company STX Pan Ocean, one of the largest shipping logistics operators in the world.

The pulp leaving the Plants is stored at domestic ports until shipping. Upon arrival of pulp to the country of destination, Fibria is in charge of receiving the load, storing then carrying it through various means until the product is delivered at the distribution centers or at the customers' plants. The U.S. market is served by the Miami (USA) office, while Europe is served by the Nyon (Switzerland) office, and the Hong Kong (China) team serves Asian customers. Fibria's International Logistics area is responsible for taking care of these exports, from the plant to the end customer.

One of the main social impacts of the pulp logistics is the creation of jobs throughout the pulp distribution chain. Also, the security and health of people who work at the pulp distribution chain are management points constantly monitored by Fibria. The emission of gases by internal combustion engines is the main environmental impact from the pulp distribution chain. Fibria uses a suppliers' management process in light of requirements such as maximum age of fleet, validation and maintenance of equipment, penalties for non-compliance with minimum services, which ensure low levels of emission, compatible with the most stringent criteria.

### Product

**Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories are subject to such procedures (GRI PR1)**

Pulp is a stable product under normal handling and storage and poses no hazard to health and safety of the client, having been evaluated in various life cycle stages, with the exception of marketing and promotion.

Any problem with pulp that causes complications due to use, customer product damage, or whose specification is not consistent with those established with the customer (technical, logistics, packaging, etc.), or that causes segregation and/or separation by the client, is formally registered in the Complaints System applicable to each Unit. According to

internal procedures, customer complaints – internal and external markets, are analyzed so that the complaint will result in a technical report. This material is documented and is filed with the commercial area of the Unit.

The pulp produced in Fibria's Industrial Units (Aracruz, Jacaré and Três Lagoas) is in compliance with international standards for use as packaging of various food products, as certified by the German institute ISEGA, in accordance with norms established by the US Food and Drug Administration (FDA).

Fibria has an internal policy for handling pulp and an assessment of product safety (Material Safety Data Sheet – MSDS), the latter identifies the dust on stored pulp as the sole factor causing harm to human health (eyes and inhalation), though in concentrations lower than the exposure limits.

### **Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements (GRI PR3)**

All pulp produced carries the Fibria logo with three characters that indicate the product description (the production unit, the type of product and certification) and the tracking data (year, production date, baling line, lot number and unit number), as well as the barcode that stores all this information.

### **Practices related to customer satisfaction, including results of surveys measuring customer satisfaction (GRI PR5)**

Fibria has a high concentration of sales: about 20 customers account for about 80% of sales. Account Managers therefore serve the customer from the beginning to the end of the process. The Account Managers perform daily tracking of sales, delivery and product development to these customers. Thus, feedback from customers is constant and response time is immediate.

In the second quarter of 2011, Fibria conducted its first customer satisfaction survey, run by an external company. The results will be available during the first quarter of 2012 and will aid the company in developing an action plan for 2012. A satisfaction survey will be conducted every two years.

### **Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion and sponsorship (GRI PR6)**

To carry out its communication and institutional marketing activities, Fibria follows the Brazilian Self-Regulation Advertising Code and its Code of Conduct, launched in 2011. There are no records of fines arising from advertising or marketing activity in 2011.

<b>Codes and voluntary standards related to marketing communication</b>	<b>Frequency with which compliance is assessed</b>	<b>Does the organization sell products that are banned in certain markets? If yes, describe how the organization responds to these concerns about the product</b>	<b>Does the organization sell products that are the subject of questions from stakeholders or public debate? If yes, describe how the organization responded</b>
Brazilian Advertisement Self-regulation Code	No complaints were filed with CONAR	No	No
Fibria's Code of Conduct	Launched in 2010	No	No

### **Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes (GRI PR7)**

Fibria has never had a case of non-compliance concerning the actions of communication and/or marketing. More importantly, Fibria condemns deceptive advertising and marketing initiatives and is known for its respect for the current law, ethics and standards of local and international references.

There are no records of fines arising from advertising or marketing activities in 2010. To carry out the activities of communication and institutional marketing, Fibria follows the Brazilian Self-Regulation Advertising Code, its Code of Conduct and Brazilian Advertising Self-Regulation, which among other things, consider:

- The guidelines of the advertising legislation of the country, especially chapters in Law No. 4680 of June 18, 1965, and Decree No. 57690 of February 1, 1966;
- The recommendations of the International Chamber of Commerce (ICC) and the guidelines of the International Code of Advertising Practice, published originally in 1937 and revised in 1949, 1955 and 1966 and finally in 1973 during the Congress held in Rio January and whose terms have been adopted by Brazil and more than 250 entities from 40 countries;
- The guidelines of the International Advertising Association (IAA – International Advertising Association) and its world congresses, especially those in his study “Effective Advertising Self-Regulation”, published in 1974, and the recommendations of the XXV World Congress held in Buenos Aires in 1976;
- Sustainability Ethical Norms of CONAR: <http://www.conar.org.br/html/noticias/070611.html>.

## Expansion of Três Lagoas Unit

In late 2012 Fibria will set a date for the launch of a second plant in Três Lagoas (MS), boosting production capacity from today's 1.3 million tonnes of pulp/year to 3.05 million tonnes/year by 2014. The investment is estimated at R\$3.6 billion and will employ around 3,000 people in the construction period. The forest base to support this additional production, which is already being formed, comprises nearly 100,000 acres of eucalyptus plantations, of which 70% in areas leased to the company and the remainder on company-owned land.

In June 2011 Fibria held a Public Hearing to present to the population of Três Lagoas an Environmental Impact Assessment study (EIA-RIMA) and other project details. The hearing was coordinated by the Institute for the Environment in Mato Grosso do Sul State (IMASUL) and the State Secretariats for the Environment, Planning, and Science and Technology (SEMAC) and was attended by 600 people. At this stage, IMASUL has granted Fibria an Installation License for the operation and established a Compensatory Measure in the amount of R\$18 million to offset the environmental impacts that cannot be mitigated due to the sheer size of the undertaking.





4

## Social performance

### Introduction

In the following pages, we report Fibria's main initiatives in 2011 with respect to engagement with stakeholders, as well as investment in social projects in neighboring communities. The impacts generated by our industrial and forestry operations and ways to mitigate them are also covered in this chapter, which brings information about the company's relationship with specific communities – such as indigenous, black, fisher and landless workers' movements – and with employees, suppliers, NGOs, government and labor unions. The chapter also includes a report on the views of people who live in regions neighboring Fibria. They comment on the impacts caused by our operations and on our social and environmental initiatives coordinated by Fibria.

### Communication with stakeholders

Fibria has an Ombudsman to handle concerns and suggestions, as well as specific channels for communicating with other parties who have a direct interest in the company's business. Neighboring communities are able to register environmental, forestry or industrial incidents or wood transportation irregularities related to our Forest and Industrial Units through dedicated toll-free telephone numbers.

In 2011, the Aracruz Unit (Espírito Santo state) introduced the *Talk to Fibria Program*, aimed at building a closer relationship with communities in Espírito Santo and the south of Bahia. Call handlers were trained to receive concerns, suggestions and complaints and pass them on to the appropriate areas, which respond to every single case. Moreover, new software is being introduced to manage the program and is expected to be ready in March 2012.

The forest monitoring team, hired from within the local communities, also participates in the *Talk to Fibria Program* and has been trained to represent the company in direct contact with local residents. They record events in an incident log, which enables issues to be brought to the unit's attention. The team is also responsible for explaining how to use the suggestion boxes that are placed at the disposal of the communities participating in PDRT (Rural Territory Development Program) projects. *Talk to Fibria* is also a conduit for messages from the company, through notice boards installed in five communities in four different municipalities, next to the suggestion boxes, and by means of radio programs, such as Community In Action, which will be launched in 2012 and carried by broadcasters in São Mateus (Bahia state) and Teixeira de Freitas (Espírito Santo state). There will be three editions produced each month, which will be broadcast daily, with breaks for the announcement of community activities.



The company also provides exclusive e-mail and telephone contact, available on its website ([www.fibria.com.br](http://www.fibria.com.br)), in relation to personnel management, supplies and the media. In addition, the Investor Relations department has its own site ([www.fibria.com.br/ir](http://www.fibria.com.br/ir)) for the disclosure of information that is of interest to the financial market, as determined in the legislation governing listed companies. In 2011, the IR site was renewed, with the introduction of tools, such as interactive spreadsheets and special areas for disclosure and quarterly results, while segmented content and links on the home page make browsing and access to information easier. The site also has a section devoted exclusively to sustainability.

In order to speed the flow of information between the company, employees in specific areas, the workforce in general and external stakeholders, Fibria has put in place various communication vehicles as outlined in the table below.

Vehicle/Tool	Name	Description	Frequency	Target public
Notice board	<i>Informe-se</i>	Flyers for putting up on notice boards strategically placed in busy locations, in the company's offices and mobile Units (harvesting modules), containing information about regional and corporate events.	Weekly	Employees
Digital notifications	<i>Extra</i>	E-mail disclosure of urgent news, that can be printed out and put on the notice boards.	—	Employees
	<i>Área</i>	E-mail disclosure of information specific to determinate areas, informing the personnel about anything of importance and, in certain cases, promoting changes in attitude or behavior.	—	Employees
	<i>Gestores</i>	E-mail disclosure to leaders within the company of pertinent information promoting interaction between the management and their teams.	—	Employees in leadership positions
Printed journal	<i>Vital</i>	Publication aimed at the Fibria workforce and their families, containing key messages from the company and the main events at the Units.	Monthly	Employees
Intranet	<i>Fibria Net</i>	Making news, documents, services and systems publicly available, with a view to facilitating access to information and reducing the e-mail flow.	—	Employees
Face-to-face communication	Meet the CEO	Regular face-to-face meetings with employees at the company's Units.	—	Employees
Internet	Institutional website — <a href="http://www.fibria.com.br">www.fibria.com.br</a>	Fibria's main channel of communication with outside audiences. It contains all the information that the company makes public, such as news, publications, institutional information, its position on issues, and content of specific interest, as well as resources for communication with stakeholders.	—	Various: clients, suppliers, employees, students, NGOs, government, media
Newsletter	<i>Fibria Notícias</i>	An online bulletin aimed at the audience registered on the Portuguese language page of the Fibria website, providing news on the most important events involving the company.	Weekly	Various: clients, suppliers, employees, students, NGOs, government, media
	<i>Fibria News</i>	An online bulletin aimed at the audience registered on the English language page of the Fibria website, providing news on the most important events involving the company.	Monthly	Various: clients, suppliers, employees, students, NGOs, government, media
Sustainability Report	—	Publication that compiles and discusses the company's principal results and challenges in the environmental, social and economic-financial spheres.	Annually	Various: clients, suppliers, employees, students, NGOs, government, media



Vehicle/Tool	Name	Description	Frequency	Target public
Specific publications	<i>JornalEco</i>	Environmental education publication aimed at students and teachers of the 5 <sup>th</sup> and 6 <sup>th</sup> years of elementary education in the state school network, located in the vicinity of the company's forestry and industrial operations.	Monthly	Students and teachers of the 5 <sup>th</sup> and 6 <sup>th</sup> years of elementary state school education
	<i>Na estrada com segurança</i>	Publication aimed at the drivers working for transport companies that are providing services to Fibria, containing information about safety, health and good driving practices.	Quarterly	Drivers of transport companies providing services to Fibria
	<i>NaFolha</i>	Publication aimed at visitors to the Units, presenting the company and providing a memento of the visit.	—	Visitors to the Units
	<i>EcoCiente</i>	Environmental education publication aimed at the company's own employees and outsourced workers in the forestry area.	Monthly	Forestry workers at the Aracruz Unit
Special publications	Public summary of the Stewardship Plan, institutional folder, and others	—	—	—
Videos	Institutional videos on forest and industrial safety, for training purposes, and on specific topics or areas of the company	—	—	Various: clients, suppliers, employees, students, NGOs, government, media
Communication with investors	Site for investors – <a href="http://www.fibria.com.br/ri">www.fibria.com.br/ri</a>	Communication channel for investors, providing information and features aimed at this audience.	—	Investors in Brazil and abroad
	Disclosure of quarterly results	Face-to-face meetings or conference calls to present the company's quarterly economic, financial and operational results and answer questions about them.	—	Investors in Brazil and abroad, the media and employees
	Fibria Day	Face-to-face meetings between Fibria executives and external audiences, to present information about the company and answer questions.	—	Foreign investors and media
	Public meetings with Brazilian investors	Face-to-face meetings between Fibria executives and investors, to present information about the company and answer questions.	—	Investors in Brazil
Corporate Governance Portal	—	Communication channel with restricted access to news, institutional information and documents relating to Fibria's corporate governance.	—	Members of the Board and the various advisory committees
Programmed Visits	—	Program for receiving visitors and showing the company's forestry and industrial operations, as well as Fibria's socio-environmental projects.	—	Visitors from the communities in the vicinity of Fibria's operations
Constructive Dialogue	—	Initiative promoting dialogue with representatives of groups that the company deals with, such as neighboring communities, churches, NGOs, academic institutions and other stakeholders in the states where the company operates.	—	Various: clients, suppliers, employees, students, NGOs, government, media
Social Media	"Importance of Forests" blog – <a href="http://www.valordafloresta.com.br">www.valordafloresta.com.br</a>	Web Page devoted to disclosure and debate on issues relating to forests.	—	Various: clients, suppliers, employees, students, NGOs, government, media
	YouTube page – <a href="http://www.youtube.com/fibriacelulose">www.youtube.com/fibriacelulose</a>	Fibria has a YouTube page showing institutional content, interviews with company executives and leaders in the sector on topics relating to management, trends, markets, and other matters.	—	Various: clients, suppliers, employees, students, NGOs, government, media

## Communities

### Relationship with communities

Fibria has operations in 254 municipalities in seven Brazilian states (Rio Grande do Sul, São Paulo, Mato Grosso do Sul, Rio de Janeiro, Minas Gerais, Espírito Santo and Bahia), where its mills, eucalyptus plantations, preservation areas and the properties of independent timber producers, on long-term supply contracts, are all located. Consequently, the company maintains relations with several urban and rural communities, in a variety of different situations, which are affected by its forest activities.

A good relationship with the residents of communities located in the vicinity of Fibria's operations is critical to the company's performance. Since it was founded, in 2009, it has invested in engagement and socioenvironmental projects aimed at supporting social inclusion and improved quality of life in these communities. There are programs to encourage professional training of local residents, the employment creation and income generation, land-use planning (backed by specialized consultants), environmental education for community members and, above all, dialogue aimed at seeking mutual solutions. By working to integrate these communities with the forestry business, while at the same time seeking to eliminate or mitigate the impact of its activities, Fibria is reinforcing the social legitimacy of its business.

Fibria's socioenvironmental investments are aligned with the guidelines of the Votorantim Institute<sup>1</sup>, which was established in 2002, and are mainly directed at the following strategic areas:

- Education: labor training and formal qualifications, environmental education, building skills for social entrepreneurship;
- Culture: appreciation and restoring of the local culture and traditional knowledge, conservation of sites of historical or archaeological value;
- Sport: promotion of all kinds of sporting activities, reinforcing the educational development of young people;
- Generating employment and income: creating work and income opportunities, by diversifying the use of the forests and rural properties, promoting local enterprise, and new business opportunities linked to the company's activities;
- Environment: conservation of natural resources, such as biodiversity, water and soil, in all the biomes where the company operates (Atlantic Forest, cerrado, pampa and others), programs of payment for environmental services that lead to conservation, reduction of carbon emissions, incentives to use renewable energy sources and the adoption of conscientious consumption practices.

1. The Votorantim Institute was founded for the purpose of accrediting the social investments of the Votorantim Group, the controlling shareholder of Votorantim Industrial, which is one of Fibria's shareholders. The institute's programs are aimed at young people and are defined as 'routes'. Each route integrates and sets the parameters for the itinerary that is offered to young people in the areas of education, work, culture and sport, as well as reinforcing rights and encouraging young talent that stands out in the various socio-cultural projects that are supported.

#### INVESTMENT IN NEIGHBORING COMMUNITIES (GRI EC1)<sup>1</sup>

	2009	2010	2011
Fibria	R\$13,922,901.55	R\$13,506,816.42	R\$20,615,000.00 <sup>3</sup>
Incentivized projects	R\$347,310.00	R\$587,910.00	R\$1,993,138.00
Votorantim Institute	R\$ 2,182,000	R\$ 3,200,000.00 <sup>2</sup>	R\$3,098,000.00
<b>Total</b>	<b>R\$ 16,104,901.55</b>	<b>R\$ 16,941,274.42</b>	<b>R\$25,706,138.00</b>

1. Refers to donations to and investments in the community in benefit of people outside the company. These include contributions to charity organizations, NGOs and research institutes (unconnected with the company's own technology area), funding support for community infrastructure projects and the direct cost of social programs. It also includes the cost of managing the projects.

2. Updated value.

3. Including the project Sustainable Settlements, in partnership with the Landless Workers' Movement (MST), the Constructive Dialogues event, investment from BNDES, among others.

Note: Incentivized projects are coordinated by the Votorantim Institute, are sponsored with funds from companies controlled by the Votorantim Industrial, backed by federal (Rouanet Law, Law and Sport Fund for Children and Teenagers) and state (ICMS) laws.

## INVESTMENTS IN INFRASTRUCTURE (GRI EC8)

	2009	2010	2011
Aracruz Unit (ES, BA and MG)	R\$ 1,452,919.80	R\$ 352,133.41	R\$ 755,782.75
Três Lagoas Unit (MS)	R\$ 42,432,232.85	R\$ 8,639,000.00	R\$ 1,609,488.38 <sup>1</sup>
Jacareí Unit (SP)	R\$ 233,100.00	R\$ 1,474,705.24	R\$ 868,579.09 <sup>2</sup>
Capão Bonito Forestry Unit (SP)	R\$ 0.00	R\$ 11,000.00	R\$ 42,953.82 <sup>3</sup>
Capão do Leão Forestry Unit (RS)	R\$ 0.00	R\$ 0.00	R\$ 0.00
<b>Total</b>	<b>R\$ 44,118,252.65</b>	<b>R\$ 10,476,838.65</b>	<b>R\$ 3,276,804.04</b>

1. R\$ 1,500,000.00 were invested in road networks.

2. R\$ 846,987.32 were invested in city roads.

3. The full amount accounts for investments in road networks.

### Goal – Improve community relations through engagement and measures that promote their economic and social development ✓

#### 2011 target

- Expand the Votorantim Partnership Project for Education from 7 to 13 municipalities, 2 of which in Espírito Santo state, 3 in Bahia state, 4 in São Paulo state, 2 in Mato Grosso do Sul state and 2 in Rio Grande do Sul state.

Result: **Partially achieved target** with participation of 14 municipalities in 2011 as shown in the table below:

Unit	Municipality involved
Capão Bonito	Capão Bonito/SP
Piracicaba	Piracicaba/SP
Capão do Leão	Arroio Grande/RS
Capão do Leão	Capão do Leão/RS
Três Lagoas	Água Clara/MS
Aracruz	Aracruz/ES
Aracruz	Caravelas/BA
Aracruz	Alcobaça/BA
Aracruz	Nova Viçosa/BA
Aracruz	Conceição da Barra/ES
Aracruz	Vila Valério/ES
Jacareí	Jambeiro/SP
Jacareí	Santa Branca/SP
Jacareí	Jacareí/SP

### Relationship model with neighboring communities

Fibria's relationship with communities neighboring its operations follows a Relationship Model with a four-step approach adopted by all of Fibria's Units: Engagement, Community Meetings, Operational Dialogue and Face-to-face Agenda. These meetings are planned annually, as per the Unit's forestry activities and the intensity of the company's presence in those communities.

Given its extensive business scope, Fibria is in contact with communities of different economic, social and cultural backgrounds, which are affected positively or negatively and in varying degrees by the company's eucalyptus plantations. To ensure a good relationship with its neighboring communities, Fibria has drawn up a Community Relationship Plan, which is reviewed annually, whereby these populations are ranked according to the intensity of their relationship with the company. The Prioritization Matrix considers three dimensions when listing the communities as high, medium or low priority: social and economic vulnerability, impacts generated by Fibria's activities and the importance of the community for the company's operations. The vulnerability is defined by eight key social and economic indices (the lower the index, the higher the priority); the impact is measured by the percentage of the municipality's area occupied by Fibria; and the importance of the community to the company's operations is measured by the percentage of Fibria's eucalyptus plantations in the area and by assessing its relationship history with the company.

The Relationship Model is applied to 100% of Fibria's forestry operations during the plantation and harvesting stages. The Capão do Leão Unit did not undergo either stage during 2011 and thus the Model was not applied. All community members are invited and encouraged to participate in the meetings.

- **Engagement:** Refers to the relationship based on the Votorantim Institute Engagement Manual. In rural communities, this Engagement is done through the Rural Territory Development Program (PDRT). Fibria assumes the role of local development partner and seeks to understand the communities, while engaging them in the company's activities and decision-making processes. The Engagement model takes place in those communities most impacted by Fibria's operations. Number of municipalities involved: 26

- **Community Meetings:** These are meetings with leaders and opinion makers in the municipalities where the company operates, with the purpose of rendering accounts of the projects developed locally in partnership with the community. The meetings also serve to exchange information of common interest. Number of municipalities involved: 11.

- **Face-to-Face Agenda:** Is done through regular visits paid by company representatives to neighboring communities in order to understand the local reality. These visits are conducted in all communities not covered by the Engagement process as they are less impacted by the company's forestry activities. Number of municipalities: 64.

- **Operational Dialogue:** Consists of dialogues conducted before commencement of the company's forestry operations in the communities surrounding the area where the planned operations are to take place. These meetings serve to inform the local population of operational impacts and ways to mitigate them. Operational Dialogues were carried out in almost all of the municipalities located in the vicinity of Fibria's forest operations, see table below. Number of municipalities involved: 31.



Unit	Municipalities where harvest operations were conducted in 2011	Municipalities with Operational Dialogue in 2011 <sup>1</sup>	Main demands from Operational Dialogues initiatives taken
Aracruz	<b>22 municipalities</b> Alocabaça (BA), Aracruz (ES), Caravelas (BA), Carlos Chagas (MG), Conceição da Barra (ES), Ecoporanga (ES), Ibiraçu (BA), Jaguaré (ES), Lajedão (BA), Linhares (ES), Medeiros Neto (BA), Mucuri (BA), Mucurici (ES), Nanuque (MG), Nova Venécia (ES), Nova Viçosa (BA), Pedro Canário (ES), Pinheiros (ES), Prado (BA), São Mateus (ES), Serra (ES), Teixeira de Freitas (BA)	<b>Four municipalities in Espírito Santo:</b> Aracruz, Conceição da Barra, Pedro Canário and São Mateus  <b>Two municipalities in Bahia:</b> Mucuri and Nova Viçosa	<ul style="list-style-type: none"> <li>• High speed of vehicles – Fibria worked on the control and reduction of speed of the trucks carrying raw materials for the company</li> <li>• Roads in poor condition – the company invested in the improvement and maintenance of roads</li> </ul>
Jacareí <sup>2</sup>	<b>Capão Bonito (8 municipalities)</b> Anhembi (SP), Avaré (SP), Capão Bonito (SP), Itapetininga (SP), Pilar do Sul (SP), Ribeirão Branco (SP), Salto Alto de Pirapora (SP), Votorantim (SP)  <b>Jacareí (18 municipalities)</b> Angatuba (SP), Caçapava (SP), Carrancas (MG), Cunha (SP), Guararema (SP), Guaratinguetá (SP), Igaratá (SP), Itapetininga (SP), Itu (SP), Jacareí (SP), Jambuí (SP), Lorena (SP), Pindamonhangaba (SP), Santa Branca (SP), São José dos Campos (SP), São Luiz do Paraitinga (SP), Taubaté (SP), Tremembé (SP)	<b>Capão Bonito (8 municipalities):</b> Avaré, Anhembi, Capão Bonito, Itapetininga, Guapiara, Ribeirão Branco, Votorantim, Pilar do Sul  <b>Jacareí (13 municipalities):</b> Santa Branca, Guararema, Jacareí, Igaratá, São Luiz do Paraitinga, Pindamonhangaba, Taubaté, Caçapava, Jambuí, Carrancas, Lorena, Guaratinguetá, Cunha.	<ul style="list-style-type: none"> <li>• School transport routes of access – noted in the Logistics rotograma, drivers are told to avoid peak hours for school transport or redouble attention</li> <li>• Height of power lines – faulty wiring patterns. Logistics requests solution from the utility</li> <li>• Dust / request for wetting of access roads – the company intensifies wetting</li> <li>• Increased traffic flow on weekends near fishing and leisure sites – logistics is included in rotograma and even decreases the flow of transport, if necessary</li> </ul>
Três Lagoas (MS)	<b>3 municipalities</b> Três Lagoas, Selvíria and Brasilândia.	<b>4 municipalities:</b> Três Lagoas, Brasilândia, Selvíria and Água Clara	<ul style="list-style-type: none"> <li>• Neighbors impacted by the dust caused by wood transport. The company invested in a project of wetting by water sprays</li> <li>• Road was not in good condition. The company made the recovery of 50 km of rural road to the neighboring farm called Brasileira</li> </ul>
<b>Total</b>	<b>51 municipalities</b>	<b>31 municipalities</b>	

1. Satisfaction surveys are held during Operational Dialogue meetings. At the Aracruz Unit 89% of the respondents gave the Dialogue a rating of "Good", at the Jacareí Unit 95% and at the Três Lagoas Unit 55%.

2. Vale do Paraíba and Capão Bonito.

3. The Capão do Leão Unit did not undergo plantations or harvest operations during 2011 and thus the Operational Dialogue was not applied. The main demands from those communities in 2011 were:

- The community asked for closer contact with the company, some wood and the use of space in the surrounding farms to placement of cattle.
- Support for the production of native plants and eucalyptus. Fibria donated greenhouse trays, tubes and substrate for the production of 10,000 seedlings.

In 2011, several environmental responsibility programs and actions undertaken by Fibria, including healthcare, education and training, environmental issues, economic and socio-cultural development, reached approximately 150 thousand people.

#### Before the company commences operations in the community

The company establishes in advance what to do to reduce impacts such as noise, dust and moving trucks. What was agreed with the communities during the meetings in this respect is recorded in minutes.

#### During operations in the community

At least two meetings are held during operations to monitor compliance with the agreement made with the community and review or change any aspect of the agreement if necessary.

#### At the end of operations in the community

At the end of each forest operation, Fibria's representatives meet with the locals to discuss everything that happened. At each meeting, community is expected to take hold of the process more actively and increasingly improve the dialogue with the company.

## Impacts on communities

Fibria seeks to identify and assess systematically the impacts caused by its operations on neighboring communities. Once diagnosed, the company hopes to eliminate or mitigate the impacts identified and, at the same time, maximize the positive effects from its activities. The company believes that communities living within a 3 km radius of its properties or areas leased for production of eucalyptus are directly affected by its operations.

The identification of impacts is made by company representatives who compose the Local Relationship Commissions (CRLs) in accordance with the guidelines provided by the Internal Sustainability Commission (CIS) and approved by Fibria's Executive Board. Based on the communities' demands, the information is stored in the SISPART (Stakeholder System) software. The CRLs then investigate the impacts and may hold hearings, meetings or pay visits to the communities to clear up doubts.

Data on the operations, the impacts and other communities' needs and concerns are collected and used in decisions on social and environmental projects in the regions where Fibria operates.

The Relationship Model has been adopted since Fibria's inception and seeks to reduce negative impacts and enhance positive ones. A methodology was implemented for measuring complaints brought about at the Operational Dialogue meetings.

The most significant negative impacts reported by local community members were:

### Forestry operations:

- change in the local agrarian structure
- many properties and communities became isolated
- the capacity and quality of existing roads deteriorated
- dust generation
- change in the landscape and loss of reference points
- increased risk of accidents (people and animals)
- change in the productivity of municipalities / changes in local production
- appreciation of land prices
- change in water availability and quality
- food safety compromised
- disruption of local communities' livelihoods
- disregard for non-predatory local habits and customs
- noise generation
- obstruction of roads

### Industrial operations:

- odor generation
- noise generation
- smoke generation
- job redundancies

The main positive impacts were:

**Forestry operations:**

- employment opportunities
- provision of services
- rehabilitation of degraded areas
- conservation of water sources

**Industrial operations:**

- employment opportunities
- provision of services

**Goal – Improve the relationship with local communities through engagement and measures to promote their economic and social development** ✓

**2011 target**

- Implement the 2011 Community Relations Plan through the process of dialogue with neighboring communities at different levels, according to the impact of Fibria's forestry and industrial operations in the five Brazilian states in which it operates. For 2011, 10 communities were expected to join the Engagement Model, 75 communities were expected to attend the Operational Dialogue meetings, while the Face-to-Face Agenda was going to be implemented in the remaining communities.

Result: **Target fully met** with Engagement of 28 communities (2 in São Paulo State, 1 in Mato Grosso do Sul State, 9 in Espírito Santo State and 16 in Bahia State) and Operational Dialogue with 87 communities in the states of São Paulo, Mato Grosso do Sul, Espírito Santo, Bahia and Rio Grande do Sul. The highlight of this process is the participation of 687 families from rural communities in Espírito Santo and Bahia states in the Rural Territory Development Plan (PDRT) project, whose main results are:

- partnerships with universities and NGOs
- strengthening and expansion of rural utilities networks
- agricultural production focused on vocation and on the local market
- access to government policies
- infrastructure improvement with access to water quality (Irrigando a Vida program)
- better interaction among communities to facilitate timber production and transportation
- better use of retreat areas in forest plantations designed for agricultural production
- joint production of eucalyptus and food
- production in agroforestry systems

All projects relate to local development programs and arise from the Engagement process, which is preceded by a full diagnosis of the situation of the community and its needs conducted by a specialist consulting firm. We work with dozens of communities and the more immediate needs are water and sewage treatment, lack of structure education and professional training, and on-street safety and security.

## Goal – Consolidate sustainability in Fibria's governance. ✓

### 2011 target

- Conduct a discussion panel with Fibria's stakeholders

Result: **Target fully met** through the Constructive Dialogues event held on August 11 and 12, 2011. Several topics of interest for the company, neighboring communities, customers and suppliers were discussed, and the event was attended by 150 people from local communities and institutions from all Brazilian regions in which Fibria operates. Some of the topics included:

- climate change: water and biodiversity
- forest certification as the driver of social and environmental improvements
- community engagement
- development of local communities through family farming and forest enhancement programs

The purpose of Fibria's Constructive Dialogues event was to improve communication with internal and external audiences, disseminate important information to the understanding of sustainability related issues and create a space for the free discussion of ideas, opinions and experiences by all participants.

The discussions were conducted with the following structure:

- presentation of the topic with related challenges, actions and opportunities
- presentation of Fibria's initiatives pertaining to the topic discussed
- round-table discussions with participation of a Fibria executive director and a member of the Sustainability Committee, as well as representatives from other companies and from communities involved in the topic
- audience participation through oral or written questions
- voting of the proposed resolutions discussed in plenary sessions through electronic means

Learn more about the impacts of Wood logistics on page 129.

## Relationship with specific communities ★

Fibria maintains good relations with most of the communities neighbouring its operations. However, there are some unresolved conflicts with certain communities in the poorest regions of the north of Espírito Santo and the south of Bahia, stemming from problems that are often unrelated to the company and beyond the management's capacity to resolve, regardless of its good intentions.

Despite the complexity of the challenge, settling these conflicts is a priority for the Fibria, which is working directly with the communities and engaging with other parties that might help to develop satisfactory solutions, such as the government, at all levels, NGOs and other companies. Some communities merit special attention from the company, which has been developing specific projects for social inclusion, often with the participation of government bodies and independent socio-environmental entities. This includes black communities, several of which have been recognized as quilombolas (descendants of runaway slaves who formed their own communities) or are in the process of claiming this status; Indian people of Tupiniquim or Guarani ethnicity; members of the Landless Workers' Movement (MST); and traditional fishing communities.

These projects, planned and introduced as from 2010, proceeded over the course of 2011, with the establishment of a Priorities Matrix for Fibria's socioenvironmental activities, the creation of Local Relations Commissions, with respected local interlocutors to observe the engagement processes, and the establishing of partnerships between the company and government, private and third-sector institutions.

Around 2,500 households, numbering approximately 10,000 people, are already benefiting from the development programs introduced in 57 communities neighboring Fibria's operations. Among the most notable results of these social inclusion activities are the formal hiring of about 600 community residents and a more than 50% reduction in the rate of wood theft from company property in 2011 (read more on page 86). In 2012, Fibria intends to increase the reach of its engagement projects with priority communities by at least 20%.

### Relationship with indian communities<sup>2</sup>

Fibria has made progress in its relations with the seven indian villages<sup>1</sup> neighbouring its forest plantations in the municipality of Aracruz (Espírito Santo state). A solution to the land dispute regarding expansion of the local indigenous reserves was achieved in 2007, with the signing of a Conduct Adjustment Agreement (TAC)<sup>2</sup> between the parties to the litigation, as well as Brazilian Indian Foundation (FUNAI), following intervention by the Federal Public Prosecution Service.

In the agreement, all the parties recognized that the company's previous occupation of the land had been in good faith and FUNAI undertook to demarcate the 11,000 hectare area that was the object of the dispute. This was done in 2008 and ratified in 2010 by a presidential decree. Meanwhile, Aracruz Celulose, Fibria's predecessor, undertook to finance an ethnoenvironmental study, conducted by an entity chosen by the indigenous leaders and FUNAI, that would identify the best options for the use of the land and development of the communities, and would contribute R\$3 million to projects deriving from that study, with FUNAI contributing an equal amount. In 2010, upon the completion of the ethnoenvironmental study by National Association for Indigenous Action (ANAI), Fibria passed on the outstanding financial resources, in compliance with the TAC.

Having resolved the land issue, a new phase of indigenous relations was begun, for the aim of supporting sustainable development of the Indian populations. In order to empower and facilitate contact with indigenous leaders, in 2011, Fibria engaged the services of the anthropologist Marina Kahn, who is well-known for her dedication to indigenous causes, working through the NGO Instituto Socioambiental (Socioenvironmental Institute or ISA). Marina is presently working on the viability of an agricultural model in the reserves that is similar to the Rural Territory Development Program (PDRT) that has been successfully applied in black communities near Fibria's installations. The results of this approach have already begun to appear in 2011, with the inclusion of schools in Indian communities in the Votorantim Partnership for Education program and a student winning a prize in the School Days essay competition [see: School Days blog at <http://www.blogeducacao.org.br/concurso-tempos-de-escola/>]. Moreover, the Votorantim Institute approved the first project developed by an indigenous community, while other are being put together for approval in 2012.

1. The municipality of Aracruz is home to approximately 3,000 indigenous inhabitants, living in seven villages, four of which are Tupiniquim (Caieiras Velhas, Pau-Brasil, Irajá and Comboios) and three are Guarani (Boa Esperança, Três Palmeiras and Piraquê-Açu). In 1975, FUNAI (National Foundation for Indian Affairs) officially recognized the existence of indigenous peoples in the state of Espírito Santo. The indigenous reserves were established in 1983 and expanded in 1998 and 2007.

2. Formal relations between what was then Aracruz Celulose and the indigenous communities of Espírito Santo got underway in 1981, when the company donated a portion of the 4,500 hectares of land used to set up the villages. In 1998, in response to pressure from the indigenous peoples, FUNAI recommended the expansion of the original reserve, set up in 1981, by a further 13,000 hectares, approximately. The Minister of Justice only partially followed that recommendation, expanding the reserve by 2,571 hectares. This was followed by incursions into company-owned areas, which were only ended by an agreement whereby Aracruz Celulose would pass on financial resources for investment in community projects. In 2005, the indigenous communities broke the agreement and returned to using pressure tactics (including invading the company's lands and mills and campaigns against its customers), while calling for the expansion of the reserve to the total recommended by FUNAI in 1998. The dispute was ended in 2007, when the Minister of Justice at the time, Tarso Genro, issued an Administrative Ruling expanding the reserve by a further 11,000 hectares, approximately. Although it was entitled to appeal against the decision, Aracruz Celulose adopted a strategy of negotiation, on the understanding that a formal guarantee would be given prohibiting any further expansion of the reserve. This was accepted by the government, the indigenous leaders and the Public Prosecution Service, which culminated in the signing, on December 3, 2007, of the Conduct Adjustment Agreement (TAC), providing for the expansion of the reserve while giving the company all the legal assurances it needed.

## Relationship with landless movements

Fibria has been investing in dialogue to resolve a dispute caused by the invasion of company areas in the south of Bahia state by members of the Landless Workers' Movement (MST). From this was born the Rural Sustainable Settlements with Agroforestry and Biodiversity Project (see the box), a proposal developed in a partnership between Fibria, the MST, the National Institute for Settlement and Agrarian Reform (INCRA) and the state government of Bahia. The business model for this was drawn up by researchers at the University of São Paulo's Luiz de Queiroz Agricultural College (ESALQ/USP).

Following approval at a meeting of MST members, the Sustainable Settlements project began implementation in August 2011, with the hiring of agricultural specialists from the movement, the selection of beneficiary families and the allocation of plots. The land occupied by the MST, that includes five farms and covers a total area of 11,000 hectares belonging to Fibria, is to be expropriated against compensation paid by INCRA.

More than 1,000 farming families will participate in the program, significantly more than the 800 originally predicted. Sustainability criteria will be taken into account in all the cultivation, with certification being awarded for good agricultural and environmental practices. At the MST's request, an agroforestry production training center is also to be built in the region.

**Goal – Improve community relations through engagement and measures that promote their economic and social development. ✓**

### 2011 target

- Develop and implement a model settlement project, with agroforestry production that preserves the biodiversity, benefiting 800 families.

Result: **target fully achieved**, with implementation of the project in August 2011, benefiting more than 1,000 families from the south of Bahia state. Developed by USP professors Paulo Kageyama and Marcos Sorrentino, the project was approved at a meeting of the Landless Workers' Movement (MST) and has already completed the following phases:

- hiring of local agricultural specialists, thereby generating employment, as predicted.
- division of the plots and selection of the families.
- inspections by INCRA, for formal recognition of the settlement and the passing on of the necessary financial resources.
- training of the selected families in sustainable production.



## Relationship with black communities

Since 2003, when the federal government issued Decree No. 4,887, extending the rights of the descendants of runaway slaves (Quilombolas, in Portuguese) beyond the restrictions of the land on which they lived, 1,408 communities have made claims for such recognition all over Brazil. Of those communities, 15 are eligible for or have already been registered as quilombos. INCRA (National Institute for Settlement and Agrarian Reform) has initiated proceedings, in the north of the state of Espírito Santo, for the identification of four quilombos that include Fibria lands, as well as those of other landowners. Two of these proceedings have been annulled by the courts (Linhaquinho and São Jorge), one (Angelim) is under appeal, and one (São Domingos) has not yet been completed. The last two alone relate to 15,732 hectares of land belonging to Fibria, while another 9,606 hectares belong to other landowners.

Given that Decree No. 4,887/2003, in the view of much of society, unduly extrapolates the rights guaranteed to the Quilombolas under the 1988 Constitution, those that have felt the decree is unfair to them have taken the issue to the Federal Supreme Court (STF), which has not yet handed down a decision on the matter. Fibria will respect the legal decisions, but retains the right to question any proceedings that affect the company.

While the legal issue is following its due course, Fibria has sought to intensify its dialogue with these communities and assist in their development, with programs for generating employment and incomes, while at the same time discussing with them and other interested parties ways to find a satisfactory and enduring solution to the situation.

The most important initiative in this respect is the Rural Territory Development Program (PDRT), which started to be implemented in 2010 and progressed in 2011, bringing benefits to about 760 families in 24 black communities in the states of Bahia and Espírito Santo.

Carried out in partnership with a variety of public bodies and using as a platform the communities' own information and resource sharing network, the PDRT provides expert technical assistance to community residents (from 15 agricultural specialists hired by Fibria), guidance on the sale of products through federal programs to stimulate family farming, such as the PAA (Food Purchasing Program) and the PNAE (National School Food Program), and professional training courses through SENAR (National Rural Training Service), where 14 courses were completed in 2011 and a further 60 are planned for 2012.

All PDRT decisions are taken collectively and openly at meetings of the residents' associations, and are disclosed on boards placed in public places where the communities can see and keep track of them. In Bahia, once the crops and planting schemes have been defined for each producer, the Management Committee, which has a representative in each community, coordinates the work and renders an account of its actions. The good results achieved under the PDRT in 2011 have attracted growing interest in participating in the scheme, on the part of other families, while at the same time helping to bring down the level of wood theft in areas benefited by the program. Below is a table of investments and revenues under the PDRT in a number of communities in 2011.



## PLANTING SCHEMES\* (IN R\$)

Description	Espora Gato	Helvécia	Itaitinga	Novo Destino	Pouso Alegre	Ribeirão	Juerana	Rio do Sul
1. Third-party services	3,053.28	3,178.28	7,600.00	3,311.28	—	7,121.38	5,537.24	6,771.88
1.1. Soil preparation	3,053.28	3,178.28	7,600.00	3,311.28	—	7,121.38	5,537.24	6,771.88
2. Crop preparation	18,382.60	15,092.60	45,659.00	73,234.75	78,690.00	73,599.50	34,252.60	62,020.90
2.1. Planting	2,450.00	2,450.00	9,625.00	11,925.00	19,425.00	8,400.00	6,250.00	6,637.50
2.2. Crop care	4,600.00	3,600.00	10,650.00	14,562.50	30,000.00	21,562.50	9,950.00	16,225.00
2.3. Inputs	11,332.60	9,042.60	25,384.00	46,747.25	29,265.00	43,637.00	18,052.60	41,658.40
3. Transport	—	—	—	—	—	—	—	—
4. Harvesting	9,100.00	R\$ 9,100.00	11,550.00	23,800.00	27,750.00	1,375.00	11,600.00	19,425.00
<b>Total</b>	<b>30,535.88</b>	<b>27,370.88</b>	<b>64,809.00</b>	<b>100,346.03</b>	<b>106,440.00</b>	<b>82,095.88</b>	<b>51,389.84</b>	<b>88,217.78</b>
Total number of hectares planted	9.50	9.50	27.00	45.20	59.00	41.30	10.50	35.50
Average unit cost per hectare planted	3,214.30	2,881.15	2,400.33	2,220.04	1,804.07	1,987.79	4,894.27	2,485.01
<b>Forecast average return</b>	<b>157,972.72</b>	<b>171,434.80</b>	<b>105,396.50</b>	<b>197,225.07</b>	<b>191,880.00</b>	<b>446,238.36</b>	<b>275,563.95</b>	<b>354,562.30</b>

\*carried out in 2011.

Support to family farming, through inputs, infrastructure, equipment and technical assistance)

## INVESTMENT PER COMMUNITY (IN R\$)

Description	Espora Gato	Helvécia	Itaitinga	Novo Destino	Pouso Alegre	Ribeirão	Juerana	Rio do Sul
<b>1. Investment</b>								
Total investment by Fibria	13,110.88	17,096.40	25,384.00	50,555.35	29,265.00	7,121.38	5,537.24	6,771.88
Total of matching funds from the association	17,425.00	23,997.96	39,425.00	62,017.40	77,175.00	74,875.00	33,337.24	39,787.50
Number of families served	25	16	30	34	40	14	15	46
Investment per family per year	524.44	2,568.40	846.13	1,486.92	2,661.00	4,671.03	3,425.99	1,052.83
<b>2. Return</b>								
Average income per family per year	6,318.91	10,714.68	3,513.22	5,800.74	4,797.00	31,874.17	18,370.93	7,707.88
Return on investment per family ratio	1,105%	317%	315%	290%	80%	582%	436%	632%

All investments have matching funds from the communities (low investment cost per family).

The program is already generating income for the communities, in accordance with the planting scheme (eg: sale of annatto yielded R\$ 45,000 in Ribeirão).

The communities are giving priority to the 2012 investments (community/family), through the Management Committee.

**Goal – Improve community relations through engagement and measures that promote their economic and social development. ✓**

### 2011 Target

■ Implement the Rural Territory Development Program (PDRT) in 16 traditional communities (12 from Bahia state and 4 in Espírito Santo state) and priority groups based on the integrated agricultural production in conjunction with local partners, aimed at improvements in production, technical assistance, cooperative partnership, agricultural certification and differentiated sales.

Results: **Fully achieved target**, with implementation of the program in 22 communities (15 in Bahia and 7 in Espírito Santo), as shown below:

#### IN BAHIA: 4 MUNICIPALITIES, 15 COMMUNITIES AND 397 FAMILIES

Community	Number of households	Municipality
Espora Gato	18	Caravelas
Volta Miúda	35	
Juerana	27	
Valha-me Deus	20	
Colônia Nova	50	Nova Viçosa
Helvécia	12	
Rio do Sul	35	
Vila Portela / Sede-Viveiro	34	Ibirapuã
Canabrava	11	Alcobaça
Aparaju	06	
Taquari	44	
Novo Destino	33	
Pouso Alegre	30	
Itaitinga	28	
Ribeirão	14	

#### IN ESPÍRITO SANTO: 2 MUNICIPALITIES, 7 COMMUNITIES AND 315 FAMILIES

Community	Number of households	Municipality
Roda d'Água	50	Conceição da Barra
Angelim 1 e 2	70	
Córrego do Coxi	15	
São Domingos	50	São Mateus
Morro das Araras	20	
Nova Vista 1 e 2	50	
Dilô Barbosa	60	

The plans are already being implemented in the communities highlighted. With respect to the others, the analysis has been finalized and the action plans are being initiated.

### Relationship with fishing communities

Fibra maintains relations with the local fishing communities in the two areas where it operates shipping terminals: in Barra do Riacho, a district of the municipality of Aracruz (Espírito Santo state), and Caravelas, in the south of Bahia state. Barra do Riacho is the location of Portocel, a maritime terminal specializing in the handling of export pulp, in which Fibra has a 51% equity stake (see more about Portocel on page 169). Fibra channels part of its eucalyptus production through Caravelas, loaded on sea-going barges, to supply the three fiberlines at the Aracruz Unit, which is just 4.3

kilometers from Portocel. The company seeks closer ties with the communities in these areas, by means of dialogue, social action and measures in support of traditional fishing.

Important progress was made in 2011 in Fibria's coexistence with these fishing communities. Local leaders at Barra do Riacho were invited to visit the Aracruz Unit and to participate in open dialogue about the company's activities and environmental practices. The leading topic of conversation was the project for improving the collection and treatment of water, which local residents had been calling for. The project is being carried out by the Aracruz Saae (Independent Water and Sewerage Service), supported by Fibria and nine other companies operating in the area. The convening also provided the opportunity to inform the local representatives about Fibria's work in maintaining the Caboclo Bernardo Channel and operating the Moveable Barrier, as well as make it clear that the company was not responsible for the silting up of the River Riacho, by presenting technical studies showing this to be a natural phenomenon.

In addition to construction of the new water treatment station, early in 2012, Fibria, together with other companies and public bodies, is supporting the upgrading of the Barra do Riacho first Aid Post – which is to become a UPA (Emergency Treatment Center, performing general medical treatment, X-rays and laboratory tests), the setting up of a Community Police Unit (with a vehicle for exclusive local use), and the holding of professional training courses, supervised by SENAI (National Industrial Training Service) and IFES (Federal Institute of Espírito Santo State). With classes getting under way in January 2012, the first two groups will provide qualifications for 22 mechanics, 22 welders, 22 electricians, 22 boiler workers and 22 industrial instrument installers. Another 40 young people from the Caboclo Bernardo School will undergo an apprenticeship program in the areas of maintenance and industrial electrics and electronics.

There was a demonstration of dissatisfaction with Fibria, on the part of the Barra do Riacho fishing community, due to the company turning down a sponsorship request, which failed to meet the company's socioenvironmental investment guidelines.

In Caravelas, Fibria allocated financial resources to maintaining the headquarters of a local fisherman's association and engaging consulting services to draw up a business plan for the "O Pesqueiro (The Fisherman)" restaurant. It also sponsored a course on cooperativism for 16 administrators of AMPAC (Ponta de Areia and Caravelas Association of Shellfish Gatherers), the "A Pesca" Association and Fishing Colony Z-35, focused on the importance of teamwork in improving the collective quality of life. The company also decided to support the building of a distribution center in the town and the refurbishing of a 3-tonne capacity ice factory.

## Theft of wood ★

The theft of wood, very often associated with arson, remains a big issue for Fibria in the north of Espírito Santo and in the far south of Bahia. The volume of wood stolen from Fibria properties in 2011 was 297,000 cubic meters, a loss of nearly R\$12 million. While significant, this loss was smaller than that in 2010, when about 320,000 cubic meters of wood was stolen from the company's plantations, i.e. a R\$13 million loss. The volume of stolen wood has fallen significantly in the last half of 2011, by nearly 40% in the fourth quarter compared to the first, as coordinated police actions to clamp down on this crime have strengthened, as the following chart shows.

### Volume of stolen wood



Enhanced policing in the last quarter of 2011 led to dozens of arrests and destruction of about 1,000 illegal charcoal furnaces linked to the criminal chain which encourages theft of wood. In accordance with police estimates, some 3,000 people made a living on theft of wood and production of illegal charcoal in the south of Bahia and in the north of Espírito Santo in 2010. While this figure has fallen in 2011, further coordinated and persistent action by economic and social players in these areas is needed to solve the problem conclusively. One of the cruelest facets of the illegal charcoal activity is the use of child labor at furnaces (whose narrow doors allow only children in).

It should be noted that the theft of wood is part of a large-scale criminal network, endemic in some areas, which operates by enslaving poor communities into collecting and producing charcoal which is then sold on front companies to producers of pig iron using a false trail of invoices to make the product appear legal. Fibria understands that this illegal situation will only be settled by combining legal enforcement with income generation and creation of jobs, through joint action of state governments, official agencies for development, companies interested in these areas, local governments and non-government agencies. In 2011, unprecedented efforts were taken to clamp down on theft of wood through simultaneous enforcement efforts and job creation, with concrete results.

An important initiative for social inclusion in those regions is the Rural Territory Development Program (PDRT), carried out by Fibria in tandem with a number of public authorities in communities close to the areas where the company operates. With a number of initiatives to support small-scale farms, the PDRT began to directly benefit 760 families from 24 communities. (for further information, please refer to the chapter Relationship with black communities, from page 83). Another action was Fibria hiring forest monitors, recruited among the inhabitants of these communities to help the company detect thefts, fire and aggression to the environment. The forest monitors report these cases to the company so that the necessary steps can be taken.

Fibria supports the Costa das Baleias Sustainable Development Plan, together with other companies. This is an initiative of the Government of Bahia officially launched in November 2011, that until 2023 will focus on six strategic areas: environment and sustainable development; social policies and life quality; education, professional training and enhanced employability; tourism, sport and leisure; infrastructure; culture; and development of the community identity. The plan covers the municipalities and districts of Mucuri, Nova Viçosa, Caravelas, Ibirapuã, Lajedão, Alcobaca, Teixeira de Freitas, Medeiros Neto, Prado, Vereda, Itanhém, Itamaraju and Jucuruçu, the deployment of which is currently under discussion.

The Government of Espírito Santo is planning to launch the North Coast Development Plan, under the same principles.

**Picadão Working Group** – The region called Picadão is located between the north of Espírito Santo and southern Bahia, where the municipalities of Pedro Canário and Conceição da Barra (ES) and Mucuri (BA) are located. The social problems of the region are known, including the theft of wood and illegal production of charcoal that involves child labor. Given this situation, the local Public Ministry office created the Working Group of the Picadão region. Environmental authorities, local government, pulp companies that operate in this location and the local Public Ministry itself are among the participants of the group.

Aiming to halt the illegal activity and create alternatives for income for families who are involved in the production of charcoal, the Working Group has resulted in a reduction of more than 50% in wood theft, the destruction hundreds of charcoal ovens, generating 200 jobs and social projects for the community development such as apiculture, fish farming and family farms, involving 250 families.

**Incident in the South of Bahia state** – On March 17, 2010, in the Nova Brasília region of the municipality of Mucuri in southern Bahia, an incident involving Garra, a security company hired by Fibria in the region, led to the death of Henrique de Souza Pereira. For further information about the case, please refer to the online version of Fibria Sustainability Report 2011.

Two civil claims were filed by the father and wife of Henrique de Souza Pereira against Fibria and Garra seeking compensation. Both companies tendered their defenses in January 2011, but the court has not yet handed down any decision.

## Consultation with communities ✪

Fibria has been seeking to broaden its relations with local communities, by increasing dialogue and attention to criticism and suggestions from local residents and community leaders in São Paulo, Mato Grosso do Sul, Espírito Santo, Bahia and Rio Grande do Sul. In order to monitor how the company is regarded by the local population, Fibria hired specialized consultants<sup>1</sup> to interview a selection of people in different parts of the country.

The interviews, addressing the ten main issues identified in the Materiality Matrix, took place between September 2011 and February 2012, seven of them being face-to-face and five by telephone.

Summaries of the interviews and critical analysis of the responses by the researchers are shown below. The full interviews and audio excerpts are available on the website: [www.fibria.com.br/rs2011](http://www.fibria.com.br/rs2011).

1. Prof. Adriana M. Imperador, Prof. Giselle P. Sancinetti and Prof. Gunther Brucha.

## Critical analysis of the responses

### Impact of the eucalyptus plantations on biodiversity

In general, the interviewees do not cite any significant impact by Fibria on local biodiversity. Some mentioned that there was significant impact in the past, but now the company invests in programs for the recovery of degraded areas, thereby helping to maintain the local biodiversity.



## Certification and voluntary commitments

In contrast to the reports of previous years (2009 and 2010), the interviewees, on the whole, demonstrated knowledge about certification, which reflects a certain level of confidence in the social, economic and environmental aspects of Fibria's activities.

The interviews reflect a lack of clarity regarding Fibria's activities in certain communities in Espírito Santo and Bahia, particularly in regard to its environmental policies. They also talk about the need for clarification regarding the criteria for forest certification.

## Ethics

This aspect was one of those with the highest approval ratings, and notably Fibria's posture regarding community relations in general, its consideration of the opinions, suggestions and criticism from local communities and the fulfilling of its commitments towards local communities.

## Use of water

It was noted that the interviewees had difficulty in talking about issues relating to water resources. In general, they believe that Fibria treats the water it uses before discharging it and that there is no significant impact from the use of water in the cultivation of eucalyptus. One interviewee in particular mentioned problems relating to a floodgate not far from an Amerindian village in the municipality of Aracruz (Espírito Santo state), which used to cause flooding in the past.

## Strategy / commitment to sustainability

The communities expect the company to collaborate in the developing of social projects and some of the interviewees mentioned that even after being nurtured for a certain period of time, the projects did not achieve a degree of autonomy that would enable them to become sustainable without investment from Fibria.

Many interviewees mentioned the development of their municipality since Fibria's arrival. For example, one says that Três Lagoas grew in several respects, such as commerce, infrastructure, and industrialization, as well as the contribution to income generation in the community.

Most interviewees made a positive point about the generation of employment, either directly by Fibria or indirectly through service providers. It is worth emphasizing the interview with Nazine Bittencourt Ribeiro, president of COMDICA (Municipal Council for the Rights of Children and Adolescents in Arroio Grande, Rio Grande do Sul), who tells of the expectations created amongst the residents of her "little" municipality, who she tells were excited by the possibility of Fibria installations there, which were subsequently frustrated, thereby compromising the credibility of the company and its good relations with local residents.

Representatives of communities in the south of Bahia state, who were until recently involved with the illegal production of charcoal, call for the hiring of local labor, claiming that the company does not generate employment in their communities. It should be pointed out that the issue of a decline in the level of income and benefits as a result of the change in company policy from direct employment to outsourcing is one of the chief criticisms made by the communities in the states of Espírito Santo and Bahia.

## Relationship with neighboring communities

Most of the accounts of the company's relations with neighboring communities are positive, as in the previous year. Although the communities consider the passing on of information to be clear, the interviewees indicate an information gap when it comes to the positive effects of the forestry operations. The visits to the communities by technical specialists were considered to be satisfactory. The interviews revealed a latent desire for the hiring of local suppliers and for community participation in environmental education programs.

In general, the interviewees saw changes in Fibria's attitude towards working and communicating with local communities and recognized that this is a good time to plan for more consistent future action. At any rate, they recognize the positive changes that have occurred.

## Forest partners (wood suppliers)

Here again, a change was seen in the interviews in relation to the reports for 2009 and 2010. The interviewees showed themselves to be well-informed regarding forest partnerships and, according to some, topics such as this and certification were given priority in meetings between the community and Fibria. It is important to note the interview with Osmar (Ribeirão Residents' Association – Alcobaça, in Bahia state), who says that the partners do not adopt the same posture as the company regarding planted forests, thereby putting environmental factors at risk.

## Environmental risks

In a general sense, the interviewees do not feel they are at risk because of the company's presence in their municipality, although some statements bring up a lack of information regarding potential environmental hazards.

## Emissions, effluents and waste

The statements are positive with regard to controls over the effluents discharged by Fibria's mills and air pollution. On the other hand, control of soil pollution, expansion of the forest recovery areas and control of odors generated by the mills earned poor ratings. In general, a lack of knowledge on the part of the interviewees was noted with regard to the last item, despite mention of problems relating to odor at certain times of the year. One interviewee mentioned respiratory problems in the Indian community of Comboios (Aracruz, in Espírito Santo state), which in that person's opinion were related to Fibria's emissions.

## Relationship with specific communities

This refers to Indian and black communities, traditional fishing settlements and those of landless rural workers that are directly or indirectly related to the company's activities in the region. Several interviewees said that they had had problems in the past, particularly in regard to land ownership and eucalyptus cultivation in areas occupied by traditional communities, but that nowadays it is dialogue that prevails.



## Summaries of the interviews

### Érico Carlos dos Santos Miranda – President of the Taquari Association of Small-scale Farmers – Bahia state (10/2/2012)

Érico Carlos dos Santos Miranda, President of the Taquari Association of Small-scale Farmers (Bahia state) was very pleased to contribute the information requested, recognizing that this was an opportunity to disclose information and situations that will contribute to good neighborly relations between Fibria and the local community. Asked about environmental matters, Erik commented that, "Regarding the question of the environment, there are many planted areas, left as reserves. The company actually leaves more reserves than the farmers used to, but still many rivers dry up, few fruit trees are planted, little is done for the environment, and this has to be more transparent, for the community to see... We hear comments that the river is drying up and that the eucalyptus is harmful, and since we don't participate in the activities, we don't know the truth of the matter. We need this transparency so that, in addition to having the knowledge, we can also collaborate, if that's possible." As for the social factors, Erik is scathing about employment generation and other actions that could contribute to the development of the local community, such as collaboration in health and education: "So, Fibria needs to participate more. It needs to listen more to the community, which lives almost 90% on what the local companies provide. We depend directly on the public authorities in our region, on the government, but mainly on the companies. Fibria did not help in the renovation of a school, Fibria did not help to renovate a first-aid post. Fibria has not generated employment, perhaps because of a contractual process involving outsourced companies." Eric told us that the work with charcoal ovens, which cause social and environmental impacts on the community, as well as affecting Fibria's forestry activities, has been terminated, but the workers need alternative work, to generate income and avoid returning to that unpleasant job: "Charcoal has stopped in our community, which had 300 ovens, all of which have been knocked down. Our community needs jobs. It is necessary and it is possible, if there is a good alliance between the company and the community. It is small community, easy to resolve... We won't make charcoal, but we want jobs." Eric believes that Fibria should get together with other local businesses and propose a plan for generating employment. He believes that a policy of transparent communication between the community and Fibria can yield mutual benefits, and once again criticizes the outsourcing of services provided to the company: "It's time for the company to play for the team; let's go to work, let's correct the errors, let's go! Because we are all human beings and need to survive. Because the contractors want to extract as much profit as they can, at the people's expense. Fibria is to blame. So Fibria has to call its contractors and make its demands: "We are having problems because of you. Let's share things equally; you are being paid for this." As for the environment, Erik recognizes the opportunity Fibria has to bring the community in as a project partner and, with that, he believes the actions aimed at environmental conservation can be even more effective: "I believe it can improve further; that it's not so bad, but it can be made even better. That includes holding lectures, teaching the community what a reserve is, what mustn't be destroyed, what can be preserved, and what has to be preserved. So I think that even in biodiversity, in the environmental problems, if the community and the company are good neighbors, the company will have a partner that defends it, once they are informed... I think that if we bring the company and the community together, many good things will come of it, for the good of nature, for the sake of the environment, for the general well-being. We are afraid that the rivers will dry up, we are afraid that the land, some time in the future, will not be so productive. So we worry a lot about this. About the preventive care for the environment. We worry. It's time we played on the same team and sought to improve our community, in a general sense."

### Alexandre Evaldo Lohn / President of the Capão Bonito Wood Cooperative (COOPEMADE), in São Paulo state (14/10/2011)

Alexandre Evaldo Lohn, president of the Capão Bonito Wood Cooperative (COOPEMADE), in São Paulo state, told us that Fibria plays an important social role in his region, since it provides assistance to several cooperatives, thereby stimu-

lating employment generation in a municipality where professional placement opportunities are very scarce. Alexandre believes that the company has made the effort to learn about the community's problems and helped to encounter solutions, which has reflected positively on its activities in the municipality. With regard to the planted forests, Alexandre believes that this is done in a sustainable manner, in accordance with the certification standards: "I think it is very good, because I can see that in our business they are asking for the areas to be certified, so that one can be certain of the origin and that everything is in accordance with the requirements". When asked about Fibria's forest partnerships, Alexandre said he doesn't know much about them, but believes in the company's support to the participants in the program: "I remember when, in the part they do together with the people who do the planting, they demanded that it was all done in accordance with the standards required for planting, at the correct distance from rivers, streams and springs; I think that's great".

**Ivamara Santos Oliveira / Angelim II Association of Native Seedling Producers, Conceição da Barra, in Espírito Santo state (29/9/2011)**

Ivamara Santos Oliveira, of the Angelim II Association of Native Seedling Producers, Conceição da Barra, in Espírito Santo state, highlights the important contribution Fibria has made to reforesting hillsides in her municipality seedlings of native species produced by the association. This activity has helped to generate income in the community and also yields environmental benefits. Ivamara emphasizes the positive social changes resulting from Fibria's activities in her community: "Until 6 years ago we didn't have any guaranteed income, we couldn't assume any debts, as we had no way to pay them off, but now it's different, we can take on that debt, confident in our production. Before, we just got by; our sustenance came from making brooms. We used to go out into the forest to collect vines, facing the risk of snake bites, wasps nests, all these venomous creatures. But not now, since Fibria came into our lives. They built this plant nursery here, for us, and then everything changed. Now we have our own homes, we have food to eat at mealtimes. Before, we didn't have any of this. So I think that our lives, for us in the association, have changed a lot since Fibria came here and settled in our midst". Ivamara took advantage of the interview to give her opinion about the illegal production of charcoal in her region: "Here in our community, not everybody is a member of the association. There are about ten members in the community, whereas the others aren't members. For example, some deal in charcoal, and it's easy money, but it's not a nice way to work. Some projects have been drawn up for these other people to be able to work, but they think the money comes too slowly. Well, in my opinion, although the money comes more slowly, this is offset by the fact that it's doing something right".

**Juan Jimenez Jurado Jr. / Batucando Project – Asa Branca Development Institute, Santa Branca, in São Paulo state (12/10/2011)**

Juan Jimenez Jurado Jr. is a musician, founder of the Batucando Project and a representative of the Asa Branca Development Institute, in the municipality of Santa Branca (São Paulo state). Since 2001, he has been developing activities with a band of children and adolescents whose parents are in custody for problems relating to drug and alcohol abuse. He tells us that the company brought many direct and indirect jobs, with suppliers also coming in because of Fibria. Juan believes that forest certification is important and shows that Fibria cares about being a correct and serious business, but he mentions both positive and negative points about forest partnerships: "They [Fibria] have leased a large number of our fields and farms, or else they go to the owner and offer incentives. On one hand it is good, but on the other it isn't. When I was small, I would go into the fields and see maize, sugar cane, coffee plantations, cattle. Nowadays, it's not as if they don't exist anymore, but if I go to the fields and farms today, I see eucalyptus, eucalyptus, and more eucalyptus. I also see cattle, other plantations, but not so many. This isn't Fibria's fault. If I was thinking about beef or dairy cattle nowadays, you go off and make a big investment, spend a lot of time, a lot of money, but the profit is very low. Yet with the eucalyptus the profit is greater. Fibria isn't to blame for this; the problem is with the whole system". Juan shows concern over issues relating to water, but believes that Fibria adopts an ethical attitude in relation

to this resource: “At the Jacarei mill they use water from the River Paraíba and a portion of the water is returned to the river in a clean state. They use the water and treat it so that it is clean when it goes back into the river. They have this concern about water, precisely because clean water, a few years from now, is going to be a rare commodity”. With regard to odors, the musician told us that, “20 years ago, the smell was really strong. Now I think there have been a lot of studies, a lot of investment, because it needs to be so. It is not fair for us who live here, nearby, to have to breathe in an awful odor of sulfur, and now that isn’t the case. I think that Fibria now has modern filters”.

**Júlio César Florentino Perini, President of the Association of Residents of São Pedro, Pindorama and Chic-Chic (AMBSPPC), Aracruz, in Espírito Santo state (29/9/2011)**

Júlio Perini is actively involved in his municipality, seeking dialogue with local businesses and authorities with a view to improving the population’s quality of life. He supports movements that complain to the Public Prosecution Service about transportation, education and conditions in the schools. He is also director of the union of local public servants in the municipality of Aracruz, and he monitors the environmental licensing. As president of the Barra do Riacho Residents’ Association, Júlio sits on a number of boards, such as the Jurong shipyard, Portocel, the Barra do Riacho Waterway Terminal, and the maritime reserves. According to Júlio, “the purpose of the association is to get involved as much as possible with all the companies and other entities and participate in as many meetings as possible, so as to obtain as much information as possible, in order to always seek improvements, speaking out when one has to, but always looking to make progress, doing the two things – fighting whenever necessary and giving praise whenever positive things are being achieved. My commitment is only to the local residents; I have no commitments to any company”. With regard to negative impacts he sees in his municipality, he commented that, “practically all the space has been taken up for the planting of eucalyptus... and there’s the water issue too... the fishermen encounter difficulties in getting their boats out to sea. At high tide, they can get out. Portocel has even tried to facilitate the movement of their boats... But there is also the odor, which here in Barra do Riacho isn’t even that strong ... and the matter of noise, but it’s all at a tolerable level.” With regard to water resources, he told us that, “Of the water that is used, the waste is released into the river; there is no concern about replanting riparian forest, nor even the trees on the sidewalks; and there is no selective garbage collection in the community. I think [these are things] where progress could be made”. Julio tells us that he came to Barra do Riacho when around 60% of the [rural] population migrated in search of jobs, but the town didn’t absorb all the labor and not that many people nowadays work directly for Fibria, while a number of brothels have arisen. Julio emphasizes that, although there are negative aspects, many benefits were also brought by the company, such as the increased number of home owners and greater comfort. He uses a personal example to illustrate the social benefits generated by Fibria: “Economic power brought in people from outside. I, for example, arrived in a dump truck, when I moved here. Today, thanks be to God, I have studied, I own three houses, I have been able to contribute something to the place I came to live in. If I had gone somewhere else, perhaps I would not have been able to achieve these things”. Julio says he feels a lack of more effective communication between the company and the community with regard to processes and tells us a lot of people would like to visit the company. His most striking comments were in relation to the Indian communities: “I think the case of the indigenous peoples was very harsh. But that wasn’t Fibria, it was in the time of Aracruz Celulose. The Indians were fighting for the demarcation of their lands and the local population was turned against them. The employees demonstrated in Aracruz, protesting against the Indians. I thought that video was very hard... The Indian issue is still not fully resolved. I think that they have now managed to obtain the demarcation of their lands, and I think it would be a good idea if the company took another look at this and they could even, if they wanted and if it was permitted by the federal government or the bodies that control this, plant eucalyptus, in some kind of partnership with them... As for the settlement, I know that they had some experience in planting cassava amongst the eucalyptus and giving them something so they could use Fibria’s lands. I think this aspect is not at all bad, it is working out well. In general, the population will demand a lot of Fibria, because it is a company that needs a lot of land for planting, and with the population growth the land will be increasingly fought over”. Julio also mentioned that Fibria could invest more in the preservation of the Atlantic Rainforest and

the establishing of Conservation Areas, and sent a message for the company to invest more in the local community: "Seek to bring in more infrastructure, invest a lot here in the municipality, because we tend to be overlooked here".

**Luzia Florencio Rodrigues, educator of indigenous peoples, pedagogue and teacher in the Amerindian community of Comboios, Aracruz, in Espírito Santo state (30/9/2011)**

Luzia Florencio Rodrigues is a pedagogue and has been teaching at the Comboios Community School of the Indigenous Peoples for almost 7 years. She also coordinates the work of a group of female artisans. Luzia believes that the projects that have been developed in partnership with the company have brought benefits to the community, but admits that there was not much discussion about what would be the best projects to develop in the location, and that some environmental matters did not achieve the success that was expected. She says that, at first, the demands of the indigenous community weren't understood: "Some of the people representing the company saw this as negative and didn't try to really understand why the Indians were asking for help in that way... The situation was studied, seeking to understand the different sides, and there was even a big fight over land ownership. The company said it was theirs, we said it was ours, so who did it really belong to? Getting to the point where all the studies were completed and everybody understood each other was a very long process. We Indians suffered much discrimination and prejudice from those who didn't understand our struggle. Socially, this had a very strong impact on our lives as individuals... Our cause is the fight for the very survival of the indigenous peoples, particularly the Tupiniquim, because the only region you can find the Tupiniquim is here. We had to deny our identity for many years, speaking for my ancestors. It really was a difficult relationship". Luzia went on to discuss Fibria's posture regarding dialogue with the indigenous community: "They really are open to listening, they take the situation, discuss it there, then come back with a response; we are not left without a response... We never had any intention of arguing in such a way that both sides would end up getting hurt. On the contrary; the dialogue is always friendly, with both sides trying to understand each other". Luzia also confirmed the social benefits brought by the company: "They have been positive. We already had non-governmental organizations helping the community and, through the projects we were able to organize ourselves better, to be able to buy food, ensure our sustainability in a general sense... They have provided support in various areas; not just in agriculture, but also in education, that has been very good... Once the families started to see that the food situation was improving, that they could buy it with money, that things were getting easier, they stopped planting enough crops. Since our grandparents, who were farmers, and their children who were growing up, had the projects, which originated there, and were working and receiving daily payments, they stopped working in the fields and had already given up fishing. When the projects finished, under an existing agreement, those who were able to arrange a job elsewhere left, while those who couldn't had to return to the old way of life, planting and harvesting, fishing; it had an impact". Luzia regrets the lack of proposals for forest conservation in her community and says that proposals are under discussion: "Now, little by little, a different view is developing; the issue of recovery is being discussed, and the community itself is aware that it is necessary to seek partners in order to implement the recovery of the area, appreciating more what we have here. We cannot afford to lose it, because if we were to look at our region and compare, the only village that is preserved around here is ours".

With regard to the impact on water resources, Luzia says, "A canal was created here, I don't know exactly when, but there is a canal near Regência, Comboios. And we have noticed that in some years there has been a lot of flooding here in the village. So we have felt a certain impact. In 2006, there was a heated battle to close the floodgate. The community had to fight to stop them opening this floodgate, because it was flooding everything, ruining everything, with a lot of dead fish floating on the surface of the water. There have been some very tense moments here with regard to the water. For example, if the river is being polluted, what is the water like that comes out of the tap? So, it was necessary to have a serious conversation, and now we understand one another". Luzia mentioned that the company fulfills its obligations regarding the treatment of waste, because, in her opinion, the legislation obliges it to do so. Her biggest concern relates to the planting of eucalyptus in areas belonging to the village: "We are concerned about





the water, about the river; whether the river will always be here... We have to maintain riparian forest, between the water and the planted eucalyptus monoculture. I don't know if they are complying with this law, but we, the people who live here, are concerned about this water source of ours". Luzia agrees that the company can be a partner in social projects and help to strengthen the Tupiniquim culture. She says that there are fewer people leaving the villages nowadays and believes that ongoing dialogue can be favorable to the sustainable development of both the company and the indigenous community.

**Nazine Bittencourt Ribeiro – President of COMDICA (Municipal Council for the Rights of Children and Adolescents) – Arroio Grande, in Rio Grande do Sul state (24/10/2011)**

Nazine de Moura Bittencourt Ribeiro, president of the Municipal Council for the Rights of Children and Teenagers in Arroio Grande (Rio Grande do Sul state), said that projects supported by Fibria benefit the community and encourage citizenship: "In first place, we have a lot to be grateful to the company for. I speak for my own part, for the possibility, the opportunity that was given me to carry out this social work, which I strongly believe in, with the children being cared for outside their school hours... We have about 100 children and adolescents being cared for during the week, providing all kinds of education, including environmental, in places such as this one. The development takes place here and in other locations, with the support of the company, so I think these children and adolescents are being placed on the right path. And this benefits their families too". She emphasized a negative factor related to the social impact of the company's intention to set up in her municipality, since that intention never came to fruition. According to Nazine, "There were certain expectations in the municipality with regard to the generation of employment, as a result of the mill. It is only a small municipality, and there was all this expectation in the community surrounding the coming of the company and the possibility of generating employment. And since it didn't occur, there was no second phase, which would have been industrialization. There was a degree of frustration in this respect. In fact, the work actually diminished slightly, according to what I have heard talking to other people, because with the planting of the trees, there was the hiring of specialized labor, to begin with, but now, so long afterwards, there aren't even jobs for the people who worked in those plantations; now they're all unemployed". Nazine said that she hadn't noticed, in her municipality, any problems relating to environmental issues arising from the company's activities, despite a certain resistance from the community. In her view, "There is a highly qualified and dedicated team responsible for water collection, and our water is one of the best you can find for drinking. There is no problem whatsoever with our water, which is well looked after and treated. So I think everything is being well taken care of in this area".

**Nilva Barroso – President of the Cultural Center – Três Lagoas, in Mato Grosso do Sul state (14/10/2011)**

Nilva Barroso, president of the Casa da Cultura (Cultural Center), has lived in Três Lagoas (Mato Grosso do Sul state) for more than 20 years and works in a painting studio. She believes that the company has brought enormous benefits to Três Lagoas, involving development and employment generation: "I think that, in truth, the company has sought to do its best for the municipality and for the region and has tried to resolve everything according to standards, which is how they should be resolved. They have taken a lot of care over the environment. And they have explained this to the community, in public hearings", including information she had access to about forest certification: "I think certification is correct. I think it is necessary to look at this issue also, because if the population, the community hadn't kept track of this process, Fibria's work in the region, I don't know what the environmental consequences would have been, or the environmental damage in the future. I think we have to keep up with what is going on, how it is being done, so that we, the residents of the town, can also fight for our rights". Nilva drew attention to Fibria's major investments in social projects in the areas of technology, apiculture, and handicrafts, among others: "People used to have to leave the town in order to study and to work, and the company has brought these things to us. The fact is that today this is a busy town, with active commerce; you can see it in the store façades, which have changed considerably in the last 5 or 6 years. It is a different town. Everything has modernized and improved a lot, to serve the large population that mo-

ved here... Três Lagoas is functioning, working like a big city, and the development is stimulating the economy of the region... We have many big companies here, the schools have improved, the road surfaces in the town have improved. So you can see that it has just brought good things to the town". Nilza also highlights the company's transparency, which makes her believe in its ethical posture: "I think that the level of transparency is already a good motive for me to be responding in this way. Because they are very open, passing on to the community everything that is going on, whatever it may be. So I think that the transparency of their work alone is a great thing. We have access to everything that is done at the company. They disclose the information, either in hearings or in the media, the newspapers, we always know what is going on. I think that working with transparency shows high ethical standards". Nilza believes that lack of information has led many residents to take a mistaken view of environmental issues: "[For example,] we have got the wrong idea about water. That's why I think it is good to open up to the community, so that they know about these things. I always used to hear things like 'goodness, a eucalyptus consumes 20 liters of water a day and in the future we're going to end up living in a desert'. I used to think like that. Now I can see that it isn't like that at all. The way the water is removed from the river [by the mill] and then returned to the river has already been explained to us, so I now believe that it doesn't have any impact on the environment. And those who are responsible for the environment in this region take a lot of care over this in our town".

**Osmar Bernardo dos Santos – Small-scale farmer and President of the Ribeirão Association – Alcobaça, in Bahia state (28/9/2011)**

Osmar Bernardo dos Santos is a small-scale (family) farmer and president of the Ribeirão Association in Alcobaça (Bahia state). Osmar believes that Fibria is concerned about environmental and social questions, always seeking to keep the population informed about action that is being carried out in these areas. He acknowledges that the company is certified and supports this initiative: "I knew about this, because there are technical specialists who are always working on it. I have an uncle who is a monitor and he tells us about it. It's great, because we see that unless they take care of the environment there is no certification, and if there is certification we know they are taking good care of the environment." With regard to forest partnerships, Osmar criticizes the attitude of some sponsored producers: "I know a little about this sponsorship. There are some areas, which I had even spoken about at the conference in Vitória, where, with this partnership project, disrespect is being shown to the farmers who are producing there. Plant along the road, plant along the electrical network, plant around springs. I have my own opinion about this and will always keep pressing the point. I don't know if it's the company's decision, or that of the ones doing the planting and supplying this eucalyptus to the company. Whenever I participate in the meetings I bring up this subject." Osmar participates in conferences on matters relating to traditional communities, and points out: "With regard to the quilombolas [descendants of runaway slaves]. It's one of the problems. Here in southern Bahia, we're always having discussions about this, about the demarcation of Amerindian lands and quilombos. But I think there's a lack of dialogue." As regards the charcoal workers, a common practice in the region, Osmar says he feels he is putting himself at risk when he tries to make contact to invite them to participate in the association: "Nowadays, there in the community, there is a risk, because we work in agriculture and we try to get people to join the association, to do some farming, but a lot of people go and work with charcoal. I think they feel a little superior and try to damage their [Fibria's] plantations. Because right here there is some weird devastation related to charcoal. I think they feel a little isolated. Because we are different, Fibria is always supportive, so there is a group that goes against it".

**Carlos Alberto dos Santos Dutra, Brasilândia, in Mato Grosso do Sul state (11/1/2012)**

Carlos Alberto dos Santos Dutra, or Carlito, as he is known in his community, has a background in sociology, archaeology, anthropology and philosophy, and keeps an eye on the work developed by Fibria in those areas. He has lived in Brasilândia (Mato Grosso do Sul state) for more than 20 years and served as a member of the town council, so he understands the local needs and problems. He considers himself to be very active in the community. Carlito believes



the company's interest in discussing environmental issues with the community has grown. As for changes in the social field, he explained, "I would say that the arrival of a company the size of Fibria has a big impact and ends up altering the habits of the community. Behavior, consumption, I think it creates considerable employment expectations. This is positive, because it ends up making the town function at a faster pace... Then there was the enhanced value of the local potential, in other words, local agents, labor, work, people felt more appreciated. A lot of training was provided by the company, working with the municipality. To some extent, there was a general improvement in the social sphere, because in the areas of health, education and safety also, the municipality began to benefit from its partnership with the company and to improve its services." Regarding forest certification, Carlos Alberto believes it is important, since the bodies that perform the validation and auditing bring the company enhanced credibility. However, he thinks that the criteria and indicators applied in the certification could be better disseminated, so that the community knows how it is done and acknowledges the company's attitude towards forest management. The sociologist criticizes the company's position in relation to the outsourcing of services, which creates insecurity in times of crisis: "I think this issue, at a time of economic crisis, is a problem. For example, the company outsources a service particular for planting. Once the planting is over, you have thirty, forty unemployed drivers. It pays all their entitlements, but I think it could go a little bit further ... modify things a little bit, have a more distinctive relationship with the community in light of this economic crisis." Regarding the relationship with the community, he believes that Fibria has become part of the community and shares the challenges: "Because when it settled here, it used local labor, so it also adopted the identity of the people here. Then it became a company of the community too. So if the community suffers, it will also suffer; it is a mutual learning process." Also in relation to the community, Carlito emphasizes that the relationship and support for local culture and traditions could be given greater importance: "People need art, need culture, literature, research. So I think this relationship with the community requires, this historical moment demands, that Fibria takes a qualitative leap forward, making a distinctive contribution, more in keeping with its own horizons."

**Pedro Batista Silveiras, resident of the Angelim I community, Itaúnas – Conceição da Barra, in Espírito Santo state (11/2/2012)**

Pedro Batista Silveiras is 51 years old, has always lived in the Angelim I community, in Conceição da Barra (Espírito Santo state) and knows the area better than anyone. During this period, Pedro has seen changes in the physiognomy of the landscape, following the arrival of companies, and told us of his concerns, and those of other local residents, regarding environmental issues: "The company caused a major imbalance in the environment. ... today (the residents) are worried because they can see the situation is ugly; communities are without water. Previously, I used to drink water from this river here; I used to go there and drink the water, swim. Not only the companies producing from eucalyptus plantations; the alcohol-ethanol manufacturers have also caused us great harm. So, it caused this imbalance, but now they are worried about what they are doing. They have already withdrawn a certain amount from the springs; all areas are getting bigger. I think that with every harvest, I don't know if they will make them even bigger." With regard to social issues, Pedro looks at the changing pattern of employability and regrets the outsourcing of the services provided to local companies, which, according to him, led to a decline in income and benefits, compared to what they used to provide: "I've been dying to say this to someone, regarding the social change that took place with the change in company. The social side at Aracruz, and I say this from experience, because I worked there; when I worked at Aracruz the social side was marvelous. The company gave us jobs; I worked there for eight years, in the cutting of the eucalyptus. I earned about 5 times the minimum wage and was on the company medical plan, that wouldn't be a bad salary today for someone who only studied up to fourth grade. I had good health care, which covered you, your child, your family had everything, no worries, it was really good. What happened was that Aracruz, up to a certain point in time, bankrolled this population. Today, everyone who worked there has his own house, has managed to make a decent home. But since that time, from 1990 to now, if my memory serves me well, since the time I left there, things have changed. The company started outsourcing and the social side left something to be desired, take my word for it... There was this imbalance in society and in the economy, even the family, because of the decline. For me it was truly a disaster." Pedro

told us that many problems arose because of the decline in the standard of living of the community, which saw no other alternative to the illegal actions that brought no direct benefit to the community and even went so far as to harm the company: "As I already said, to begin with, we used to live here quite freely, letting the animals roam, raising pigs, cultivating the land here and there; the climate helped, we grew beans, grew corn. But with the arrival of the company, things diminished; some people sold up, others sold their tenure rights, because they lived there but had no document, and with the reduction, we stayed on this little patch. And things got difficult, like it is today... People went off to invade the eucalyptus plantations, to make charcoal so they'd have an income. And the company saw that the situation was getting complicated in all the communities. The people who lived in the countryside no longer wanted to leave; they went off to make charcoal to sell and have an income, and they went into the company's eucalyptus plantations – whose eucalyptus would they go for, the company's. So they responded, put the police on them, and the people fled. A lot of confusion; we would drop the chainsaw, they would pick it up and take it away, we would ask the guy and he'd go and buy another one, and this struggle went on until early last year [2011]." Pedro acknowledges the efforts of the community and Fibria to change this situation and admits positive changes have taken place in this context: "From then [early 2011] till now, things have changed. It [the community] came here, sat down here with some Fibria directors, and we showed them the project; a meeting with quite a lot of people, and we talked about the people's needs, what the problems were for us; that we needed this support, this assistance. And they came up with this PDRT [Rural Territory Development Program], this sustainability project. But we're getting started. The company is fulfilling its part. We still are not at 100% yet, because we are still only at the beginning... There are rules dealing with the environment, everything just right, with a deadline for us to work to. There's a 10-year contract, which can be extended later, subject to agreement, if the criteria are just right for everybody. The company has already dug a well for us – we just need to cover this excellent water with a lid – because we were also experiencing a lack of water... I think that then, with the entry of Fibria, I think that after a year, in late 2009, we started talking and they reached out to the communities, they are talking. Then we were able to get close to them, to bring up certain things. They defined an area of 35 hectares, which they left for us to work in... I believe that it will work out well. We have many projects in the association that will bring improvements to our community. Not for me, but for all the others too, not just us. And it is my desire that it is not just for me, but for everyone. So, in this respect, we have now started a relationship, to talk. And nowadays we are already having a dialogue, starting to understand one another. It was them that donated this shed to the community. They gave us the wood, and it came already sawn. And little by little we are starting to get going. Today I can see a little light there at the end of the tunnel. And we have everything to go ahead and reach a better level... Fibria is now talking. I hope it's for the better. That's what we're fighting for in this area here. So now I can say to the company that we are taking the first step. We are already talking, we have moved on from being enemies – not to being friends, because there are still many loose ends, but at least we're talking a little bit. I can see that this will be fruitful."

**José Horácio Alexandre Nenartavis, Chairman of the Association for the Welfare of the Elderly. Água Clara, in Mato Grosso do Sul state (4/1/2012)**

José Horácio has lived in Agua Clara (Mato Grosso do Sul state) for at least 20 years and he participates in organizations such as the Chamber of Commerce, the Rotary Club, and the Freemasons. Lately, he has been presiding over the Agua Clara Association for the Welfare of the Elderly. José is worried about the deployment of Fibria in the region, especially in regard to the increased demand for public health and education services. He believes that the responsibility for these services lies with the public authorities, but recognizes Fibria as an important tool for orchestrating efforts to make sure the right steps are taken: "The people leave the countryside and come into the town. They travel every day to work, planting and forest production. This was a change of custom for the local people, for people already accustomed to living on rural properties; theirs was another activity, with livestock farming predominant in our region. We can also consider that many people were brought in from other regions to our municipality, to supply these areas of work, thereby increasing the demand for rental properties, for schools, at the hospital, for all those things that the town, to a certain extent, was not expecting. These are the impacts that occur, but I believe the company is aware of all this and



will seek solutions. Not that it will bear the burden of infrastructure, but that it will use its power, even political power – a company like that has political power in the region – to call for infrastructural improvements, the expansion of the infrastructure in our municipality." José notes that many changes have occurred in the municipality since the arrival of Fibria, but he claims that local business has still not benefited, since he believes that the suppliers are not qualified to meet the demand for products. He suggests a partnership with Fibria for the training of local business: "Let's go to Agua Clara, call the local businesses and ask them, who want to supply us, to participate in training to supply Fibria? I think it would be a good investment, at least showing what we want; now you have to want to meet our requirements. I think it would be a way; one can do other things. But something is being done." Regarding the environment, José acknowledges the benefits brought by the company, with the recovery of areas degraded by ranching and farming: "Even when you address the environmental issue, for us to talk about the environment, there is much talk about the forests degrading areas, causing erosion, ruining the soil; there are all these myths. We are aware that this is not the case with what is happening here. The establishing of forests by Fibria - I also work as a realtor and know a lot of properties in the region, and I can say that where Fibria arrived, where there was ranching and pastureland and it became Fibria forest, I can say that it is now better, environmentally speaking; it is better cared for than before. There are myths which tell that forests degrade, that forest ruins, but that does not apply to areas where Fibria operates. It takes every care; you do not see erosion. I believe this reflects the conscientiousness of the company, and also the certification requirements... Where it [Fibria] is now, it used to be pastureland. Very few of these areas where it is operating had riparian forests or Permanent Preservation Areas. The pastureland extended almost into the water. Not today; now you see conserved Permanent Preservation Areas, natural reserves that are closed off and isolated. It wasn't like this before. With livestock farming, the people put the cattle in the reserve and cattlemen go in with them, so the fauna is disturbed, unlike the situation today, where they are isolated. We can see that they are isolated, both the APPs and the reserves. So, it is in the company's areas where I say that, environmentally, it is better than it was. (...) What is more, it is said that the planted eucalyptus forests are not attractive to wildlife, but I believe that the protected natural areas, allied with the eucalyptus forests, all together, is best; that is what we believe." Regarding the company's contribution to the eradication of local social problems, José says, "The company has tried hard to discover indicators, to conduct participatory diagnoses here, and it is giving the impression that it wants to participate in this. It is too early to say 'it did nothing'. I cannot say that. I understand that it is positioning itself, looking to see where it will act. It has some activities, and there are a lot of things that can still be done, but it is too early to say. Right now, the company is trying to find out who is who, and who it could form a partnership with." José believes that the company has brought benefits to the community where he lives, such as the taxes that are levied by the local government and invested in the municipality. Even so, he believes that the situation can still improve: "It is good, yes, but there is room for improvement. We are looking for a better path to follow."

## Socioenvironmental education

Fibria undertakes various socioenvironmental education initiatives aimed at both its internal and external audiences through diverse programs aligned with the reality of each Brazilian region and compliant with the National Environmental Education Policy (Law No. 9.795/99), the National Environmental Education Program (PRONEA), and the Treaty on Environmental Education for Sustainable Societies and Global Responsibility.

Initiatives with external stakeholders involve primarily teacher training on environmental education in public schools, environment interpretation projects, environmental lectures for children and youths, and organization of social and environmental contests and activities. Some of Fibria Units have fixed facilities – the Environmental Education Centers (NEAs) – and welcome members from neighboring communities to their monthly programs. The Jacareí Unit in São Paulo state has a mobile NEA which facilitates the logistics of socioenvironmental education initiatives by expanding the scope of its activity.

For internal stakeholders, which are largely made up of forest employees and contract workers, initiatives are focused on raising their awareness to biodiversity conservation and environmental impact management. There is a program of lectures and environmental education training at each Unit to train employees to work as multipliers.

At the Aracruz Unit in Espírito Santo state, the Environmental Education Program (PFA) has provided half-yearly training courses for forest employees since 2004. These workers act as multipliers and their task is to disseminate what they learned among their work teams through monthly meetings called Direct Environment Dialogues (DDMAs). To support employees in these meetings, Fibria distributes a monthly newsletter – *EcoCiente* – containing the issues discussed in the training sessions.

In 2011, 171 employees attended the PFA program in the first semester and 158 employees in the second. These employees disseminated the knowledge learned in the course to around 8,300 forest workers at Aracruz Unit. An awareness index is calculated every year through a questionnaire containing questions on the environment and sustainable attitudes. The result of the 2011 index was 69.5%, showing that workers are knowledgeable about the issues addressed in the program and actions are putting environmental conservation principles into practice. Inspired by the Aracruz Unit achievements, the Três Lagoas Unit in Mato Grosso do Sul state joined the PFA program in 2010, using the same training system and distribution of the *EcoCiente* newsletter, while topics were selected according to the specificities of the region.

This model will be fully implemented at the Jacareí Unit, São Paulo state, in 2012. Monthly training programs to employees are already underway. In 2011, 3,646 employees from the Vale do Paraíba Forestry Unit, also in São Paulo state, received information from the environmental area through induction or training.

At Capão do Leão Forestry Unit, Rio Grande do Sul State, employees receive three online news bulletins: *Consumo Consciente* ("Conscious Consumption") – with tips and information on the impacts of consumption – *Dia do Bicho* ("Animal Day") and *Dia da Árvore* ("Tree Day"), which bring information on local fauna and flora species.

Fibria's Environmental Training Program is conducted in local communities neighbouring Fibria's Units. Learn more about the social and environmental education activities undertaken by Fibria on [www.fibria.com.br/rs2011](http://www.fibria.com.br/rs2011).

**JornalEco** – Is a monthly Fibria publication to raise awareness to the environment, conservation of natural resources and conscious consumption distributed free of charge to 5<sup>th</sup> and 6<sup>th</sup> grade students of city and rural public schools located around Fibria's Units across Brazil. As well as this student's version, teachers receive a special version to support the content of the newsletter, whose themes are based on the United Nations commemorative year and adapted to the Brazilian Syllabus requirements. In 2011, the *JornalEco* had a print run of 70,000 copies monthly, covering the states of São Paulo, Minas Gerais, Mato Grosso do Sul, Rio Grande do Sul, Bahia and Espírito Santo. According to data obtained from a survey with educators, the *JornalEco* is used in the classroom as much as teaching materials, and all the stories and features were considered interesting and were frequently used by students and teachers alike.



## Dialogue with NGOs and participation in forums (GRI 4.13) ★

Fibria currently participates in 125 forums, associations, working groups and similar bodies, and holds a consulting or executive position in 24 of them. In 2011, the company participated in drawing up a 16-point proposal in regard to the country's new Forest Code [see: public policies], which was presented to Congress by The Forest Dialogue – Brazil ([www.dialogoflorestal.org.br](http://www.dialogoflorestal.org.br)), acting on behalf of local forest-based companies and socio-environmental entities. This document, the result of unprecedented cooperation between civil society and the business community, can be seen in full at: [www.dialogoflorestal.org.br/legislacao/codigo-florestal](http://www.dialogoflorestal.org.br/legislacao/codigo-florestal).

One of the company's most important involvements is in the Sustainable Forest Products Industry (SFPI) working group of the World Business Council for Sustainable Development (WBCSD), which has developed an ambitious new agenda and raised its membership from 16 to 26. Fibria's chairman, José Luciano Penido, is one of the two co-chairmen of the working group.

Also notable at the international level is the company's participation in The Forest Dialogue (TFD), an entity that promotes discussion on key forest issues and involves forestry companies, NGOs, indigenous communities and multilateral institutions. Fibria's general manager for Sustainability and Corporate Relations, Carlos Alberto Roxo, is one of the two co-leaders of the TFD. During 2011, the TFD held a number of dialogue sessions addressing five areas: investing in forests that are controlled by local communities or landowners; REDD+ mechanisms in a climate change agreement; free, informed and prior consent by indigenous peoples to measures that will affect them; genetically modified trees; and the role of the forests in producing the 4Fs (foods, fuels, fibers and forests).

The company continued to participate in the regional forums of The Forest Dialogue – Brazil, held in Espírito Santo, the south and far south of Bahia and São Paulo. In October, The Forest Dialogue – Brazil came to the state of Mato Grosso do Sul, bringing together NGOs and companies, including Fibria.

In April, Fibria hosted part of the FSC® Certified Plantations and Local Communities: Challenges, Activities, Standards and Solutions convening, which brought together some 90 representatives of companies certified by the Forest Stewardship Council® (FSC®) [see: <http://www.fsc.org/?id=1182>], along with environmentalists, academics, consultants and NGOs from several countries.

With a view to assisting the development of forestry certification systems, Fibria attended two other important international events in 2011. In September, the company participated in the FSC® general assembly, which took place in Malaysia, and in November it sent a representative to the Stakeholders' Dialogue of the Programme for the Endorsement of Forest Certification (PEFC), held in Montreux, Switzerland.

Another highlight was Fibria's participation in the Carbon Disclosure Project (CDP) Global Forum 2011, a virtual event in which representatives of leading international corporations described their experience in reducing carbon emissions. Fibria's chairman, José Luciano Penido, represented the company in this forum, which was transmitted live over the internet [see the video recording at: <https://www.cdproject.net/en-US/Pages/cdp-global-forum-webcast.aspx>].

Fibria also continued its participation in the New Generation Plantations project (NGP) [see: main commitments undertaken], in partnership with the World Wide Fund for Nature (WWF).

In 2011 Fibria also organized of the event Constructive Dialogues in Vitória, Espírito Santo. The event aimed at developing sustainable relations within the regions where the company operates involved 245 participants, comprising representatives of the company, local communities, clients and socioenvironmental institutions.



# Suppliers

Fibra seeks to engage with its supply chain in order to identify and share good social and environmental practices and responsibly reduce carbon emissions, improve the use of natural resources and ensure respect for workers' rights. Furthermore, suppliers are made aware of the importance of reducing the negative social and environmental impacts of their activities as much as possible. These initiatives are described below.

**Accreditation and audits** – By accrediting its suppliers, Fibra seeks to identify risks stemming from the supply of materials and services (financial, legal, labor, quality, healthcare, workplace safety, environmental and commercial services) in order to avoid compromising its end product, creating liabilities or damaging the company's reputation. Supplier accreditation assessments are aligned to local legal requirements and the principles contained in international quality standards such as ISO 9001, ISO 14001, OHSAS 18001, NOSA and ILO Conventions.

Fibra has 647 accredited key suppliers<sup>1</sup>, of which 525 were evaluated for social responsibility in 2011. Out of those suppliers, 410 were approved, 105 were approved with restrictions and 10 were rejected following assessment of their social responsibility<sup>2</sup> practices. Under this supplier program, suppliers approved with restrictions are requested to make changes or adaptations according to an agreed action plan, in advance of the next evaluation. Fibra has gradually increased the percentage of suppliers evaluated for human rights criteria, as shown in the following figure.

1. To be accredited as a Fibra supplier, a company must be registered in at least one of the following categories:
  - Suppliers of raw materials, inputs and packaging (industrial and forestry sectors);
  - Suppliers of long-term internal services (industrial and forestry sectors);
  - Suppliers of exclusive transportation;
  - Suppliers (clients) of non-operational items (waste, scrap and similar) and waste processing (internal or external to Fibra);
  - Suppliers of services.
2. Suppliers that are rejected may reapply for approval at a later stage, but if they are not eligible a second time they must submit to an evaluation by the Harmonisation Committee, which decides whether that supplier can be accepted for sub-contracting.

## CONTRACTUAL OBLIGATIONS AND EVALUATIONS CONCERNING HUMAN RIGHTS (GRI HR2)

	2009	2010	2011
Number of contracts	797	1.218	1.044
Percentage of contracts with sub-contractors and major suppliers that include criteria or an evaluation concerning human rights	78.24%	78.47%	81.14%
Percentage of contracts with sub-contractors and major suppliers that were either rejected or accepted with restrictions or that were subject to other actions as the result of an evaluation concerning human rights out of the total number of contracts with sub-contractors or suppliers evaluated concerning human rights	2.62%	10.34%	21.90%

There has been an increase in the percentage of companies rejected or approved with restrictions because of more stringent measures in evaluating documentation.

After a pilot project in 2010, Fibra established a new supplier evaluation process in order to take into account the performance of these partners as regards their labor relations, environmental practices, fiscal practices, safety and occupational health and social practices. These evaluations seek to ensure respect for children's rights and eliminate child labor and forced labor throughout Fibra's supply chain (GRI HR6 and HR7). All results are confirmed through documentation and records submitted by the company being audited.

## MEASURES TAKEN TO CONTRIBUTE TO THE ABOLITION OF CHILD LABOR<sup>1</sup> AND FORCED LABOR OR SLAVE LABOR (GRI HR6 AND HR7)

	2009	2010	2011
Preventive and corrective measures for sub-contractors	<ul style="list-style-type: none"> <li>• Fibria contract form</li> <li>• Fibria supplier accreditation policy: Company policy that covers contract and accreditation requirements for Fibria's suppliers, including evaluation of social responsibility</li> <li>• Standard operational accreditation of suppliers: Company procedures established for contracting and accrediting suppliers, including evaluation of social responsibility</li> <li>• Form for evaluating social responsibility: Form for the evaluation of social responsibility of Fibria's suppliers covering legislation, respect for the environment, occupational and labor relations, forced labor, protection and integration of handicapped persons, social discrimination and the right to collective bargaining. These conditions are governed by the International Labor Organization (ILO) Conventions and Brazilian laws</li> </ul>	<p>All the measures taken in 2009, plus the following:</p> <ul style="list-style-type: none"> <li>• In-situ audits in order to ensure that suppliers are not using child labor</li> </ul>	<p>All the measures taken in 2009, plus the following:</p> <ul style="list-style-type: none"> <li>• Preparation of a new form for evaluating sustainability that replaces the social responsibility form, whose goal is to identify current indicators of sustainability, including the Global Compact. This new approach allows Fibria to create action plans so that companies can adopt Fibria's criteria. A trial application was carried out in November 2011</li> <li>• In 2011, we continued to audit in place what had begun in 2010 in order to guarantee that suppliers were not using child labor or forced labor</li> </ul>
Preventive and corrective measures for sub-contractors and suppliers	All the measures mentioned above	All the measures mentioned above	All the measures mentioned above
Measures to promote the rights of children, adolescents and youths	All the measures mentioned above	All the measures mentioned above	All the measures mentioned above

1. The minimum age for employment in Brazil for nighttime, dangerous or unhealthy work is 18 years of age. For regular work, the minimum age is 16 years and 14 years for apprentices. This is strictly complied with by Fibria.

During 2011, evaluations were made on the sites of 27 sub-contractors, involving a total of 6,740 employees. Priority was giving to suppliers operating in the forested areas of Fibria's Aracruz, Portocel and Caravelas Terminal units in Bahia State. In addition to Fibria's sustainability guidelines, these evaluations take into account the BrazUK guidelines on legislation and parameters and principles of the United Nations Global Compact, the Dow Jones Sustainability Index (DJSI World) and the Corporate Sustainability Index of the BM&FBOVESPA.

Two other mandatory requirements for contracting suppliers are compliance with environmental policies and transportation safety criteria contained in Fibria's Safe Road Program manual. All contracts signed with suppliers include Fibria's Code of Conduct or mention the standards adopted by Fibria (GRI HR2), which strengthen the prohibition of any discriminatory practices or practices that conflict with existing laws.

In order to reinforce the importance of sustainability among suppliers, Fibria is preparing a new sustainability evaluation form for the supplier accreditation process. In November 2011, Fibria invited 15 suppliers of various sizes (small, medium and large businesses) to complete a pilot version of this form and submit suggestions for improving it. The new sustainability evaluation form, which replaces the current social responsibility form, will be implemented by the company during the first quarter of 2012, after review of the comments received.

**Local suppliers** – Fibria gives preference to local suppliers when it buys supplies or contracts for services. In 2011, the company spent R\$2.95 billion (73% of its total expenditures) with local suppliers located in the same states as its industrial and forestry activities (São Paulo, Mato Grosso do Sul, Espírito Santo and Bahia states). Fibria increased procurement from local suppliers by 8.7% compared to 2010.

#### LOCAL PURCHASES BY STATE (GRI EC6)

(in R\$)	Total amount of local purchases by Fibria Unit	São Paulo state		Mato Grosso do Sul state		Espírito Santo and Bahia states	
		Amount of purchases from local suppliers	Percentage of purchases from local suppliers	Amount of purchases from local suppliers	Percentage of purchases from local suppliers	Amount of purchases from local suppliers	Percentage of purchases from local suppliers
2009	2,171,822,507	1,492,353,578	81.31%	223,633,914	16.63%	455,835,016	16.34%
2010	2,758,656,803	1,543,963,643	77.59%	350,274,092	37.15%	864,419,068	64.92%
2011	2,950,364,527	1,254,774,470	85.22%	363,787,475	41.39%	1,331,802,582	79.81%

Factors that influence the selection of suppliers, in addition to their geographical location, are the level of services provided, impact on the local economy (promotion of local suppliers), delivery timeframe, capacity to innovate, prices, payment deadlines and certificates obtained in programs promoting local suppliers, such as PRODFOR and PQF Avançado.

Fibria is one of the participants in the Integrated Program for Development and Evaluation of Suppliers (PRODFOR) in Espírito Santo state and the Program for Evaluation of Suppliers (PQF Avançado) in Mato Grosso do Sul state. Both programs promote environmental quality management, respect for the environment, health and work safety, finances, tax status and working conditions among suppliers.

In Três Lagoas (Mato Grosso do Sul state), Fibria has partnered up with the local government, the Instituto Evaldo Lodi (IEL/MS) and SEBRAE in awarding 17 evaluation certificates to suppliers through PQF Avançado Program in January 2012. A total of 838 hours of classroom teaching were given to vocational training, consultancy services and evaluation with the participation of local businesspeople from several industry sectors (human resources, construction, business, maintenance services, automobile parts and machinery manufacturers) interested in meeting the needs of large industries. The total amount of local purchases made in the Três Lagoas region in 2011 by the companies participating in the PQF Avançado was R\$55,686,279, of which R\$9,366,515 (16.8%) were for purchases by Fibria's regional offices.

**Services Contracting Commission (CCS)** – In January 2011, Fibria created a Services Contracting Commission (CCS) with the purpose of establishing guidelines and evaluating contracts for permanent services deemed to be critical. That includes services performed exclusively for Fibria for two years or more, those whose annual amount totals more than R\$5 million, services that impact the company's internal operations and those with an annual amount between R\$1.9 and R\$4.9 million that pose specific risks as identified through an activity evaluation form. The CCS goal is to minimize risks by carefully selecting contracts for provision of services in accordance with the company's growth and sustainability strategies. The following main considerations guide the CCS work:



- focus on end result;
- termination of long-term contracts for recurring services;
- prioritizing new calls for tenders;
- cost transparency;
- use of a model contract together with the request for tenders;
- alignment of technical and commercial proposals;
- creation of bonuses and penalties;
- promotion of improvement projects;
- promotion of new alternatives;
- search for synergies in contracting functions;
- strengthening local partnerships and long-term alliances;
- delegating functions.

The CCS is composed of representatives from Fibria's Industrial, Forestry, Supply and Legal areas, Corporate Engineering, Human and Organizational Development, Sustainability and Tax planning and the Commission seeks to:

- decrease the number of broken contracts;
- reduce the risk of labor liabilities;
- reduce the number of non-competitive bids;
- promote greater stability in contract adjustments;
- institute longer term contracts.

The members of the CCS meet monthly to discuss the contracting process and make recommendations. In 2011, the Commission began a review of 26 calls for tenders, identifying opportunities and suggesting improvements in order to ensure compliance with all Fibria's standards. Several of these calls for tenders are still being negotiated.

**Carbon Disclosure Project (CDP) Supply Chain** – For the second consecutive year, Fibria has held a workshop on the Carbon Disclosure Project (CDP) Supply Chain, bringing together 91 of the company's main suppliers – 15 more than at the 2010 meeting. Held in March 2011, the workshop stressed the importance for all participants to measure, publicize and reduce carbon emissions in their production processes. Participants attended presentations on climate change, learned about the results of the CDP Supply Chain for 2010, sharing lessons from the cases of three companies.

Representatives of the 65 participating companies, 71% of the companies attending the workshop, completed a long and detailed questionnaire on sustainability in English, a satisfactory rate. Participants were divided into groups to fix goals and draft plans for specific activities. The following topics were the focus of the discussions.

- implementation practices: what suppliers are doing in order to decrease their emissions.
- emissions reduction targets: the commitment of suppliers to reduce their emissions.
- reporting performance: how suppliers are communicating these initiatives.
- strategic awareness: the priority given by suppliers' management.

**Waste disposal** – Fibria has strived to identify suppliers interested in using waste produced by the company's industrial activity. To this end, Fibria created a sales taskforce to market non-operational equipment and sell or donate waste to those suppliers that meet the company's environmental criteria. Fibria periodically conducts audits on the site of suppliers interested in buying or receiving waste from industrial pulp production.

## Government ★

### Contributions to political campaigns

Fibra has no links with political parties, but makes financial contributions to the electoral campaigns of candidates it considers to be committed to sustainable development and improvement of public administration. In the choice of candidates who merit such support, the following requirements are taken into consideration, pursuant to the company's Electoral / Political Donations Policy:

- strict compliance with existing legislation;
- registration with the Electoral Courts by the financial committees of the candidates and/or parties benefited;
- total transparency and traceability in donation processes;
- commitment to improvement of public administration at the federal, state and municipal levels;
- commitment to the fostering of sustainable development;
- commitment to the strengthening of citizenship and democracy (GRI SO5).

The donations for election campaigns are approved by the Executive Board, under the company's Electoral/Political Donations Policy; they can be found listed on the website of the Superior Electoral Court, [www.tse.gov.br](http://www.tse.gov.br) (GRI SO6). Because there were no election campaigns in 2011, Fibria did not make any political donations during the year.

### Public policies

Fibra contributes to the preparation of public policies on the federal and state levels through a number of different forestry sector representative bodies in which it participates.

In 2011, the most important participation by the company in public affairs was the discussion of the new Brazilian Forest Code, organized by The Forest Dialogue [see Dialogue with NGOs and participation in forums], a group that brings together 32 companies in the pulp and paper industry and 28 socioenvironmental non-governmental organizations. After an extensive series of meetings and debates, which lasted for eight months, the group produced a document with 16 concrete proposals, delivered to the presenter of the proposed new Forest Code, federal representative Aldo Rebelo (PCdoB-SP). Companies from the mining and energy sectors also supported the document. The full set of proposals can be accessed at [www.dialogoflorestal.org.br/noticias/106/dialogo-florestal-entrega-propostas-de-emendas-ao-codigo-florestal](http://www.dialogoflorestal.org.br/noticias/106/dialogo-florestal-entrega-propostas-de-emendas-ao-codigo-florestal).

In its Code of Conduct [see page 40], Fibria states that it "respects the legislation and the authorities at all levels of government". The company has always abided by the Forest Code and will continue to comply with the new text as enacted into law.

In the federal sphere, the main forums open to debate about the forestry sector are the Silviculture Sector Chamber, the Industrial Development Plan (PDI) and the Silviculture Parliamentary Front.

In the Silviculture Sector Chamber, which brings together representatives of the entire forestry chain of production, Fibria is represented by ABRAF (Brazilian Association of Forest Plantation Producers). The history of the resolutions of this organization, which was created in 2008 by the Ministry of Agriculture, can be consulted at the websites of ABRAF ([www.abraflor.org.br](http://www.abraflor.org.br)) and the ministry ([www.agricultura.gov.br](http://www.agricultura.gov.br)).



The PDI is a forum of the Ministry of Development, Industry and Foreign Trade that promotes debate and the proposing of public policies for the pulp & paper industry. Fibria is represented in this body by BRACELPA (Brazilian Pulp & Paper Association).

The Silviculture Parliamentary Front, which is made up of Federal Deputies from a number of different parties who are identified with the defense of silviculture, has existed in practice since 2003 and formally as of 2011. Fibria is represented in this forum by ABRAF, which supports the parliamentarians by providing updated information and studies regarding the Brazilian forestry sector. The activities of the Silviculture Parliamentary Front and the sector's positions can be found on the ABRAF website. The constituents and coordination of this parliamentary front can be found at [www.camara.gov.br/internet/deputado/frentes.asp](http://www.camara.gov.br/internet/deputado/frentes.asp).

At the state level, Fibria is part of ABAF (Forest Plantation Producers Association of Bahia), which is presided over by the company's Corporate Affairs manager, Leonardo Genofre. ABAF participates in the preparation of public policies through the Silviculture Sectorial Chamber, linked to the Bahia State Department of Agriculture, and the Pulp & Paper Industry Chamber, linked to the Bahia State Department of Industry, Trade and Mining. The purpose of the latter is the development of this activity within the state.

In 2011, ABAF participated, at the invitation of the Bahia Planning Department (SEPLAN), in meetings with the SEPLAN Working Group responsible for the process of preparing Ecological-Economic Zoning plans for the state. ABAF placed itself at the disposal of this government body for the exchanging of information and donated to them cartographic data on the forestry areas of the companies in the state that are members of ABAF.

Connected to the Silviculture Federal Chamber of the Ministry of Agriculture, the Bahia State Silviculture Sector Chamber brings together representatives of the entire forestry chain of production in the state, in order to contribute to the preparation of policies for the development of the activity in the region. In 2010, the chamber contributed, together with the other Sector Chambers, to the state's Strategic Agricultural/Livestock Plan. In 2011, the Chamber discussed alternatives for the multiple uses of wood in the region and how to boost results from other agricultural activities. The actions of the Sector Chambers can be followed through the website of the Bahia State Agricultural Department ([www.seagri.ba.gov.br](http://www.seagri.ba.gov.br)).

Also in 2011, the Union of Paper, Pulp, Cardboard, Wood Paste and Paper Goods Companies in the state of Bahia (SINDPACEL/BA) organized a presentation by Rep. Arthur Maia (PMDB/BA), sponsor of Bill no. 4,330/2004, which establishes the conditions for hiring outsourced services and the labor relations deriving from such contracts. Taking advantage of this opportunity, the companies that are members of the union presented their positions to the legislator on subjects of interest to the sector.

Also regarding the issue of outsourcing, SINDPACEL/BA participated as an observer in a public hearing organized by the Superior Labor Court in order to gather technical, economic and social information regarding outsourcing that could help the judges in decisions on court cases relating to the subject.

Fibria also participates as a member of the Mato Grosso do Sul Planted Forests Producers and Consumers Association, which represents important companies in the forestry chain of production in Mato Grosso do Sul.

In the state of São Paulo, Fibria, represented by its Forest Environment manager, João Carlos Augusti, occupies the chair of the São Paulo State Forest Plantation Producers Association (Florestar São Paulo), an organization that represents forestry companies with activities in the state, as well as organizations, associations and institutions that are interested in the development of forestry and environmental preservation. Florestar São Paulo defends the interests of members that are dedicated to activities relating to the sustainable management of planted forests (GRI 4.13 and SO5).

## Personnel Management

Fibra's Human and Organizational Development area embraces the processes involving recruiting and development; remuneration and benefits; as well as occupational health and hygiene. Among the initiatives that took place in 2011 which included the implementation of the Performance Management Cycle and the Corporate Beliefs and concentrating efforts on standardizing the company's policies and procedures.

### Workforce

#### DIRECT EMPLOYEES (GRI LA1)

Company staff	2009	2010	2011		Total
	Total	Total	Men	Women	
Aracruz Unit (ES/BA/MG)	1,603	1,647	1,515	164	1,679
Três Lagoas Unit (MS)	879	982	807	90	897
Jacaré Unit (SP) <sup>1</sup>	1,148	1,214	1,021	128	1,149
Piracicaba Unit (SP) <sup>2</sup>	558	566	0	0	0
Central Administration	246	313	117	95	212
KSR <sup>2</sup>	229	236	0	0	0
Capão do Leão Forestry Unit (RS)	55	34	17	10	27
<b>Total – Brazil</b>	<b>4,718</b>	<b>4,992</b>	<b>3,477</b>	<b>487</b>	<b>3,964</b>
International Offices	31	45	19	23	42
<b>Total</b>	<b>4,749</b>	<b>5,037</b>	<b>3,496</b>	<b>510</b>	<b>4,006</b>
Percentage	–	–	87.3%	12.7%	–

1. Capão Bonito and Vale do Paraiba.

2. Units sold in 2011.

The change in the number of employees is due to the following:

1. Sale of the KSR paper Unit and that of the Piracicaba Unit – employees were dismissed, resigned or incorporated into the buyers' organizations.
2. Since July 2011, about 200 employees were dismissed due to the review of the structure of the Três Lagoas (MS) and Jacaré (SP) Units, mainly in the forestry area. Furthermore, there were adjustments in the labor force due to the unstable macroeconomic scenario.
3. At the Central Administration, about 50% of the dismissals came about as a result of disinvestment of assets and about 50% because of restructuring.

Permanent outsourced staff	2009	2010	2011
Aracruz Unit (ES/BA/MG)	4,929	5,619	9,050
Três Lagoas Unit (MS)	2,189	2,633	2,590
Jacaré Unit (SP) <sup>1</sup>	1,872	3,003	2,726
Central Administration	27	47	56
Piracicaba Unit <sup>2</sup>	282	353	0
KSR <sup>2</sup>	77	82	0
Capão do Leão Forestry Unit (RS)	142	182	101
International Offices	0	0	0
<b>Total</b>	<b>9,518</b>	<b>11,919</b>	<b>14,523</b>

1. Capão Bonito and Vale do Paraiba

2. Units sold in 2011.



The change in the number of outsourced workers is due to the following:

1. Standardization of the registration of outsourced workers in the SAP system, including suppliers from the Aracruz Unit's forestry area.
2. "Natural" change involving approximately 400 workers.
3. A reduction of about 300 outsourced workers at the Jacareí Unit due to a slowdown in plant activities.

#### TIME OF SERVICE

	2009	2010			2011		
	Total	Men	Women	Total	Men	Women	Total
Up to 3 years	NA	1,760	419	2,179	936	203	1,139
From 4 to 10 years	NA	913	169	1,082	1,194	188	1,382
From 11 to 20 years	NA	733	68	801	536	59	595
Over 20 years	NA	905	70	975	830	60	890
Average time of service (in years)	8.6	10.53	6.65	9.97	10.65	7.02	10.18

#### TURNOVER RATE (GRI LA2)

TURNOVER RATE (SIMPLY)							
	2009	2010	2011				
Total turnover rate <sup>1</sup>	14.52%	11.71%	36.30%				
1. Turnover = {(admissions + total terminations) / 2} / effective total} x 100							
2011	Men	Women	Total				
By gender	21.87	34.22	36.30% <sup>1</sup>				
1. Readjusting the 2010 base, excluding the Units sold in 2011, the total turnover is 14.83%							
2011	Up to 30 years	From 30 to 50 years	Over 50 years				
By age bracket	28.83	22.64	16.99				
2011	Central Administration	KSR <sup>1</sup>	Piracicaba <sup>1</sup>	Aracruz Unit	Capão do Leão Unit	Jacareí Unit	Três Lagoas Unit
By Unit	26.65	0	0	8.52	18.52	8.83	21.35
1. Units sold in 2011.							

#### ABSENTEE RATE (2011)

Unit	Women	Men	Total
Aracruz	22.50	98.49	91.07
Jacareí <sup>1</sup>	1.03	3.81	3.49
Três Lagoas	28.74	26.53	26.76
<b>Total<sup>2</sup></b>	<b>13.18</b>	<b>50.21</b>	<b>45.66</b>

1. Includes the Capão do Leão Unit (RS).

2. The Central Administration and the international offices do not control the absentee rate. In previous years the absentee rate was calculated using another formula.

#### EDUCATION (GRI LA13)

	2009	2010	2011	
	Total	Total	Men	Women
Basic education	675	631	521	36
Secondary education	2,710	2,775	2,075	100
Higher education	1,426	1,631	763	308
Specializations (post-graduate, master's and doctorate)	231	238	137	66

## DIVERSITY

Workforce Ethnicity	2010	2011
Asian	0.58%	22 0.55%
White	72.92%	2,645 66.03%
Indian	1.19%	59 1.47%
Mixed race	19.75%	991 24.74%
Black	4.25%	199 4.97%
Undeclared	1.31%	90 2.25%

Ethnicity by job category (2011)	Asian	White	Indigenous	Mixed race	Black	Undeclared	Total
Executive Board	0	6	0	0	0	0	6
Managers	1	83	0	3	2	13	102
Consultants and Coordinators	8	322	1	21	4	6	362
Administrative	4	643	8	138	28	27	848
Operational	9	1,591	50	829	165	44	2,688

## EMPLOYEES WITH DISABILITIES (2011)

By job category	
Executive Board	0
Managers	1
Consultants and Coordinators	3
Administrative	48
Operational	113

## COMPENSATION

Change in the proportion of the lowest wage compared to the local minimum wage in important operating units. (GRI EC5)	2011
Percentage of the employees whose labor/compensation contract is governed by minimum salary rules (example: CLT; legislation of the country <sup>1</sup> ).	1.15%
1. Refers to young apprentices.	
Minimum wage established in local currency by the government on December 31 (national minimum wage)	R\$545.00
Lowest salary practiced by the company for Men	R\$640.50
Lowest salary practiced by the company for Women	R\$857.00
Proportion of the lowest salary practiced by the company with regard to the minimum wage (Men)	117.52%
Proportion of the lowest salary practiced by the company with regard to the minimum wage (Women)	157.25%
Lowest salary practiced by the company for Men (Aracruz Unit)	R\$949.00
Lowest salary practiced by the company for Women (Aracruz Unit)	R\$949.00
Lowest salary practiced by the company for Men (Jacaré, Vale do Paraíba and Capão Bonito Units)	R\$917.00
Lowest salary practiced by the company for Women (Jacaré, Vale do Paraíba and Capão Bonito Units)	R\$857.00
Lowest salary practiced by the company for Men (Três Lagoas Unit)	R\$1,181.00
Lowest salary practiced by the company for Women (Três Lagoas Unit)	R\$1,181.00
Lowest salary practiced by the company for Men (Capão do Leão Unit)	R\$640.50
Lowest salary practiced by the company for Women (Capão do Leão Unit)	R\$1,170.50

## GRI LA14

Basic salary by job category for men and women (monthly) (in R\$)	2010		2011	
	Men	Women	Men	Women
Executive Board <sup>1</sup>	560,468.01	0.00	553,725.30	0.00
Managers	2,194,803.23	257,814.44	2,027,025.71	242,886.61
Consultants and Coordinators	3,383,076.27	781,730.59	2,780,078.93	682,151.15
Administrative	2,851,349.06	1,511,783.17	2,126,677.24	1,151,017.77
Operational	6,874,928.58	219,717.00	6,727,486.50	255,580.00

1. Were considered 6.83 officers in 2009, 6.42 in 2010 and 10.92 in 2011.

Average basic salary (monthly) (in R\$)	2010		2011	
	Men	Women	Men	Women
Executive Board <sup>1</sup>	163,178.15	0.00	55,722.46	0.00
Managers	19,952.76	17,187.63	22,522.51	20,240.55
Consultants and Coordinators	9,243.38	8,059.08	9,823.60	8,634.82
Administrative	3,577.60	2,918.50	4,050.81	3,563.52
Operational	2,267.46	2,288.72	2,595.48	2,662.29

1. Were considered 6.83 officers in 2009, 6.42 in 2010 and 10.92 in 2011

Fibra does not have a formal policy for the hiring of local manpower; however, its practice is to recruit candidates from regions where the company has operations, disclosing the opportunities on websites, schools and universities in such regions.

It also is company practice to train local manpower in partnership with SENAI. In November 2011, the Jacaré Unit selected 28 young people between 17 and 22 years old, having completed public high school and who were residents in the cities of Taubaté, Caçapava and Tremembé (SP), for a program designed to train operators and mechanics of forest harvest equipment, in partnership with SENAI, initiated in January 2012. From August 2010 until June 2011, the Três Lagoas Unit conducted, in partnership with SENAI, a technical improvement course for market professionals designed to develop basic skills and knowledge for industrial functions. The course trained 120 people from the local community, of which Fibria hired 36 professionals.

### Employee benefits

Return to work and retention rates after maternity/paternity leaves of absence, broken down by gender (GRI LA15)	2011	
	Men	Women
Return to work and retention rates of the employees who return to work after taking maternity/paternity leaves of absence, broken down by gender.	94.44%	78.13%

1. Women have the right to 120 consecutive days. Men have the right to five consecutive days. 100% of the employees who had the right to the leave of absence took advantage of maternity/paternity leaves.

**Benefits offered to full-time employees (GRI LA3)** – Medical assistance, dental assistance (ES and BA Units), day care center assistance, special child assistance, transportation, meals, basic hamper (except for officers), private pension fund, Christmas hamper, Christmas toy, school kit, funeral assistance, life insurance<sup>1</sup>.

1. The GRI LA3 indicator refers to the benefits offered to full-time employees, which are not offered to temporary employees or part-time workers. The company has no temporary or part-time employees.

**Private pension funds (GRI EC3)** – Approximately 91 % of Fibria’s employees participate in the d Fundação Senador José Ermírio de Moraes (FUNSEJEM) pension fund, a private, closed and not for profit pension fund that is responsible for the management of the pension plans for the employees of the companies that are linked with the Votorantim group.

The pension plan is the defined contribution type (VotorantimPrev) and participation is voluntary and, therefore, supplemental to the Brazilian government’s mandatory Social Security system. It is offered to employees through a specific fund that is maintained separately from the funds of each of the sponsoring organizations.

The plan’s assets correspond to 106% of the value of the liabilities. Annually, an actuarial assessment is conducted to verify the coverage of the plan’s liabilities, and in the case it is identified that the fund is running at a deficit to cover the liabilities, the organization is permitted to increase the sponsorship contributions; up until the current moment, this has never has never occurred since the plan has always been in surplus.

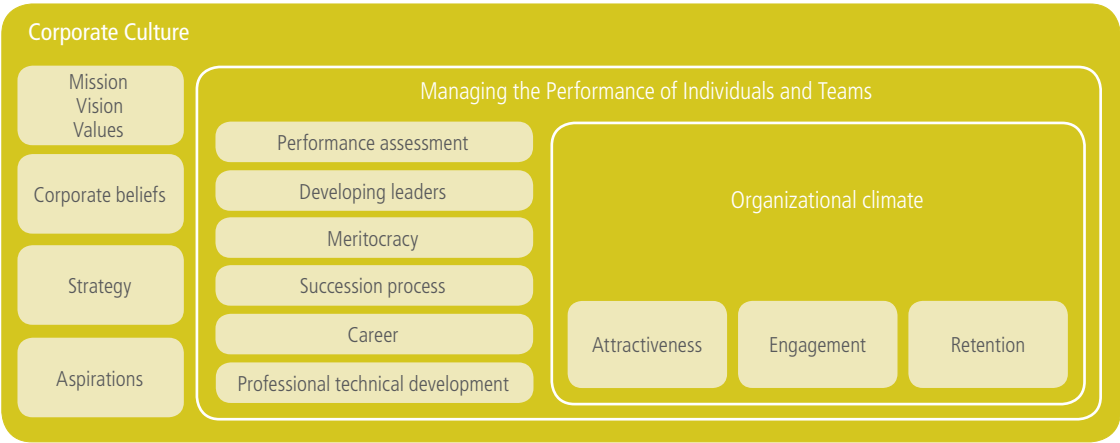
Upon joining VotorantimPrev, an employee chooses to contribute between 0.5% and 6% of his or her base wage. For salaries under R\$ 4,522.80 (per month), the equivalent of 15 URFs (FUNSEJEM Reference Units – annually defined by the actuarial assessment, which determines the contribution salary), the company’s contribution will be up to a limit of 1.5% of the participants’ wage. For salaries of 15 URFs or higher, Fibria matches the contribution made by the participant. Employees of the International Offices are not eligible for the plan.

Recruiting and development

Personnel recruiting and development

- In 2011, the Personnel Recruiting and Development area worked on restructuring their main objectives, as follows:
- continuously create value for the organization, through its personnel;
  - support and encourage the management in the development of a corporate culture, based on the Corporate Beliefs;
  - facilitate and stimulate self-development among the personnel;
  - identify opportunities and influence organizational changes aimed at increasing Fibria’s competitiveness;
  - work with the company leadership to develop a cause that will inspire and engage individuals and teams.

Last year, an operational strategy was defined for the Human and Organizational Development department, as shown in the diagram below. This strategy involves managing the employees’ performance in accordance with the corporate beliefs, culture and strategy, with the aim of generating a positive impact on the organizational climate and thereby strengthening the attractiveness of the company, its engagement with the personnel and its ability to retain talent.





## Culture

In order to understand and participate in the consolidation of the Fibria corporate culture, the directors and general managers got together with the human and organizational development in 2011, in a workshop designed to analyze the prevailing corporate culture and compare it with the desired one. During this event, certain initiatives were highlighted that are being developed and monitored, as follows:

- invigorate the business, with the focus on relations with clients;
- develop a feeling of ownership and remove any bureaucratic red tape from our procedures;
- show appreciation of the personnel, with the focus on performance management;
- simplify the organizational structure and the systems, with the focus on productivity.

Another important ongoing effort by the area, aimed at strengthening the Fibria corporate culture, relates to the Corporate Beliefs, which were disseminated throughout the company in September 2011. The Corporate Beliefs are a set of principles governing the behavior of the people within the organization. They represent the corporate values and provide clear guidelines on behavior, roles, interaction, decision making, key processes and the attainment of desired results. The implementation and dissemination of the concept is not only connected to consolidating the corporate identity and culture, but is aligned with the company's business strategy. Read more about the process of disseminating the Corporate Beliefs on page 62.

## Performance management

In September 2011, Fibria introduced its Performance Management Cycle. This is a process of assessment and leadership development that involves all the company's directors, general managers and managers. In November, the committees got together to assess the performance and career development prospects of those groups. Four meetings were held, in which the general managers evaluated their managers and the executive officers evaluated the general managers. The process provided feedback for those involved, who learned what action should be taken to further their professional development and the next steps in their career. What is more, it was possible to create a general overview of these groups and create a succession plan. In 2012, the cycle will be extended to the coordinators, advisors and specialists. Within two years, all the different levels of the organization will have been covered.

The main objectives of the Performance Management process are to:

- assess performance, based on the achieving of results and alignment of behavior with the corporate values and beliefs.
- manage the personnel, allocate resources and measure results based on current performance and the potential to contribute to the organization.
- monitor and guide actions aimed at individual and collective development.
- develop a culture of feedback and high performance.
- ensure the succession process at the different levels of the organization.

All the general managers and managers, representing 2.6% of the males, 2.4% of the females and 2.6% of Fibria's total number of employees, received a formal analysis of their performance and career development (GRI LA12).

## Policy review

During 2011, the Human and Organizational Development area finalized the standardization of policies across a broad variety of fronts that comprise personnel training and development. All the Human and Organizational Development professionals working at the company's Industrial and Forest Units underwent training in the new procedures.

### Recruiting and development:

- training (functional, obligatory, development);
- organizational climate
- recruiting (recruitment and selection);
- induction programs (interns/trainees);
- apprentices and the handicapped;
- rescission interviews.

## Training programs

A list of Fibria training programs that were continued or launched in 2011 is shown below.

### Program for the development of technical specialists and supervisors

Launched in the second half of 2011, this program is aimed at training and developing supervisors and technical specialists for the forestry area, through action that stimulates fresh attitudes focused on high performance. So far, 51 supervisors and 73 technical specialists have undergone training.

The course, which is scheduled to be completed in the second half of 2012, is based upon three basic pillars: behavioral, aimed at developing skills and abilities for managing teams and processes; technical, working on fine-tuning in areas that are important to the performing of daily activities; and interface, focused on an overall understanding of the forestry business and relations with all the stakeholders.

### SENAI: training of machine operators and mechanics

In November 2011, 28 young people aged 17 to 22, residents of the municipalities of Taubaté, Caçapava and Tremembé (São Paulo state), with complete basic education, preferably within the public school network, were selected for the program to train forest harvesting machinery operators and mechanics, scheduled to begin in January 2012. Classes are interspersed with practical activities and technical visits to Fibria's harvesting modules.

### SENAI and partners: technical development for industrial functions

In Três Lagoas (Mato Grosso do Sul state), between August 2010 and June 2011, Fibria, in partnership with SENAI (National Industrial Training Service), provided a technical development course for professionals in the region, aimed at developing the basic skills and knowledge required for industrial job functions. The course trained 120 people from the local community and, from these, Fibria hired 36 new professionals.

Fibria also has a partnership with IPEF (Forestry Science and Research Institute) and, since 2010, has sponsored the Program for the Development of Forest Stewards, which aims to train recently graduated students, to give them a better professional start in the forestry companies; broaden and standardize the knowledge of forest issues; deepen administrative and financial concepts; and develop teamwork skills and abilities.

**TRAINING BY FUNCTIONAL LEVEL (HOURS) (GRI LA10)**

	2009	2010	2011		
	Total	Total	Males	Females	Total
Executive officers	0	3	25	0	25
Managers	4,868	2,517	11,136	2,130	13,266
Consultants and coordinators	52,207	25,530	36,455	7,674	44,129
Administrative	51,657	18,066	34,844	16,657	51,500
Operational	149,626	87,072	131,343	7,103	138,445
<b>Total</b>	<b>258,358</b>	<b>133,188</b>	<b>213,802</b>	<b>33,563</b>	<b>247,365</b>
<b>Average number of hours of training, by gender / total number of employees per gender</b>	<b>54</b>	<b>26</b>	<b>61</b>	<b>66</b>	<b>62</b>

**AVERAGE NUMBER OF HOURS OF TRAINING PER YEAR, PER EMPLOYEE, BY FUNCTIONAL LEVEL**

	2009	2010	2011	
	Total	Total	Males	Females
Executive directors	NA	0.5	4	0
Managers	NA	20	124	178
Consultants and coordinators	NA	55	405	640
Administrative	NA	14	66	52
Operational	NA	28	51	74
<b>Total</b>	<b>54</b>	<b>26</b>	<b>61</b>	<b>66</b>

The numbers cover:

- management participation in the Votorantim Academy of Excellence, the aim of which is to promote individual development to ensure the perpetuity of the business and generate value for the group. There have been 847 participants so far;
- the Technical Center for the Training of Forestry Machinery Operators and Mechanics, which aims to train and retrain forest machinery operators and mechanics, with the main focus on excellent professional technical qualifications that meet the quality, safety and socio-environmental responsibility standards. There were 2,327 participants in 2011;
- skill building through obligatory training in the performing of professional activities.
- participation in specific training in job functions.

**Development programs**

With the aim of investing in employee training and development, Fibria provides scholarships for study and language learning that will lead to the improved performance of job functions. In 2011, around 400 study and language scholarships were granted, representing 10% of the company's staff.

Opportunities, such as post-graduation in Pulp and Paper Technology, in partnership with the Federal University of Viçosa, were granted to 55 employees, 58% more than the number in the previous group (2008/2009).



## Recruitment

To attract and select people who are aligned with the company's values and beliefs, Fibria has developed the Apprentice Program and the Intern Program. The former provides young people aged 14 to 24 with the opportunity to obtain basic professional qualifications in Fibria's administrative and operational areas. In addition to the technical content, the program also addresses citizenship and social and cultural values, thereby contributing towards social inclusion. The latter program is aimed at training technical and higher education students, preparing them for the job market while at the same time identifying talent that may be of future interest to Fibria.

July 2011 saw the conclusion of the Trainee Program initiated in 2010, with the 4 trainees joining the company's staff. In January 2011, a further 6 trainees were taken on, for the company's forestry, industrial and financial areas, and their development program will continue until July 2012.

The main aim of the program is to train young professionals who will be able to sustain the organization's transformational processes and maximizing their development through participation in resolving challenging issues in the company's various lines of business.

Also in relation to 2011, there was a 43% success rate in filling job vacancies through internal recruitment amongst the employees. Among the executives, the figure was 89%.

### TOTAL HOURS OF EMPLOYEE TRAINING ON POLICIES AND PROCEDURES CONCERNING ASPECTS OF HUMAN RIGHTS RELEVANT TO THE ORGANIZATION'S OPERATIONS, INCLUDING THE PERCENTAGE OF EMPLOYEES THUS TRAINED (GRI HR3)

	2009	2010	2011
<b>Resources invested in training (R\$)</b>	<b>NA</b>	<b>3,342,853.43</b>	<b>4,767,850.80</b>
Number of hours of training	258,358.00	133,187.58	247,365.40
	2009	2010	2011
Total number of employees	4,749	5,037	4,006
Total number of employees that received formal training on the organization's policies and procedures regarding human rights issues and their relevance to the employees' work	768	1,142	2,356
Proportion of employees trained, during the period covered by this report, on the organization's policies concerning aspects of human rights that are relevant to its operations	16.17%	22.67%	58.81%
Total number of hours, during the period covered by this report, dedicated to training on the policies and procedures concerning aspects of human rights that are relevant to its operations	1,756	1,199	3,877

Under the plan for the restructuring and simplification of the company's procedures, Fibria offered professionals leaving the company support in the placement process, through a partner company. Individual programs were granted to executives and 16 hours of lectures were provided for administrative staff. This initiative forms part of the gratuity package offered in the event of layoffs.

## Internal opinion survey

Based on the results of the last Organizational Climate survey, conducted in 2010, Fibria held a number of discussion rounds, through focus groups, for the purpose of deepening the knowledge about the company's various areas and Units yielded by the survey. This was coordinated by a partner consulting firm that specializes in the field. After consolidating the results of these discussions, macro action plans were drawn up, such as for the Performance Management process. The company's Units and departments also drew up their own plans covering, for example, holding regular meetings with the teams to discuss the results; the development of management skills; developing personnel management practices; and improving the flow of information to the employees. A new edition of the Organizational Climate survey will be held in 2012, with the aim of verifying the progress made.

## Health and safety

Seeking to improve standards of health and safety at work, the company encourages communication of below-standard conditions or practices, makes regular and random security inspections and supports the Internal Commissions for Accident Prevention (CIPA – Internal Commission for Accident Prevention, and CIPATR – Internal Commission for Accident Prevention in Rural Work) and the Safety Committee. Workers are represented by various internal commissions associated with the management of health and safety at work – Area Committees / cells, Ergonomics, Quality of Life Management (led by the general manager of the Unit or process) – and also by CIPAs and CIPATRs. 99.9% of employees are represented by these commissions in all Units of the company (GRI LA6).

### RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS, AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES, BY REGION AND BY GENDER (GRI LA7)

	2009	2010	2011
Number of injuries	143	101	59
Injury rate (IR)	0,89	0,47	0,23
Number of occupational diseases	2	6	1
Occupational diseases rate (ODR)	0,012	0,034	0,004
Number of lost days	9.475	21.725	8.883
Lost days rate (LDR) **	58,73	100,25	35,49
Total number of fatalities	2	3	1
Number of fatalities (men)	2	3	1
Total number of fatalities (women)	0	0	0

Injury rate (IR)	2009			2010			2011		
	Men	Women	General	Men	Women	General	Men	Women	General
Aracruz Industrial Unit	2.04	0.00	2.04	0.51	0.00	0.51	0.35	0.00	0.35
Espírito Santo and Bahia Forestry operations	1.49	0.02	1.51	0.83	0.01	0.84	0.17	0.02	0.19
Três Lagoas (MS) Industrial Unit	0.27	0.00	0.27	0.34	0.00	0.34	0.09	0.00	0.09
Jacaré (SP) Industrial Unit	0.31	0.00	0.31	0.28	0.00	0.28	0.25	0.00	0.25
São Paulo /Mato Grosso do Sul / Rio Grande do Sul Forestry operations	0.09	0.00	0.09	0.22	0.00	0.22	0.24	0.05	0.29
Central administration office	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53
Pulp sales and logistics	0.23	0.00	0.23	0.45	0.00	0.45	0.00	0.00	0.00
Corporate engineering	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Technology centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forestry planning and development	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.00	0.94
International Offices	Not monitored								
<b>Total</b>	<b>0.88</b>	<b>0.01</b>	<b>0.89</b>	<b>0.46</b>	<b>0.01</b>	<b>0.47</b>	<b>0.21</b>	<b>0.02</b>	<b>0.23</b>

Occupational diseases rate (ODR)	2009			2010			2011		
	Men	Women	General	Men	Women	General	Men	Women	General
<b>Total</b>	<b>0.010</b>	<b>0.023</b>	<b>0.012</b>	<b>0.034</b>	<b>0.000</b>	<b>0.034</b>	<b>0.004</b>	<b>0.000</b>	<b>0.004</b>

Lost day rate (LDR) <sup>1</sup>	2009			2010			2011		
	Men	Women	General	Men	Women	General	Men	Women	General
<b>Total</b>	<b>56.32</b>	<b>2.41</b>	<b>58.73</b>	<b>97.25</b>	<b>3.00</b>	<b>100.25</b>	<b>35.28</b>	<b>0.21</b>	<b>35.49</b>

1. The number of days lost is calculated as calendar days and count from the day following the accident.

On 17 August 2011 there was a fatal accident involving a contracted forestry worker in Três Lagoas (MS). During the planting of eucalyptus in the field, an agricultural tractor coupled to a trailer pulled out of the field where planting was taking place to get more seedlings. Meanwhile, one of the members of the team was taking a nap under the shade of vegetation. The place where the employee was resting was in the path of the tractor. When returning with a new shipment of seedlings the tractor hit him on the side of the head and chest. The driver did not have an adequate field of view. The worker was recovered by ambulance but died before he reached the hospital.

Fibria's Management System for Occupational Health and Safety consists of tools and practices that guide operational areas to the prevention of accidents, incidents and occupational diseases. These practices support Fibria in meeting the requirements of OHSAS 18001 (Santos Port Terminal) and for forest management certification such as FSC® and CER-FLOR (PEFC). The methodology used to classify accidents and for comparative reference follow the guidelines of the Occupational Safety and Health Administration (OSHA). Therefore the data for Simple Ambulatory Care or First Aid are



not included in the Report, following the OSHA criteria. For the purposes of compliance with national legislation and the issuance of the Notice of Occupational Accident (CAT), ISO 14280 and welfare legislation guidelines area also observed.

Considering the period from the integration of the companies that originated Fibria in September 2009, there has been a significant reduction in the occurrence of accidents and incidents, as reflected in our rates and targets (the target is for an injury rate of 0.20 or less. In 2009 the rate was 0.89, in 2010 it was 0.47 and in 2011 it was 0.23).

In 2011, forest operations in Espírito Santo and Bahia reached SmartStep program requirements, in order to prepare for the FSC® certification. There were no instances of non-compliance found in the management of occupational health and safety.

The health and safety statistics, for each month, and for the year to date are reported through a system of monthly results meetings at Industrial and Forestry Units.

Safety indicators are an integral part of the remuneration system in the company's Profit Sharing and Variable Remuneration Programs, the latter involving executives.

There are activities with risk of specific occupational diseases:

- ergonomic risks: RSI / WMSD (Repetitive Strain Injury / Work-Related Musculoskeletal Disorders) in the forest nurseries and forestry equipment operation (joystick handling) activities;
- physical risks: loss of hearing (occupational noise); sunstroke / heatstroke / dehydration (activity under the sun), disc herniation (maintenance / handling charge); radioactive contamination (inadvertent exposure to specific processes of the Industrial Units: radioactive sources that are used for measuring the thickness of the pulp sheet and to measure the level of the tank inputs);
- chemical hazards: accidental exposure to chemicals stored or used in our plants (chemical plant Unit);
- chemical and biological hazards (activities in the laboratories of quality control and technological development as well as in medical clinics).

However, the incidence of occupational diseases has been low due to the continued focus on prevention and awareness. In 2011 only one case of occupational disease, resulting from a diagnosis of noise-induced hearing loss in Jacareí Industrial Unit, was filed.

The Brazilian Ministry of Health recognizes Três Lagoas (MS) as an endemic area for yellow fever, dengue fever and mucocutaneous leishmaniasis.

**Yellow fever:** all persons born in the municipality of Três Lagoas are vaccinated against yellow fever by public health authorities. In the case of employees from other locations moving to Três Lagoas, Fibria's medical department recommends that everyone be vaccinated against yellow fever 10 days prior to relocation.

**Dengue:** since 2007 Fibria subsidizes Três Lagoas with a monitoring tool for the dengue vector geocoding engine, which has contributed to the reduction in reported cases of dengue fever in Três Lagoas compared with other municipalities.

**Leishmaniasis:** In 2006 Fibria donated 10,000 Scalibor® collars that are still in use to protect the dogs diagnosed as healthy in the canine survey conducted by the municipal health surveillance. The company also donated a vehicle to capture sick or abandoned animals (GRI LA8).

## Quality of life

The +Vida (Life Plus) Program includes preventive health initiatives, encourages physical activity and healthy eating, provides assistance to pregnant women, offers psychological counseling, and provides social, legal and financial support to all employees and their dependents. It also stimulates a proactive attitude of the professionals, through campaigns and actions promoting health.

### MAIN ACTIONS IN 2011 (GRI LA8)

#### +VIDA (LIFE PLUS) – FIBRIA'S HEALTH AND QUALITY OF LIFE PROMOTION PROGRAM

	Number of persons	Target audience	Region applied
<b>HIV / AIDS<sup>2</sup></b> The company holds an annual awareness program on World AIDS Day (December 1) The topic is also discussed during the Internal Weeks for Prevention of Accidents (SIPATs and SIPATRs), both among forestry and industrial operations. The company also guarantees the work of those professionals that present clinical and psychological conditions compatible with their professional activities, without any discrimination and providing all the necessary monitoring.	All employees and outsourced workers	All employees and outsourced workers	Fibria's Units in Brazil <sup>1</sup>
<b>Chemical Dependency<sup>5</sup></b> Fibria has an agreement with a specialized clinic for treatment of chemical dependency, whether inpatient or outpatient, for all is employees and respective family members.	One admission made	Employees and family members	Fibria's Units in Brazil <sup>1</sup>
<b>Kids e Teens<sup>2</sup></b> Educational activities with children of employees from 7 to 17 years of age. Goal: to raise awareness of best practices for a healthy lifestyle. Action: Life event at major Units, with physical activities, healthy meals and awareness-raising about healthy habits. A Cultural Drawing and Writing Contest is organized for children and teens who do not attend the live event.	1.023 participants	Children of employees from 7 to 17 years old	Fibria's Units in Brazil <sup>1</sup>
<b>Financial Life – Conscientious use of money<sup>2</sup></b> Lectures on the conscientious use of money in family financial management. Goal: Assist in planning of financial life. Action: behavioral training divided into three modules: basic, intermediate and advanced, taught by train Life Plus professionals.	—	Employees, outsourced workers and family members	Fibria's Units in Brazil <sup>1</sup>
<b>Move yourself! Workplace</b> Goal: to encourage physical activity during work hours. Action: Exercise sessions in the workplace.	79% of workers	Employees and outsourced workers	Fibria's Units in Brazil <sup>1</sup>
<b>Move yourself! Gym</b> Goal: encourage physical activity. Action: Grant of 50% of the monthly payment limited to R\$ 100 for exercise classes or gym.	453 employees active in the program	Employees	Fibria's Brazilian Units and international offices
<b>Course for expectant mothers<sup>2</sup></b> Goal: Professional guidance for pregnant women and their spouses. Action: Course taught in modules, covering topics such as pregnancy, signs and symptoms of labor, mode of delivery and anesthesia, birth, postpartum, breastfeeding, baby care and mother-infant interaction. Company nurses provide training. In the Forestry and Industrial Units, our health professionals teach the course internally. In other Units, a pregnant woman can request a reimbursement for courses held in maternity hospitals. All pregnant women receive an educational booklet.	15 women participated in the internal training	Employees, wives of employees, daughters of employees, outsourced employees and wives of outsourced workers	Fibria's Units in Brazil <sup>1</sup>

<b>Employee Assistance Program (PAE)<sup>3</sup></b>			
Goal: To provide professional assessment service, referral and brief counseling to help employees and their families in resolving personal problems. Action: professional and confidential for any kind of personal problem that could compromise the health and welfare of employees, be they emotional, financial, social or legal.	326 professional and family members assisted	Employees, spouses and children up to 21 years of age (or 24 years at university)	Fibria's Units in Brazil <sup>1</sup>
<b>Light Life – nutritional guidance<sup>4</sup></b>			
Goal: nutritional guidance. Action: personalized clinical care.	521 employees assisted generating 1,976 consultations	Employees	Fibria's Units in Brazil <sup>1</sup>
<b>RISK PREVENTION</b>			
	<b>Number of persons</b>	<b>Target audience</b>	<b>Region applied</b>
<b>Ergonomics Process<sup>4</sup></b>			
Goal: improve working conditions, following technological, organizational, and work processes. Action: Creation of ergonomics committees to study improvements in working conditions.	All employees	Employees and outsourced workers	Fibria's Units in Brazil <sup>1</sup>
<b>Immunization<sup>4</sup></b>			
A flu vaccination campaign against influenza A H1N1 in partnership with the Secretaries of health, to ensure that employees not covered by public vaccination campaigns can be immunized.	3,450 employees vaccinated	Employees	Fibria's Units in Brazil <sup>1</sup>
<p>1. The Life Plus program is fully implemented at the Central Administration Office and at the Forestry and Industrial Units. At Units with fewer employees (ex. the Caravelas Maritime Terminal) implementation of the program is partial due to logistical reasons. These offices implement a significant part of the actions: Move Yourself! Gym, Employees Assistance Program (PAE), Cultural Contest for Kids and Teens, refund of the Course for Expectant Mothers.</p> <p>2. Education / training.</p> <p>3. Counselling.</p> <p>4. Risk prevention/control.</p> <p>5. Treatment.</p>			

## Relationship with labor unions

Fibria's employees are represented by labor unions and are covered by collective bargaining agreements or collective agreements. The company deals directly with trade unions on issues such as salary adjustment base-date, the definition of work shifts, the profit sharing plan and any other collective questions raised by these organizations on behalf of their members.

Fibria respects the exercise of labor union activities within the company and negotiates suitable spaces and times for this to take place. Equally, it allows trade unions to disseminate information of interest to employees on the company's bulletin boards.

Currently, 3,964 employees (98.95% of the total) are covered by trade union agreements (in 2010 the figure represented 99.11% of the employees). The only employees not covered by these agreements are those in the international offices where local legislation is followed instead. Additionally, 1,279 employees (31.9%) are members of labor unions (i.e. with union rate discounted monthly from their salaries) (GRI LA4).

The company informs new employees at the outset of the labor unions that represent their category and profession, enabling the employee to choose which of these unions to join. Fibria does not dismiss or retaliate in any way against employees who exercise leadership positions in the trade unions they belong to. These employees are guaranteed the rights assured to them under law during the period they hold a management position in a trade union. In 2011, Fibria's Ombudsman received no denunciation of any violation of the right to free association and collective bargaining (GRI HR5).

The minimum advance notice for operational changes is four weeks for major changes, such as the sale of Units or the closing of branch offices, as evidenced by the cases of the sales of CONPACEL, KSR and Piracicaba. The material fact regarding these sales was filed on December 21, 2010 and the closing of the sale was scheduled for January 31 (CONPACEL) and February 28 (KSR). The sale of the Piracicaba Unit was communicated to employees on July 7 and the closing of the sale was on September 29.

In addition, all major changes in work processes – such as exchanging equipment and layout changes – are communicated to the affected employees and employee representatives (GRI LA5).

The formal agreements with trade unions cover issues relating to health and safety. The employee Profit Sharing Plan (PPR) contains an indicator that deals with worker safety and health. This indicator is discussed by a committee of employees and union representatives elected specifically for this purpose and includes:

- Personal Protective Equipment (PPE);
- Joint health and safety committees (CIPA and CIPATR) composed of executives and employees;
- Participation of representatives of workers in health and safety inspections, audits and accident investigations (CIPA and CIPATR);
- Training and education;
- System of complaints;
- Right to refuse unsafe work;
- Periodical surveys;
- Commitments relating to performance standards or desired level of practice to be applied, which include health and safety clauses negotiated in the PPR (equivalent to 10% of the annual bonus) (GRI LA9).





5

## Environmental performance

### Introduction

This chapter explores Fibria's major environmental challenges of the forest management and industrial operations in 2011. To facilitate the understanding of our operations, the environmental forest management and industrial operations are treated separately because of the nature of their activities. The exception is for climate governance, in which data are unified. In the following pages, we also discuss the company's initiatives to reduce the negative impacts of its operations on the environment, as well as program monitoring and conserving biodiversity.

### Forest management

**Socioenvironmental Performance Index (IDSA)** – The Socioenvironmental Performance Index (IDSA) developed by Fibria evaluates the characteristics of the forest ecosystem and social system in the company's areas. Through the IDSA, the company seeks to identify the medium-term social and environmental performance, incorporating the activities of forest planning and operational concerns with the communities and the environment, and develop actions to promote the constant improvement of the social and environmental performance of Fibria.

The IDSA describes elements of forest management and production processes:

- environmental fines or warnings;
- efficiency and effectiveness in social and environmental planning;
- meeting the demands of stakeholders;
- fire in conservation areas;
- waste management and packaging of pesticides;
- results of audits of environmental and forest certification;
- monitoring and environmental education program;
- relationship with neighbouring communities.

In 2011, the IDSA has made the following innovations:

- self-assessment: the areas themselves are responsible for reporting and managing performance;
- cross-validation: information from the areas are cross-validation of the events;
- bonuses for proactive actions to improve the company's socioenvironmental performance;
- indicator linked to the Profit Sharing Program (PPR) and the Variable Remuneration Program (PRV);
- prevention checklist.

## Wood production and supply

Wood consumption in Fibria's Industrial Units in 2011 reached 16.8 million cubic meters. Fibria's own plantations accounted for 90% of this wood volume, with the remainder being supplied by small, medium or large partner producers. The areas partnered with by Fibria were mainly concentrated in the states of Espírito Santo and Bahia, accounting for 71% of third party wood supplies.

The good operating performance of the plants, which translated into a decrease in specific wood consumption (per tonne of pulp produced) had a positive impact on forest management, reducing the need for new plantations.

Seedlings	2009	2010	2011
Production of eucalyptus seedlings <sup>1</sup>	33,000,000	89,017,808	102,756,751
Planting of eucalyptus seedlings	30,000,000	63,137,817	87,802,255
Donations of eucalyptus seedlings	4,000,000	1,426,630	1,922,460
Production of native seedlings <sup>1</sup>	400,000	956,762	15,316,875
Donations of native seedlings	193,000	50,007	77,500

1. In own and third-party nurseries

In 2011, the Forest area of the Aracruz Unit (ES) supplied the pulp mill with 8.9 million cubic meters of wood.

The performance of Fibria's forestry and nursery operations were important for consolidating the return to normal levels of forest production. Forty-eight million eucalyptus seedlings were made available and 49 thousand hectares of new forest plantations were, of which 40.8 thousand hectares were on Fibria's own land and 8.2 thousand were part of the Forest Producer Program.

Crop production reached 8.4 million cubic meters of wood, surpassing the 2006 record of 7.9 million cubic meters. The average daily output was 23 cubic meters per day.

Logistics achieved a total transportation volume of 8.9 million cubic meters of wood, equivalent to an average daily volume of 24.5 cubic meters, which also sets a new benchmark, surpassing the 2010 volume, which was 8.5 million cubic meters of wood. The road, sea and rail transportation modes accounted for 73.8%, 23.7% and 2.5% of supplies, respectively.

Production volumes enabled increasing wood stocks in the field (stacked wood) and in the plant courtyard, thereby rendering operations more stable and contributing to the operational stability of the Industrial Unit.

The workplace accident rate resulting in employee and outsourced workers' absence from the Unit was below 1.



Forest management at the Aracruz Unit was subjected to the monitoring audit of the SmartStep action plan, which aims to prepare the Unit for FSC® certification. The audit results were positive, particularly in terms of social management and effectiveness of the company's field monitoring in the operational, environmental, social and safety dimensions. Only two nonconformities were recorded.

In 2011, the Forest area of the Jacareí Unit (SP) supplied the pulp mill with 3.74 million cubic meters of wood, 6% of which from forest partners.

Crop production reached 3.58 million cubic meters of wood, with a performance in productivity reaching 13.66 machine hours per day, an increase in 8% in relation to 2010. This increase was in line with the increase of 4% in harvest equipment availability.

The logistics that supplies the Jacareí Unit achieved a record performance in safety with 0.29 accidents per million kilometers, a 59% decrease in relation to the previous year. This represents a global safety benchmark and demonstrates the effectiveness of the Road Safety program.

These results guarantee a stable stock of wood in the operations (both in the field and in the mill), maintaining the wood supply and mill production at the current levels.

The Forest area of the Três Lagoas Unit (MS) supplied the pulp mill with 4.15 million cubic meters of wood, and the harvest produced 5.07 million cubic meters of wood, a 13% increase in relation to 2010. The machine hours reached 14.03 per day, an increase in 12%. This increase was in line with the increase of 7% in harvest equipment availability.

The logistics that supplies the Três Lagoas Unit is continuously improving its safety performance, reaching in 2011 1.69 accidents per million kilometers, a 24% decrease in relation to the previous year. Demonstrating the effectiveness of the Road Safety program, and moving towards the safety benchmark levels demonstrated at the Jacareí Unit.

These results guarantee a stable stock of wood in the operations (both in the field and in the mill), maintaining the wood supply and mill production at the current levels.

In line with the expansion plans at the Três Lagoas Unit, Fibria leased around 113 thousand hectares, 70% of which will be eucalyptus plantations and the other 30% will be dedicated to preservation purposes.

The Capão do Leão Forest Unit (RS) maintained its forest base and awaits the company's decision as to the future business use in Rio Grande do Sul.

## Wood supply by third parties ☆

The supply of wood by forest partners accounted for 10% of the volume of raw materials consumed for the production of pulp at Fibria's Industrial Units during 2011 (for further information about the matter, please refer to the Wood Logistics chapter on page 127). This supplementary supply of wood was secured by 3,422 contracts with rural producers in the States of Espírito Santo, Bahia, Minas Gerais, Rio de Janeiro, Rio Grande do Sul, Mato Grosso do Sul and São Paulo, providing a total area of 106,891 hectares. Besides reducing the need for purchasing land, forest partnership is a way to integrate rural producers near Fibria's pulp plants into our value chain, promoting income generation and job creation and diversifying agriculture.

In 2011, the Aracruz Unit's Forest Producer Program accounted for 28% of the wood supply of its three plants, with a total volume of 2,582,238 cubic metres, i.e. 1,429,762 cube metres of wood delivered at warehouses and 1,152,476 cubic metres of standing wood. The company's partnership model provides benefits to producers, allowing them to better plan their properties and comply with law, thus aligning with Fibria's certification principles. A controlled wood (CW) audit process was initiated, with positive results on legal and social requirements. The information flow between the Unit and the contracted producers was also reaffirmed by the change in the System supporting the program, from the Forest Information System (SIF) to the Forest Management System (SGF).

The Aracruz Unit's Forest Program, which accounts for 85.74% of Fibria's forest partnerships, began to address a new type of enterprise: small scale farmers working in a consortium to plant eucalyptus and other crops. The 2,934 contracts with forest producers in the states of Espírito Santo, Bahia, Minas Gerais and Rio de Janeiro, provided a total area of 78,982 hectares. It is an important regional development driver, whereby Fibria seeks to:

- Consolidate partnerships with producers so as to integrate local enterprise, environmental conservation and rural development with the forest business.
- Encourage the well-planned occupation of rural areas;
- Respect local culture and encourage agroforestry systems which add value to the forest and other crops;
- Promote environmental development by encouraging conservation.

In the other states where the company is active (SP, MS and RS), the company's program to ensure supply of wood by third parties is the Forest Savings Program, whereby rural owners are encouraged to produce wood for Fibria, in long-term secured loan agreements, with supply of seedlings and purchase commitment at the end of the cultivation cycle which last seven years on average. Due to the good results of the program in terms of job creation and income generation Fibria has decided to adopt it in its new contracts to purchase wood from third parties. The Forest Savings Program will so be extended to the contracted areas in Espírito Santo and Bahia beginning 2012, aligning with the company's certification principles.

The Forest Savings Program was firstly implemented in Rio Grande do Sul, starting in 2006, and since then has been intensified and expanded by Fibria. One of the benefits granted to the forest partners is the provision of technical support for food production in first-year eucalyptus areas, when there is sufficient space to have a second early crop. In Rio Grande do Sul, the "From the Forest to the Table" project has been offering a certification seal to food produced in eucalyptus forest since 2010, with technical support from the Technical Assistance and Rural Extension Company (Emater) and audit of the Agrifood Chain Product Quality Assessment Institute, in charge of certifying crops that are cultivated in a correct ecologically-friendly manner (further information provided in the chapter Agriforests, on page 135). In 2011, the project covered an area of 13.5 thousand hectares. The most successful crops so far have been watermelon, pumpkin and maize in the regions of Bagé, Candiota, Pelotas and Dom Pedrito.

The Forest Savings Program also has a social purpose, already in place in São Paulo and to be adopted in Espírito Santo and Bahia states. These guidelines are set by PRONAF (National Program for Strengthening of the Small-scale Farm Enterprise, of the Ministry of Agrarian Development) and by Fibria. The social purpose benefits families using their own manpower, with no more than two employees (a condition set by PRONAF), whose properties are not larger than 5 hectares of eucalyptus (in these cases, Fibria allows the farmer to sell wood in the market if the price is higher).



**Controlled wood** – Approximately 85% of wood purchased from third parties in 2011 – including forest partners – came from producers in Espírito Santo and Bahia to supply the Aracruz Unit. The Controlled Wood (CW) program analyses documents asserting attendance to legal requirements and conducts field audits to confirm the origin of wood from suppliers that do not have certification.

**Conduct Adjustment Agreement (TAC) on reforestation in Bahia State** – In December 2011, Fibria and Suzano Papel e Celulose S.A. signed a Conduct Adjustment Agreement (TAC) on the forest restoration of Legal Reserves, Permanent Preservation Areas and remainder of the Atlantic Forest which belong to rural properties owned by wood suppliers of both companies, in Bahia. The document signed with the Public Prosecution Service of the State of Bahia, the Public Prosecution Office of the Regional Environmental Justice of Teixeira de Freitas and the Atlantic Forest Central (NUMA) – Regional Office Costa das Baleias, forecasts the financing by Fibria and Suzano of the Arboreum Program of Conservation and Restoration of Environmental Diversity, which will take ten years. The Ecology and Forest Restoration Laboratory (LERF), linked to the Higher School of Agriculture Luiz de Queiroz of the São Paulo University (ESALQ/USP), will provide technical support to the forest recovery actions, while the José Silveira Foundation will take care of the financial management of the program. The work will also be closely monitored by environmental certification entities IMAFLORA and SYSFLOR.

Fibria and Suzano will be responsible for funding forest restoration studies, preparation of planimetric plans (identifying the remainders of the Atlantic Forest, permanent preservation areas, legal reserve and plantation of eucalyptus) and creation of a Revegetation Plan, besides committing itself to providing seedlings to the owners of smaller areas (50 hectare areas will be provided with free seedlings, whilst 50 to 100 hectare areas will be provided with the necessary seedlings).

By signing these formal commitments to action, Fibria reaffirmed its suppliers' alignment with the sustainability principles, thus directly contributing to regularizing the farms of its forest partners. One of the commitments undertaken by the company is to provide the State Institute of Environment and Hydric Resources (INEMA) the complete list of the forest partners' and leased areas in Bahia by August 2012, including the name of the owner, location, total area, actual plantation area, Legal Reserve area, Permanent Preservation Area, number of Registration of the Legal Reserve (or proof of progress of the registration process) and proof of environmental registration. This data will be accompanied by satellite images of all the areas in question, which will be updated every three years for assessment of the restoration progress.

## Wood logistics 🌟

The wood that supplies Fibria's Industrial Units for the most part is transported by trucks, which is the main mode of transport for cargo haulage in Brazil. The traffic of trucks and equipment, which intensifies during harvest periods, causes environmental and social impacts that Fibria strives to mitigate and control through operational dialogues with the local communities involved (learn more about this topic in the Impact on the Communities chapter, on page 78). Our company also makes use of barges, which are more economical and with have a lower impact, on the route between the Caravelas Maritime Terminal in Bahia and the Portocel barge terminal in Espírito Santo.

In 2011, the Jacareí Unit received 3.74 million cubic meters of wood, of which 75% were certified by the FSC®. Of particular note was the accident rate of 0.29 accidents per 1 million kilometers traveled in transportation services to this Unit. This is lower than the world average of 1 accident per million kilometers traveled on motorways. This result reflects the consolidation of the Safe Highway program, implemented in 2005, involving renewal of the trucking fleet and the establishment of regional committees to discuss improvements in transportation processes on a monthly basis. The 150 trucks used by the Jacareí Unit make about 200 trips per day, averaging 225 kilometers, which represents 34 million kilometers traveled per year.

At the Três Lagoas Unit some 4.15 million cubic meters of wood were transported. Fibria invested approximately R\$5million in improving 85 kilometers of roads, including 35 kilometers used by communities, providing higher standards of safety and productivity for the fleet as well as benefits for the population. The 105 trucks that work out of Três Lagoas average 200 trips per day in an average radius of 66 kilometers, totaling 10 million kilometers traveled per year.

At the Aracruz Unit, the 8.92 million cubic meters of wood transported in 2011 surpassed the volume registered in 2010 by 4.4%, establishing a new record for the movement of this pulp raw material. The Unit's Forestry Logistics department was notable for the significant improvement in safety, registering an 86% rate, practically double that obtained in 2010, which was 44%. The accident rate with lost time (own and outsourced employees) was only 1.13, compared to 7.55 the previous year, an achievement made possible thanks to educational campaigns aimed at contracted transportation suppliers carried out by our Safety Committees and the Safe Highway Program, focused on most problematic stretches of the BR 101 highway. The Unit is restructuring its Transportation Monitoring Network (RMT) in order to seek greater participation of users of the BR 101 highway, involving volunteers, residents of neighboring communities, road users and representatives of stakeholder organizations. Another highlight at Aracruz is a project for changing the apparent density of the transported wood, seeking to reduce the hauling of water, increasing precision during weighing sessions and improving operational efficiency.

### Maritime transportation

In 2011, 2.15 million cubic meters of wood were transported by barges, which represents about 25% of the total volume of wood sent to the Aracruz Unit, taking into account highway, railroad and maritime shipping modes. The company has sought whenever possible to use barges, which are more economical and safer than truck transportation, as well as causing significantly lower social and environmental impacts, including lower levels of CO<sub>2</sub> emissions. In order to mitigate the impacts of maritime transportation on local communities, Fibria is in the forefront of a number of actions for generating income and employment in the port regions of Caravelas (BA) and Barra do Riacho (Aracruz, ES) (learn more in the Relationship with the Communities chapter, on page 74), and supports the Baleia Jubarte Institute's project to increase the population of this species along the Brazilian coast, which has been occurring at an average rate of 18% per year. Fibria also supports the Advanced Base of the Northeast Coast Research and Fishery Resources Management Center (CEPENE/IBAMA) in scientific research projects linked to the ecology of the mangrove regions along the Caravelas coast and for the production of native fruit tree seedlings that benefit the local population.

### Rail transportation

The relatively small number of railroad services offered in the country reduces Fibria's possibility of using this transportation system for its wood deliveries. This transportation mode is only viable, for the moment, for the Aracruz Unit, used for the transportation of wood from forestry partners in areas of Minas Gerais and some storage sites in Espírito Santo that were reactivated in 2011, located in Colatina, Araguaia and Cachoeiro do Itapemirim. In 2012, the company also intends to reactivate a wood storage location in Conselheiro Pena.

**SIGNIFICANT ENVIRONMENTAL IMPACTS OF THE TRANSPORTATION OF PRODUCTS AND OTHER GOODS AND MATERIALS USED IN THE ORGANIZATION'S OPERATIONS, AS WELL AS THE TRANSPORTATION OF EMPLOYEES (GRI EN29) ★**

**FORESTRY LOGISTICS: TRANSPORT AND SUPPLY OF THE MILL**

Activity	Environmental aspect	Detailing of environmental aspect	Environmental impact
Road and rail transportation and handling (wood and machinery)	Detours / changes in traffic	Flow of vehicles on federal, state and municipal roads, urban stretches and Fibria's internal roads	<ul style="list-style-type: none"> <li>• Use of the road network</li> <li>• Damage to property</li> </ul>
	Noise generation	Noise generated by road and rail transport	<ul style="list-style-type: none"> <li>• Nuisance to neighbors</li> </ul>
	Particulate emissions (mobile sources)	Emission of particulates (black smoke) in road and rail transportation	<ul style="list-style-type: none"> <li>• Contamination/change in air quality</li> </ul>
	Dust Generation	Generation of dust by road and rail transportation	<ul style="list-style-type: none"> <li>• Nuisance to neighbors</li> </ul>
	Generation/ disposal of waste contaminated with oil or grease	Contaminated soils and contaminated miscellaneous materials collected and sent to Class I landfill or incineration	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> <li>• Contamination/change in air quality</li> </ul>
	Generation/disposal of contaminated PPE	Disposal of contaminated PPE used during operations	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> <li>• Contamination/change in air quality</li> </ul>
	Generation/ disposal of: (1) uncontaminated PPE (2) plastic scrap (3) paper and cardboard (4) scrap metal (5) glass (6) other solid waste	Disposal during the execution of operations: (1) Used and uncontaminated PPE (2) plastics from packaging in general, glassware and miscellaneous items (3) paper and cardboard from packaging in general and miscellaneous items (4) metals from packaging in general and miscellaneous items (5) glass from packaging in general and miscellaneous items (6) wood residue such as bark and branches, generated in the unloading and cleaning of trucks and trains. In the Caravelas Terminal, this waste is disposed in class II landfills	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> </ul>
	Reuse and/or recycling of materials	Materials generated by various operations teams, such as plastic scrap, electronics, metals, glass, paper and clean cardboard and batteries that can be given alternative disposal	<ul style="list-style-type: none"> <li>• Economics of natural resources</li> </ul>
	Power Generation	Wood waste and bark and branches generated in the mill wood yard and burned in its biomass boiler	<ul style="list-style-type: none"> <li>• Economics of natural resources</li> </ul>
	Emission of liquid effluents	Towels and rags contaminated with oil or grease generated during the operation and sent to wash by outsourced companies	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> </ul>
		Wastewater generated in the intermediate wood yards through dragging of solids and other residues by rain	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> </ul>
		Wastewater generated in the mill's wood yard through dragging of solids by rain	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> </ul>
		Wastewater generated in the mill's wood yard through dragging of solids by rain	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> </ul>
		Leachate generated in the intermediate wood yards and the mill's wood yard originated from decomposition of organic matter from bark and similar materials stored in batteries and awaiting disposal	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> </ul>
		Leachate generated in the intermediate wood yards and the mill's wood yard originated from decomposition of organic matter from bark and similar materials stored in batteries and awaiting disposal	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> </ul>
		Effluents generated in the determination of wood density at the mill's wood yard	<ul style="list-style-type: none"> <li>• Chemical/physical/ microbiological soil changes</li> </ul>
		Effluents generated from the suction of sewage and oily waste from barges transporting wood at the Portocel Barge Terminal. These effluents are sent for treatment	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> </ul>



Generation/Disposal of batteries	Disposal of batteries used in intermediate yards and the mill's wood yard in flashlights, radios and other communication instruments. This waste is made up of normal or alkaline batteries that can be destined for class II landfills	<ul style="list-style-type: none"> <li>• Chemical/physical/microbiological soil changes</li> </ul>
Collision/overtaking	Risk of collision and overturning on roads and rail lines	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> <li>• Chemical/physical/microbiological soil changes</li> </ul>
Fire	Risk of fire in road and rail transportation	<ul style="list-style-type: none"> <li>• Contamination/change in air quality</li> </ul>
Leakage/spilling	Risk of leakage and overflow of fuel and other fluids in road and rail transportation	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> <li>• Chemical/physical/microbiological soil changes</li> </ul>
Running over of wild animals	Risk of running over wild animals during road transportation	<ul style="list-style-type: none"> <li>• Change in wild fauna/flora</li> </ul>
Consumption of non-renewable resources	Consumption of diesel oil in road and rail transportation	<ul style="list-style-type: none"> <li>• Depletion of non-renewable natural resources</li> </ul>
Electric power consumption	Consumption of electric power by the mill wood yard's operations	<ul style="list-style-type: none"> <li>• Imbalance in supply and demand of renewable natural resources</li> </ul>
Water consumption	Used in the intermediate wood yards courtyards and the mill's wood yard	<ul style="list-style-type: none"> <li>• Depletion of non-renewable natural resources</li> </ul>

#### MARITIME SHIPPING

Activity	Environmental aspect	Detailing of environmental aspect	Environmental impact
Wood transportation and handling	Consumption of non-renewable resources	Consumption of diesel by tugboats pushing barges for maritime wood transportation purposes	<ul style="list-style-type: none"> <li>• Depletion of non-renewable natural resources</li> </ul>
	Particulate emissions (mobile sources)	Emission of particulates (black smoke) by tugboats pushing barges during maritime transportation of wood	<ul style="list-style-type: none"> <li>• Contamination/change in air quality</li> </ul>
	Noise generation	Noise generated by the operations of loading and unloading of barges and their docking maneuvers in maritime terminals can drive away the aquatic species that breed in the mangrove areas (Caravelas Terminal) and disrupt their behavior	<ul style="list-style-type: none"> <li>• Change in wild fauna/flora</li> <li>• Change in wildlife/ aquatic flora</li> </ul>
	Leakage/spilling	Leaks and/or spills of fuel and other fluids from tugboats pushing barges during maritime transport of wood in normal operation or in case of shipwreck	<ul style="list-style-type: none"> <li>• Contamination/change of water quality</li> <li>• Changes to the fauna and flora</li> <li>• Change in aquatic fauna and flora</li> </ul>
	Collision/overtaking	Risk of collision with cetaceans when transporting wood in maritime operations, including interference in the development of these species	<ul style="list-style-type: none"> <li>• Change in wildlife/ aquatic flora</li> </ul>
	Optimization of wood supply	The full operation of Caravelas Terminal allows the loading of barges with up to 5,200 tonnes of wood, which represents the loading of approximately 100 trucks of the "tritrem" type that no longer travel on BR-101	<ul style="list-style-type: none"> <li>• Economics of natural resources</li> </ul>

Dredging of the channel (Caravelas Maritime Terminal)	Introduction of exotic species	The use of vessels from other regions may eventually be a transmitter of exotic species into the region through ballast water or hull fouling of vessels	• Change in aquatic fauna and flora
	Consumption of non-renewable resources	Consumption of diesel oil by dredging vessels and any other support vessels	• Depletion of non-renewable natural resources
	Particulate emissions (mobile sources)	Emission of particulates (black smoke) by dredging vessels and any other support vessels	• Contamination/change in air quality
	Noise generation	Noise generated by the dredging vessels and any other support vessels can drive away the aquatic species that breed in the mangrove areas (Caravelas Terminal) and disrupt the behavior of the local avifauna	• Changes in wild fauna and flora • Change in aquatic fauna and flora
	Leakage/spilling	Fuel and other fluids from the dredging vessels	• Contamination/change of water quality
		Fuel and other fluids from dredging vessels. Includes any support vessels	• Changes to the fauna and flora
		Risk of leakage and spills of fuel and other fluids from dredging vessels. Includes any support vessels	• Changes to aquatic flora and fauna
	Provision of materials in the fluid column	The dredging operation promotes dispersion of particulate matter, nutrients and chemicals that will interact with the aquatic biota, silting them or subsequent diluting. A visible plume can also be formed due to the dragging causes	• Change in aquatic fauna and flora
	Slope landslides	The excavation and removal of sediment in the channel must be performed in order to maintain the stability for certain angles of slopes and to prevent collapse and burying of areas and consequent dispersion of the liquid column material	• Change in aquatic fauna and flora
	Suppression of benthic communities	The excavation and removal of sediment in the channel displaces the benthic communities on the seabed. Restocking occurs naturally, but may have different composition of original and leads to a breakdown of the previous balance	• Reduction of biodiversity
	Geometric modification of the maritime	The excavation and removal of sediment in the channel alters the channel geometry and can modify the circulation patterns of currents and consequent changes in patterns of erosion and sedimentation of local area and biota in these areas	• Change in aquatic fauna and flora



## Water resource management ☆

Fibra continuously monitors watersheds (learn more in the glossary) within its operational areas to prevent or minimize potential impacts on forest management, as regards the quantity and quality of water. In the latest monitoring results there is no evidence that indicates significant impacts of forestry operations in the company's water reserves in the regions where it operates.

In the Aracruz Unit (Espírito Santo, Bahia and Minas Gerais), monitoring of water resources is conducted on 12 watersheds and is linked to the Watershed Project, where the water cycle of an experimental watershed with eucalyptus plantations is studied and analyzed in detail. Thus, it is possible, in this experimental area, to assess environmental impacts and ecological interactions of the plantations on surface water and groundwater, and then compare and ex-

trapolate results to the 12 watersheds of the monitoring network. The studies are conducted by staff from our Center for Technology. Participating in these studies are national and international research institutions – Federal University of Viçosa (UFV); Federal University of Espírito Santo (UFES); Federal University of Lavras (UFLA); the Commonwealth Scientific and Industrial Research Organisation (CSIRO), an Australian research organization; and The Nature Conservancy (TNC), an NGO; among others.

In 2011, the Watershed Project (PROMAB) installed monitoring equipment in a new watershed, this time in pasture areas located in Aracruz, Espírito Santo. The studies here will enable Fibria to conduct a comparative analysis between the two main land uses in this region: pastures and eucalyptus plantations.

Monitoring of water resources in the Jacaré Unit in São Paulo is being conducted in two watersheds by the Watersheds Environmental Monitoring Network (REMAM), which is part of the Forestry Research and Studies Institute (IPEF/ESALQ-USP). According to a report issued by REMAM/PROMAB, in 2011, forestry operations in this Unit's area of influence did not alter the quality or quantity of water available.

In the Três Lagoas Unit (MS), where water quantity and quality assessments are made by Fibria in three watersheds, there was no evidence of significant changes as a result of forest management during the year.

In 2011, water resource monitoring and study methodologies in Fibria's Units were integrated into its Technology Center. Accordingly, as of 2012, it will be possible to perform comparative data analyses and have an integral vision of this important aspect of forest management. Another project initiated in 2011 by Fibria's Forestry Environment area is the mapping of areas where there may be increased demand for water arising from population growth in cities and climate change.

Also in 2011, the Fibria's meteorological stations network, essential for monitoring the water balance of plantations, was adjusted and equipment purchased such that, in 2012, five new stations will be installed between the Aracruz, Jacaré and Três Lagoas Units.

Fibria also tracks its water footprint to identify the amount of water used throughout its production processes, which includes the volume of water used for planting. Since 2010, the company has been a member of the Water Footprint Network (WFN). You can learn more about this subject in the Chapter Main commitments (GRI 4.12 and 4.13) on page 61.

#### TOTAL WATER WITHDRAWAL, BY SOURCE (GRI EN8)

Unit	Type of withdrawal	2010	2011	Number of points of withdrawal
Jacaré <sup>1</sup>	Surface water (m <sup>3</sup> )	201,312	77,541	14
	Ground water (m <sup>3</sup> )	204,660	144,470	17
Aracruz <sup>2</sup>	Surface water (m <sup>3</sup> )	307,487	386,252	136
	Ground water (m <sup>3</sup> )	–	–	–
Três Lagoas	Surface water (m <sup>3</sup> )	198,558	482,566	185
	Ground water (m <sup>3</sup> )	125,940	31,535	2

1. Vale do Paraíba and Capão Bonito.

2. License to capture surface water is only granted in the nursery of Aracruz (ES). We do not have licenses for groundwater capture, which is not required by law.



## Total water discharge by quality and destination (GRI EN21)

Waste water from nurseries comes from two sources: irrigation and domestic effluent. In the Paraíba Valley Forestry Unit, water is discharged into a filtration pond; in the Capão Bonito Forestry Unit, discharge occurs in a filtration trench. In the Três Lagoas Unit, domestic effluent is routed to septic tanks and waste water from irrigation, after passing through a separation box, is passed back into the soil. At the Aracruz Unit, before becoming runoff, the waste water passes through a gravel box for the retention of solids. At the Aracruz nursery a treatment station is planned to go into operation in July 2012. The volume of water discharged in forestry operations does not bear comparison to quantities used in manufacturing operations – being approximately 1% of the volume discharged from factories.

## Forest protection ★

The protection of our plantations follows a strategy of successive cycles of prevention, monitoring and control. Measures adopted include the selection and planting of more resistant eucalyptus clones, preserving the ecological balance and the generation of knowledge for continuous improvement of forest protection.

Forest monitoring is carried out in an integrated fashion with the main objective, of detecting pests and diseases at an early stage, as well as determining weed infestation levels and, in emergency situations, performing first response to forest fires. In Espírito Santo and Bahia this approach is essential to increase the efficiency of control measures to reduce pesticide use and costs of operations. As a result, in 2011 the Aracruz Unit (ES), reduced the need to control ants in areas of forest maintenance by 60%, based on monitoring information and determining acceptable limits of infestation. In the Três Lagoas Unit (MS), 25% of the areas were safe from significant damage due to the adoption of this strategy.

All this planning and control of pests, diseases and weeds premises meets technical, environmental and compliance objectives. The teams also have responsibility for monitoring equipment, resources and training to combat forest fires. In Espírito Santo and Bahia, this work is completed by Forest Monitors – people from neighboring communities who have been trained to monitor fires, pests, diseases and identify flora and fauna. Altogether, 89 monitors have been hired to help take care of these forests, as well as Fibria-owned Legal Reserves (LRs) and Permanent Preservation Areas (PPAs).

At the Technology Center, research activities have prioritized biological control of the bronze bug, which was recently introduced into Brazil and is now a major pest. In this project, procedures have been developed related to the breeding cycle of this pest and its potential natural predators, as well as technical support for the introduction of a significant natural predator from Australia. A forestry protection lab has been set up – with the aim of improving diagnoses, developing a strategy for introducing natural predators and the evaluating clones' resistance to pests and diseases. Studies have been carried out to assess the genetic resistance of eucalyptus clones to major diseases, as well as to develop a new breeding strategy to obtain resistant genetic material. New pre- and post-emergent herbicides of interest to forestry have also been identified. Technical recommendations for the management of pests, diseases and weeds in the nursery and the field have been reviewed. Other forest protection studies were conducted or planned in order to satisfy conditions of pesticide use and other FSC® certification requirements, and these have been validated through audits.

In 2011, we adopted performance indicators on issues most relevant to forest protection activities and began to perform the tracking of such information for monthly, quality control of forestry reports, as was recommended in 2010.

## Soil management

Proper soil management is a prerequisite for plantation sustainability. This practice includes plantation area selection based on soil surveys and preparation of the land in a manner that takes into consideration environmental constraints that may impact plant growth. Soil conservation, balanced fertilization and maintenance of crop residues – leaves, twigs and bark – are common practices.

Fibria's management techniques take into account soil preparation systems, balanced fertilization strategies and post-harvest forest residues maintenance. These are included in the company's routine operations, taking into account the differences between operational regions, the characteristics of different genetic strains and the results of research and monitoring during planting cycles. The company invests in the mapping of its areas and is bringing together information obtained in the last 20 years in a database, allowing for the establishment of a single-source for the technical classification of soils and a set of performance standards.

Fibria's forestry fertilization process has recently undergone a review, which led to the expansion of the automated management of fertilization and the resulting reduction in the number of formulations of nitrogen (N), phosphorus (P) and potassium (K) on plantations, as well as expansion of automated fertilization management and control system, with gains in logistics, application security and costs. Also in 2011, more studies were conducted on the critical level of organic matter in soil, the effects of soil compaction from harvesting, managing losses of soil and water and newly-recommended fertilization tools, with the aim of establishing a unified application strategy for Fibria and application using controlled-release fertilizers.

Increasing forest productivity, crucial to the company's competitiveness, is a great challenge in intensive management environments and increasingly requires the use of specialized technologies and, at the same time, conservationists. A technology that has shown good results is the mechanization of sloped areas using the Rotree system, which allows for the joint operations of soil preparation, fertilization and herbicide application, simplifying these processes. The herbicide application is described in the Forest Management Plans, whose abstracts are available online [[www.fibria.com.br/web/pt/midia/publicacoes.htm](http://www.fibria.com.br/web/pt/midia/publicacoes.htm)] and describe the techniques of soil preparation, fertilization and maintenance of eucalyptus plantations.

Lime sludge, biomass ash, dregs and grits are solid waste generated during the pulp industrialization process. This waste is transformed into co-products and after this recycling process are reused as corrective for soils in plantations of the Aracruz Unit (ES). This operation brings economic and environmental advantages, such as increasing the useful life of landfills, reducing the amount of waste to be deposited in the area, producing economies in the purchase of lime and other fertilizers, and contributing to overall recycling efforts. In 2011, we estimate that through the implementation of this practice, generated savings were approximately R\$6.1 million. ✓

Currently within the Aracruz Unit plants, approximately 100% of biomass boiler ash is recycled, along with 100% of lime sludge and 25% of dregs and grits. Overall this amounts to around 70,000 tonnes of material recycled. It is anticipated that the two processing units under construction in the Jacaré and Três Lagoas Units will recycle 100% of ash, sludge and dregs produced by the two plants – a total of over 86,000 tonnes of waste/year – as soil corrective and fertilizer. As of mid-2012, the total annual waste that will be recycled on the plantations is expected to reach 156,000 tonnes/year.



Fibria's early research on the use of industrial solid waste began in 1992; prioritizing biomass ash as it is a more complete waste, in terms of its chemical composition. Research continued throughout the 2000s and now application formulas, modes of application, application timing and waste type to be applied are well-defined for each plantation tract. In parallel, we have also improved waste management practices and the logistics of storage and distribution.

### STEP-BY-STEP SOIL MONITORING

Eucalyptus forest care begins long before the seedling is planted. This includes:

#### ■ Soil mapping

Field studies and laboratory tests are performed to diagnose morphological, physical and chemical characteristics, among others. From this data, soil maps are made that indicate whether the area is capable of establishing a plantation and to orient the management and operations to be performed on site. This information is essential to indicate the best fertilizer for the soil and its productive potential.

#### ■ Soil preparation for planting

At this stage, the soil is prepared to facilitate root growth and water infiltration into the soil. This is the first phase of fertilization to allow the plants to grow strong and healthy in their first moments of life in the field. Up to two years after planting, the eucalyptus receives this treatment and, after six years, is ready to produce pulp. The amount of fertilizers applied becomes a "stock" of nutrients for the next planting cycle, such that soil exhaustion will not occur.

#### ■ Annual tests

During the eucalyptus growth cycle, nutrients in the tree leaves are analyzed to determine if the plant is well nourished, to identify the needs of the land, and to determine which interventions should occur and how. Every six years, soil samples are collected for analysis. Thereafter, fertilization is performed in accordance in response to the new planting cycle and measures of soil quality.

#### ■ Minimum tillage

This means preparing holes or small furrows. All organic material (leaves, bark and branches) is left on the soil surface to act as a protective cover against the direct impact of water on the soil. The intention is to disturb the ground as little as possible.

## Agroforestry ★

The system of agroforestry, which integrates eucalyptus cultivation with other crops has contributed to boosting and diversifying the economy and strengthening family farming in Fibria's areas of activity. The company encourages a variety of agroforestry projects in Espírito Santo, São Paulo, Bahia, Mato Grosso do Sul and Rio Grande do Sul, which are also giving benefits to farmers participating in the Forest Savings Program.

**Forest to Table** – Created in 2006 for Forest Savings participants, this program provides donations of seeds for the planting of annual crops within the eucalyptus forests. In Capão do Leão (RS), the Forest to Table Program was launched in partnership with the Brazilian Service for the Support of Micro and Small Enterprises (SEBRAE) and the

consulting firm, Agroflorestral, incorporating two important advances: the environmentally friendly production certificate, issued by the Agro Food-Chain Products Quality Assessment Institute - CERTIFICA, which oversees the entire process and production of honey. Although crop combinations are only possible in the first year of eucalyptus growth, the results are quite significant. Some Forest to Table numbers Capão Leão include:

- With 11 regional cooperatives participating, cultivated areas of more than 10,000 hectares of maize, sorghum, squash, watermelon, cantaloupe, beans, sunflowers and pastureland.
- Approximately 300 beekeepers involved.
- Creation of an apiculture cooperation network, which is seeking financing from the Brazilian Development Bank (BNDES) for the construction of honey extraction and processing houses.

**Hives Program** – Present in regions where the company operates in São Paulo, Mato Grosso do Sul and Rio Grande do Sul, it seeks to stimulate the development of beekeeping, including the use of flowering eucalyptus on Fibria farms. In August 2011, the initiative began to be implemented in Espírito Santo and Bahia, in areas already being used by local beekeepers. Learn more about the program's performance in 2011:

- In São Paulo, honey production in Fibria forests was divided into two nuclei. In the municipalities of Capão Bonito, Itapeva and Itapetininga, near the Jacaré Unit, 39 beekeepers from three associations benefited. Approximately 46,560 kilos of honey were produced. It was of an organic quality and purity level that was certified by the Biodynamic Institute (IBD), which certified the product for export, mainly to the U.S. market. 122 beekeepers from 15 municipalities participated in the Sustainable Apiculture Project of the Paraíba Valley, with the goal to develop the local apiculture chain in a sustainable manner.
- In Bahia, three professional beekeepers and 32 beekeeper families participated from the municipalities of Mucuri, Teixeira de Freitas and Alcobaça.
- In Espírito Santo, eight beekeeping professionals and 91 beekeeper families participated from the municipalities of Aracruz, São Mateus and Conceição da Barra.
- In Rio Grande do Sul, 300 beekeepers participated from Capão do Leão, Pelotas, Bagé, Rio Grande, Pedro Osório, Arroio Grande, Caçapava, Canguçu, Cerrito, Candiota, Herval and Aceguá.

**Integrated Production of Wood and Food (PIMA)** – This entails the planting of beans, maize and cassava between the eucalyptus rows during the first year of tree growth. The program includes the participation of approximately 60 families in five communities in the municipality of Aracruz (ES) – Cachoeirinha do Riacho, Assentamento Nova Esperança, Santa Rosa, Lagoa do Juara and Gimuhuna – and in the community of São Geraldo in São Mateus, ES. The participating farmers individually harvest up to 100 kilos of beans, 150 kilos of maize and 4,000 kilos of cassava per year on half-hectare plots, which the company grants to each family.

To identify crops, as well as the most appropriate forms of management and fertilization, the Fibria Technology Center, in partnership with the Luiz de Queiroz College of Agriculture (ESALQ/USP), tested the company's lands in PIMA, to assure the viability of the model that was eventually implemented. In addition to offering acreage, Fibria supports the creation of a producer's association in each region. It also provides seeds, fertilizer, equipment, training and technical assistance, in partnership with the Center for Agribusiness Development (CEDAGRO).



**Cattle raising** – Livestock production in the company's forested areas is being carried out in the Três Lagoas region of Mato Grosso do Sul, where Fibria is developing the Silvopastoral Project with rural producers in the area, in order to promote alternative sources of income for small-scale producers, which integrates cattle raising with eucalyptus cultivation.

#### Goal – Review the forest development models by adapting them to new guidelines ✓

##### Target 2011

- Establish a methodology and certify agricultural products originated from these systems.

Result: **Target fully achieved.** Fibria collaborated in the creation of an agriculture products certification methodology with IMAFLORA (from the Rainforest Alliance system), with the following activities:

- Use of the silvopasture system (combining forest plantations with cattle raising) in Mato Grosso do Sul for the creation of the Brazilian certification model of sustainable cattle
- Field days in Rio Grande do Sul, Espírito Santo and São Paulo to aid in the creation of the system
- Revision of the norm.

Fibria certified its first non-wood product – organic eucalyptus honey – in the region of Capão Bonito (SP), as certified by IBD.

## Biodiversity 🌿

Biodiversity conservation is a priority for Fibria's sustainability strategy. The company operates in three Brazilian biomes: the Atlantic Forest, the Cerrado and the Pampa, the first two are among the world's richest biomes in terms of number of species, although the remnants of native vegetation are highly fragmented, due to the historical process of occupation of the Brazilian territory.

In Fibria's land, about 37% of the total area is earmarked for the conservation of biodiversity and ecological processes. These conservation areas represented different ecosystems and are distributed along rivers and in large blocks, forming a mosaic landscape where eucalyptus plantations are interspersed with native vegetation. Being legally protected by Fibria as legal reserves (LRs), Permanent Preservation Areas (PPAs) and Private Natural Heritage Reserves (RPPNs), these areas receive protection initiatives, restoration, management and integration with the array of forest plantations.

In 2011, we assumed the challenge of restoring 20,000 hectares of Atlantic Rainforest in Espírito Santo, Bahia, Minas Gerais and São Paulo over the next five years. There are river sources and banks (APPs) and legal reserves that favor the creation of ecological corridors. 2011 marked the beginning of the restoration process of 3,500 hectares in the region of the Atlantic Rainforest Central Corridor (ES, BA and MG). Fibria also participated in the Sustainable Forestry Initiative Mosaics, seeking synergy of program monitoring and biodiversity restoration in partnership with other companies, NGOs and clients.

In São Paulo, we participated and supported the Ecological Corridor of the Paraíba Valley initiative, dedicated to the preservation and restoration of the Atlantic Rainforest, with estimates of planting 200 million trees on 150,000 hectares over the next 10 years, with an investment of R\$3 billion. Since 2006, Fibria is involved in the Ecological Corridor, as one of its founders, in association with Ethos Institute and the Atlantic Rainforest Foundation.

In 2011, we identified the issues of greatest importance for the development of studies and research related to biodiversity. Among the most relevant are the fauna and flora inventories, conservation of endangered species, sustainable use of biodiversity and impacts of forest management, among others.

All biodiversity monitoring programs in Fibria's farms continued in 2011:

- At the Jacareí Unit (SP), the Conserv-Ação project carried out the systematic monitoring and diagnostics of flora and fauna creating a Fast Ecological Assessment Index (IAEF) in managed farms.
- At Três Lagoas Unit (MS) groups of birds, terrestrial mammals, bats, reptiles, amphibians, insects and vegetation were monitored in representative fragments. A jaguar (*Panthera onca*) was recorded in company areas, which indicates the high degree of conservation of the biodiversity of farms in Mato Grosso do Sul.
- At the Aracruz Unit (ES), birdlife was monitored in representative fragments and also in forest partnership areas. Additionally, an evaluation was conducted of the *Glaucis dornanii*, one of the rarest hummingbirds and threatened Atlantic Forest, recently discovered in an area of forest partnership in Marilândia (ES).

Fauna and flora data collected in the field are stored in the company's Biodiversity Database. Fibria has recorded the presence of 680 species of birds, 132 species of mammals and 1,355 plant species. Of these, about 25 species are considered vulnerable or endangered on the national list (IBAMA). For more information see GRI EN15.

The accumulated knowledge about the relationship between eucalyptus plantations and native fauna and flora allow us to perform various forest management initiatives, such as:

- **Ecological corridors:** strips of eucalyptus plantations connecting patches of native forest in order to contribute to the movement of animals from the region
- **Bridge trees:** maintenance of standing trees in the areas of eucalyptus harvesting to facilitate movement of birds between patches of native forest
- **Harvest mosaic:** maintenance of eucalyptus standing trees harvesting regions in order to maintain environmental stability (wildlife flows, regulation of water, among others).

The planning of these initiatives is based on technical analysis of the landscape, with the support tool BioIndex – software that allows us to generate indicators of biodiversity in the landscape level for all of Fibria's areas.

The conservation of endangered species is also an important line of action of Fibria, in which we work in partnership with several institutions dedicated to the conservation:

■ **Conservation and Monitoring of the Espírito Santo Tapir (Pró-Tapir)** – conducted in partnership with the Institute of Education, Research and Conservation Marcos Daniel (IMD), Pró-Tapir monitors tapirs (*Tapirus terrestris*) in two protected areas in the north of Espírito Santo: the Biological Reserve Deer Creek Retreat and Fibria's RPPN das Antas.

■ **Centre for Reintegration of Wild Animals (CEREIAS)** – A project created in 1993 by Fibria in Espírito Santo, CEREIAS receives wildlife rescued from trafficking by the surveillance or taken by the population, rehabilitating them for release into nature. Nearly 80,000 animals have been through CEREIAS since 1993. CEREIAS occupies 11.5 hectares donated by Fibria and currently has 56 nurseries. The association recently was recognized as an OSCIP (Civil Society Organization of Public Interest) in 2011 and is currently maintained as a partnership between IBAMA and Fibria, receiving resources from Fibria's suppliers and other companies in the region. See more in [www.cereias.com.br](http://www.cereias.com.br).

■ **Project Management and Conservation of the blue-fronted parrot (*Amazona aestiva*)** – Project supported by Fibria since 2006 in Itapeva (SP), contributing to the increase in population of the species in the region and to reduce the looting of nests for the purposes of trafficking the young.

■ **Monitoring Project of the Southern Muriqui (*Brachyteles arachnoides*)** – Monitoring conducted since 2006 by the Association Pro-Muriqui at the Fazenda São Sebastião do Ribeirão Grande in Pindamonhangaba (SP). This farm, owned by Fibria was considered in 2011 one of the five most important areas for research and conservation-the-southern muriqui monkeys in Brazil by the Chico Mendes Institute for Biodiversity Conservation (ICMBio). The Institute promotes the National Action Plan for the Conservation of Muriquis to encourage the study of this endangered species in order to ensure their survival.

Also, under the Corporate Movement for Biodiversity (MEB), the company is also involved in talks with the government to implement the actions necessary to comply with the targets proposed by the Conference of Parties (COP-10) in Nagoya.

#### LOCATION AND SIZE OF LAND OWNED, LEASED, MANAGED IN, OR ADJACENT TO, PROTECTED AREAS AND AREAS OF HIGH BIODIVERSITY VALUE OUTSIDE PROTECTED AREAS (GRI EN11)

	2010	2011
Size of own, leased or managed land in protected areas and/or those of high biodiversity value	210 km <sup>2</sup>	222 km <sup>2</sup>
Size of own, leased or managed land adjacent to protected areas and/or those of high biodiversity value	1,618 km <sup>2</sup>	1,553 km <sup>2</sup>
<b>Total</b>	<b>1,828 km<sup>2</sup></b>	<b>1,775 km<sup>2</sup></b>

2011	Own, leased of partnerships (ha)	Partnerships (ha)	Total (ha)	Own, leased of partnerships (km <sup>2</sup> )	Partnerships (km <sup>2</sup> )	Total (km <sup>2</sup> )
Within	24,725.2	7,949.5	32,674.7	247,3	79,5	346,8
Adjacent	155,346.5	16,735.7	172,082.2	1.553,5	167,4	1720,9
2010	Own, leased of partnerships (ha)	Partnerships (ha)	Total (ha)	Own, leased of partnerships (km <sup>2</sup> )	Partnerships (km <sup>2</sup> )	Total (km <sup>2</sup> )
Within	20,964.8	7,524.4	28,489.2	209.6	75.2	284.9
Adjacent	161,801.2	15,852.2	177,653.4	1,618.0	158.5	1,776.5

# Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas (GRI EN12)

Fibra has defined policies and procedures for identifying and monitoring environmental aspects in order to minimize negative environmental impacts and reinforce positive impacts. The status of the Environmental Aspects and Impacts Matrix is periodically reviewed, and mechanisms are defined for treating the most relevant impacts. Fibra's model of environmental management is certified under ISO 14001.

Fibra's management of its impact on biodiversity is based primarily on the nature of its forestry operations. The table below lists and describes the most common impacts of the company's forest operations.

Impact	Examples
Changes in wild fauna and flora	Changes in wild fauna and flora can occur by animals being scared off, run over or as the result of suppression of vegetation caused by forest fires in plantations or conservation areas, small interventions in APPs (Permanent Preservation Areas) for construction of roads, drains and bridges or for transit of machines and equipment for forest management.
Changes in the landscape	Between planting and harvesting, eucalyptus plantations reach various levels of stratification, ranging from the herbaceous strata, close to the ground, to the upper strata of the forest, passing through undergrowth and intermediary forest strata to harvesting at the end of the growth cycle, causing constant changes in the landscape.
Changes in aquatic fauna and flora	Noise created by barges or dredgers can chase away aquatic species that reproduce in the mangroves around the Caravelas Maritime Terminal or marine environment and disturb the behavior of local bird life. Dredging operations can lead to dispersal of particles, nutrients and chemical substances that interact with the aquatic biota and are likely to disturb aquatic fauna. Excavation and removal of sediment can change the patterns of circulation of currents and consequently cause changes in the biota of these areas. There are also several risks such as collision with cetaceans during shipping and leaking during transfer of fuel and other liquids from ships.
Chemical and physical changes in the air	Chemical and physical changes of the air can occur primarily due to emission of solid particles and gases produced by burning diesel fuel, ethanol and gasoline by vehicles and machines used for forest management, including forest fires.
Intensification of climate changes	The company uses diesel equipment, nitrogen-based fertilizers and lime that emit greenhouse gases. Medium and long-term climate changes could lead to changes in air currents, vegetation and the water table, which could adversely affect biodiversity.
Chemical, physical and microbiological changes of the soil	Possible fires, spills of diesel, lubricating oil, fuel and other liquids from machines and equipment used in forest activities, as well as various chemicals, discharge of toxic and non-toxic waste in licensed dumps can cause chemical, physical and microbiological changes in the soil.
Decrease of biodiversity	The excavation and removal of sediment from the Tomba channel at Caravelas, Bahia State, disturbs benthic organisms from the sea bed. Re-population occurs naturally, but can have a different composition from the original and break the former balance.

In areas of High Conservation Value Areas (HCVAs), which can be identified using international criteria proposed by the NGO Pro-forest, specific activities are implemented to ensure the maintenance of natural resources. Conservation and monitoring are carried out by evaluating the effectiveness of the measures used. In 2011, Fibra's monitoring and diagnostic program did not detect any significant negative impacts on biodiversity.

Since Fibra's forest plantations are certified by FSC® (Mato Grosso do Sul and São Paul states) and by CERFLOR (Espírito Santo, Bahia, Minas Gerais and Mato Grosso do Sul states), measures are taken to prevent and minimize occurrences of plagues and diseases, avoid the introduction of invasive species, as well as protect rare, endemic and threatened

species. All these measures are already part of the company's forest management practices. In 2011, our monitoring showed no change in ecological processes resulting from the company's operations.

Bird life is one of the main objects monitored by Fibria in order to evaluate the impact of its operations on biodiversity. Due to their great sensitivity to disturbances in the environment, birds are considered reliable indicators of the effects produced by forestry activities on biodiversity. For more than a decade now, Fibria has been monitoring bird species that frequent or live in its management areas. The presence of a high number of bird species in forest management areas – approximately 15% of existing species found in the Atlantic Rainforest – indicate that the eucalyptus plantations are used as habitat by many species, apart from functioning as a transit area and connection between fragments of native vegetation. Even after harvesting operations, monitoring shows that several species return to the original number after establishment of a new plantation.

Of special importance in 2011 was the use of the sustainable forest mosaics methodology for monitoring biodiversity in the southernmost part of Bahia State. The main goal is to evaluate whether and how changes in land use are affecting biodiversity in the area's forest fragments as a basis for decision-making and activities that prevent or mitigate those impacts. This new unified monitoring program will allow detection of changes in biodiversity over two years, using an integrated network of monitoring stations distributed over an area of more than 6 million hectares. More details on this initiative are available at [www.dialogoflorestal.org.br/publicacoes](http://www.dialogoflorestal.org.br/publicacoes).

#### HABITATS PROTECTED OR RESTORED<sup>1</sup> (GRI EN13)

Size of protected habitats	(in hectares)	Aracruz	Jacarei <sup>1</sup>	Três Lagoas	Capão do Leão
	<b>Atlantic Rainforest</b>				
	2010	123,570.0	55,767.2	6,282.0	–
	2011	124,060.0	55,620.0	10,980.0	–
	<b>Savanna</b>				
	2010	–	7,420.0	65,576.0	–
	2011	–	7,690.0	88,620.0	–
	<b>Mangrove</b>				
	2010	–	–	–	–
	2011	–	–	–	–
	<b>Restinga biome</b>				
	2010	4,785.6	–	–	–
	2011	5,270.0	–	–	–
	<b>Pampa biome</b>				
	2010	–	–	–	59,725.2
	2011	–	–	–	60,210.0

1. The areas mentioned include areas used for conservation in Brazil (Permanent Preservation Areas and Legal Reserves). Fibria restores areas in accordance with the protocols of the Atlantic Rainforest Restoration Pact and the Laboratory for the Environment and Forest Restoration of the University of São Paulo (LERF/USP). The company has partnerships with State governments for protecting conservation units. Variations in areas are primarily the result of changes in leased areas, partnerships and development programs, which can vary from one year to the next and the purchase of land, primarily at the Três Lagoas Unit for the expansion of the mill's production capacity.

2. Vale do Paraíba and Capão Bonito.

## Strategies, current actions, and future plans for managing impacts on biodiversity (GRI EN14)

Fibra is currently carrying out 52 biodiversity projects. The projects include studies and monitoring of fauna and flora, landscape management, practices for biodiversity, conservation of endangered species, restoration of native areas, environmental education programs, management of Conservation Units and joint initiatives to conserve biodiversity.

In 2011, the Aracruz Unit prepared its Biodiversity Monitoring Plan in order to evaluate the effect of forest management on biodiversity. For 2012, the goal is to extend that monitoring plan to other Units.

Fibra will evaluate biodiversity at two levels: landscape and local communities. At landscape level, monitoring of biodiversity uses data produced by BioIndex software in all the areas where Fibra operates, taking into account the grouping of areas in Landscape Planning Units. At local community level, monitoring will be made using three groups of bio indicators: birds (bird life), medium and large-sized land mammals and woody vegetation (flora). These groups will be monitored in 10 representative fragments of environmental units where the company has operations, identifying aspects of the vegetation (plant physiognomy) that characterize the various ecosystems found in the areas managed by Fibra.

One of the biggest challenges of forest management for Fibra is the use of the results of its environmental monitoring by integrating economic issues into social and environmental aspects. Fibra is doing this by applying Socioenvironmental Recommendations (RSAs) proposed as activities on a local scale for various areas of forest management (roads, harvesting, forestry, environment, cartography and sustainability), whose goal is to identify and reduce adverse impacts and increase benefits. Therefore, the areas are studied and recommendations are made before harvest operations begin by using various tools for their preparation, such as cartography analysis and aerial photographs, results from studies and environmental monitoring, licensing and legal petitions, requests from stakeholders and long-term recommendations. Harvesting in mosaics, ecological corridors, cutting guidance, social issues, protection of water springs and streams, and conservation of biodiversity are some of the issues taken into account.

Fibra's biodiversity restoration program promotes conservation of biodiversity in protected areas, such as the elimination of exotic species, restoration of endangered species and, in several cases, management of endangered species, among other initiatives.

The criterion of giving priority to restoration areas takes into account the following parameters: legal obligations and fulfilling the conditions of operating licenses and other obligations, opportunities to connect fragments of native vegetation, areas with less anthropic pressure (fires and cattle) and optimization of operational logistics.

Currently, the main goal connected to biodiversity is the restoration of native habitats. In 2011, a total 2,800 hectares were restored by Fibra.

NUMBER OF SPECIES ON THE IUCN RED LIST AND IBAMA CONSERVATION LISTS OF SPECIES WITH HABITATS  
IN AREAS AFFECTED BY OPERATIONS, BY LEVEL OF RISK OF EXTINCTION (GRI EN15)

IUCN Category 2011	Group	Jacaré (SP, MG) <sup>1</sup>			Três Lagoas (MS)		Aracruz (ES, MG, BA) <sup>2</sup>			Capão do Leão (RS)			Total Fibria	
		IUCN	Ibama	State List (SP)	IUCN	Ibama	IUCN	Ibama	State List (ES)	IUCN	Ibama	State list (RS)	IUCN	Ibama
(CR – Critically Endangered)	Plants	1	–	–	–	–	2	–	5	–	–	3	3	–
	Birds	–	–	2	–	–	–	1	18	–	1	1	–	2
	Mammals	–	–	1	–	–	–	–	1	–	–	–	–	–
	Amphibians	–	–	–	–	–	–	–	–	–	–	–	–	–
	Reptiles	–	–	–	–	–	–	–	–	–	–	–	–	–
	Fish	–	–	–	–	–	–	–	–	–	–	–	–	–
	Crustaceans	–	–	–	–	–	–	–	–	–	–	–	–	–
(EN – Endangered)	Plants	2	4	3	1	1	5	5	25	1	–	10	7	7
	Birds	2	–	2	1	–	4	4	12	2	2	2	8	6
	Mammals	1	1	3	–	–	1	–	4	–	–	2	2	1
	Amphibians	–	–	–	–	–	–	–	–	–	–	–	–	–
	Reptiles	–	–	–	–	–	–	–	–	–	–	1	–	–
	Fish	–	–	–	–	–	–	–	1	–	–	–	–	–
	Crustaceans	–	–	–	–	–	–	–	–	–	–	–	–	–
(VU – Vulnerable)	Plants	7	–	6	7	–	13	5	20	–	1	21	18	6
	Birds	4	5	16	–	1	12	11	19	3	4	7	16	18
	Mammals	4	9	9	5	8	3	5	8	–	2	8	7	12
	Amphibians	–	–	–	–	–	1	–	–	–	–	–	1	–
	Reptiles	–	–	–	2	–	–	1	2	1	1	1	3	2
	Fish	–	–	–	–	–	–	–	–	–	–	1	–	–
	Crustaceans	–	–	–	–	–	–	–	5	–	–	–	–	–
(NT – Near Threatened + LR – Low Risk)	Plants	10	–	–	4	–	3	–	–	1	–	–	13	–
	Birds	19	–	12	4	–	17	–	–	6	–	–	35	–
	Mammals	6	–	7	4	–	3	–	–	4	2	–	10	2
	Amphibians	–	–	–	–	–	–	–	–	–	–	–	–	–
	Reptiles	–	–	–	–	–	1	–	–	–	–	–	1	–
	Fish	–	–	–	–	–	–	–	–	–	–	–	–	–
	Crustaceans	–	–	–	–	–	–	–	–	–	–	–	–	–
Minimum concern, or lack of sufficient data, or no evaluation by the IUCN	Plants	470	486	481	271	281	841	854	814	515	516	483	1745	1773
	Birds	362	382	355	302	306	486	503	470	245	249	246	683	716
	Mammals	39	40	30	58	59	72	74	66	47	47	41	136	140
	Amphibians	–	–	–	33	33	47	48	48	26	26	26	94	95
	Reptiles	–	–	–	34	36	51	51	50	37	37	36	104	106
	Fish	–	–	–	–	–	85	85	84	57	57	56	134	134
	Crustaceans	–	–	–	–	–	25	25	20	–	–	–	25	25
<b>Total species</b>	Plants		490		283		864			517			1786	
	Birds		387		307		519			256			742	
	Mammals		50		67		79			51			155	
	Amphibians		0		33		48			26			95	
	Reptiles		0		36		52			38			108	
	Fish		0		0		85			57			134	
	Crustaceans		0		0		25			–			25	

OBS: Data made available from Fibria's fauna and flora monitoring processes

1. Vale do Paraíba and Capão Bonito.

2. Forest partnership areas have been included in the Aracruz Unit.



Ecosystem services ★

Ecosystem, or environmental, services consist of all the benefits produced in nature that benefit human life. They range from the most basic benefits, such as fresh water and food to the less obvious but equally vital – such as photosynthesis, pollination, conservation of flora and fauna and climate regulation. Identifying and establishing economic benefit from these services has been proposed as a way of emphasizing the importance of ecosystems in a tangible form, and thus protecting them. The international Millennium Ecosystem Assessment in 2005 revealed that 60% of the world's ecosystem services are degraded compared to those existing 50 years before.

In 2011, Fibria started a project aimed at increasing the value of ecosystem services derived from its forestry management model. The goal was to learn the methodology and its applicability to the company – which has a strong interdependent relationship with the ecosystems. One of the services evaluated – the great capacity to absorb carbon dioxide from the atmosphere – already has been quantified for several years (see the Climate Governance chapter on page 159). However, the study also sought to place a value on such sequestration. A recent article in the journal *Nature Climate Change* affirmed that the carbon credit policies prevent loss of biodiversity. Without these payments, 36,000 species would become extinct by 2100; and if a tonne of carbon were traded for US\$ 25, preservation would rise to 94% of the forest species, the study concluded. This study exemplifies the type of information that can be obtained from appreciating the value of ecosystem services.

Through valuation techniques, the study also addressed the regulation of soil fertility, bioenergy and waste treatment services, among others.

The following table summarizes some of the ecosystem services initially prioritized by Fibria in the study. The impact analysis today is limited to isolated quantitative and qualitative analyses, both positive and negative, without being able to grasp the systemic dynamics of the ecosystem. This is due to the limitations of existing models.

Dependency	Impact (positive or negative)
Regulation of Soil Fertility	
Climate Regulation	
Photosynthesis	Refuge (habitats for flora and fauna)
Water	
Bioenergy	Regulation of Erosion
Waste treatment	
Disease regulation	

\*Adapted from The value of the world's ecosystem services and natural capital, *Nature Magazine*.

## Energy

## DIRECT AND INDIRECT ENERGY CONSUMPTION, BY PRIMARY ENERGY SOURCE (GRI EN3 AND EN4)

Forestry										
		Jacaré Unit			Aracruz Unit			Três Lagoas Unit		
		2009	2010	2011	2009	2010	2011	2009	2010	2011
<b>Non-renewable</b>										
Diesel	litres	22,279,904	26,682,442	26,860,974	40,606,708	38,951,267	59,021,226	9,336,209	14,219,598	18,258,044
Marine fuel	litres	—	—	—	6,242,750	9,732,900	10,687,000	—	—	—

Forestry										
		Jacaré Unit			Aracruz Unit			Três Lagoas Unit		
		2009	2010	2011	2009	2010	2011	2009	2010	2011
<b>Non-renewable</b>										
Diesel	GJ	795,954	953,236	959,614	1,450,683	1,391,542	2,108,545	333,538	507,998	652,272
Marine fuel	GJ	—	—	—	223,023	347,710	381,795	—	—	—

The energy consumption of the Forestry Units varies according to the average radius of the operation.

Forestry									
		Jacaré Unit			Aracruz Unit			Três Lagoas Unit	
		2009	2010	2011	2009	2010	2011	2009	2010
MWh		215	980	2.078	648	4.382	2.609	144	1,025

Obs: The 2011 values are greater as there was an improvement in the consumption control in the electric energy, and therefore a greater number of sources were included in the calculation.

### Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives (GRI EN6)

The main consumers of energy in the forestry operations are agricultural equipment and trucks for wood transport. The energy consumption of the equipment is analysed monthly, and is a part of the variable remuneration of the operators, therefore stimulating the reduction in consumption.

A similar strategy is adopted for wood transportation conducted by external companies. A fixed consumption of diesel per kilometer is established, and the supplier that achieves a lower consumption is paid for the difference. On the other hand, if the diesel consumption target is missed, the difference must be paid by the supplier. This model, which links part of the supplier's revenue to the economical use of diesel, stimulates the search for solutions that reduce consumption, such as training drivers and the maintaining equipment.

## Waste ★

## TOTAL WEIGHT OF WASTE, BY TYPE AND DISPOSAL METHOD (GRI EN22)

	Unit	Year	Aracruz	Jacareí (Vale do Paraíba and Capão Bonito)	Três Lagoas
<b>Hazardous waste</b>					
Re-refined (used oil)	tonne	2010	375.19	20.31	0
		2011	340.61	34.94	0
	litres	2010	0	0	28,020
		2011	0	0	48,070
Recycled	tonne	2010	0	74.92	0
		2011	0	0	0
	pieces	2010	0	422	1,587
		2011	0	4,592	929
Reutilized	tonne	2010	0	6.2	0
		2011	0	7.93	0
Coproprocessed	tonne	2010	NA	0	178
		2011	NA	0	119.42
Incinerated	tonne	2010	0	114.43	178
		2011	1.65	122.82	0
Landfill	tonne	2010	252	0	0
		2011	332	14.49	14.04
Stored at the Unit	tonne	2010	0	0	15,860
		2011	0	0	18,538
Others	tonne	2010	3.18	0	0
		2011	0.00	0	0
	pieces	2010	0.00	0	0
		2011	0.00	0	0
	Unit	Year	Aracruz	Jacareí (Vale do Paraíba and Capão Bonito)	Três Lagoas
<b>Non-hazardous waste</b>					
Composted	tonne	2010	5.953	0	0
		2011	0	0	0
Reutilized	pieces	2010	129	39	0
		2011	0	684	0
	tonne	2010	3.262	0	0
		2011	0	0	0
Recycled	tonne	2010	95	75	67,14
		2011	0	293	130,54
	pieces	2010	0	0	0
		2011	0	65.016	0
Landfill	tonne	2010	79	0	0
		2011	640	13,58	38,17
	m <sup>3</sup>	2010	0	80,98	0
		2011	0	19,88	0
Others	tonne	2010	0	475	0
		2011	0	0	0

The data is provided by specialized companies responsible for waste disposal. The disposal is made in accordance with the type of waste.

## Investments

## TOTAL ENVIRONMENTAL PROTECTION EXPENDITURES AND INVESTMENTS BY TYPE (GRI EN30)

	Unit	Year	Aracruz	Jacareí (Vale do Paraíba and Capão Bonito)	Três Lagoas	Capão do Leão
<b>Costs</b>						
Waste	R\$	2010	768,208.62	119,017.41	120,978.22	0
		2011	567,520.04	319,662.82	334,472.78	0
Emissions	R\$	2010	0	103,222.49	0	0
		2011	0	132,713.61	0	0
Environmental studies and monitoring (fauna, flora and water resources)	R\$	2010	769,890.44	1,117,079.68	0	0
		2011	1,057,005.75	1,316,829.81	478,357.54	0
Revegetation of degraded and protected areas (APP and RL) <sup>2</sup>	R\$	2010	6,813,029.54	1,512,487.14	0	0
		2011	12,769,300.04	216,525.15	0	0
Environmental management (fixed cost)	R\$	2010	1,364,837.28	1,934,654.50	836,912.14	299,876.80
		2011	4,414,584.27	2,029,180.80	832,118.94	331,518.56
Others	R\$	2010	0	0	0	0
		2011	0	40,725.00	611,227.17	0
<b>Total</b>	<b>R\$</b>	<b>2010</b>	<b>9,715,965.88</b>	<b>4,786,461.22</b>	<b>957,890.36</b>	<b>299,876.80</b>
		<b>2011</b>	<b>18,808,410.10</b>	<b>4,055,637.19</b>	<b>2,256,176.43</b>	<b>331,518.56</b>

## Industrial operations

The production process of pulp is divided into two main areas:

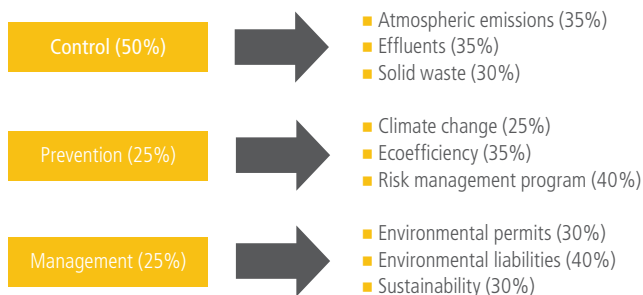
• **Production of pulp, which in turn is divided into:**

- Production of wood chips – consists in preparing the wood for mechanically removing the pulp fibers;
- Pulping of cellulose (line of fibre) – to chemically extract the cellulose fiber from the wood, bleach it and turn it into bales suitable for transportation.

• **Recovery and Utilities** – the area responsible for supplying water, steam and energy by recycling materials and for the industrial wastewater treatment.

**Environmental Performance Index (IDA)** – To check the environmental quality of activities related to the industrial process, Fibria has the Environmental Performance Index (IDA), a management tool that analyzes three important elements: pollution control, pollution prevention and environmental management. The three items have different weights for the composition of the final value of the IDA (as shown below), which is part of Fibria's employees' variable remuneration Fibria and is measured monthly at the Industrial Units of Aracruz (ES), Jacareí (SP) and Três Lagoas (MS).

## THE IDA IS COMPOSED OF SEVERAL GROUPS AND MEASURES:



## Pulp production

**Maintenance shutdowns** – Fibria’s Industrial Units interrupt their activities for a few days each year for equipment inspection and maintenance. These General Stoppages (GS), required by law, ensure productivity and, when appropriate, the implementation of modernization projects. Dozens of companies and hundreds of professionals are hired specifically to work on these Fibria maintenance shutdowns, which occurred, in 2011, between May and August.

The three fiberlines – A, B and C – of the Aracruz Unit stopped, alternately, between May 15 and June 10. The annual interruption also enabled the changing of the Digital Distributed Control System (SDCD), which allows operators to remotely control equipment. Participating in this work were 89 companies and approximately 1,400 professionals.

At the Três Lagoas Unit, in Mato Grosso do Sul, the GS involved 72 companies and 1,600 professionals, between June 27 and July 6. It was used to eliminate bottlenecks in the woodyard and drying area, which were affecting plant productivity. In Jacaré, São Paulo, 44 companies and 1,800 workers were called in to inspect the facilities, performing planned renovations and replacing a variety of equipment, including 21 tubing panels for the recovery boiler’s superheater. The São Paulo Unit’s GS occurred from July 24 to August 3.

As important as the stoppage is the restart. Successful GS means returning the plant to operation and to normal production quality and quantity as soon as possible. According to this criterion, all of Fibria’s 2011 maintenance shutdowns were successful: Aracruz’s three fiberlines resumed operations 12 hours earlier than expected, while Três Lagoas and Jacaré were right on schedule.

**Internal benchmarking** – During the year, Fibria made advances in its industrial benchmarking project, which aims to incorporate the best practices of each unit to establish a common operational standard for achieving maximum performance. This program, initiated in 2010, was based on the exchange of experience among Industrial Units, with the participation of professionals from all levels involved in pulp production.

The project’s focus is to improve the operational stability of the mills at the Aracruz, Jacaré and Três Lagoas Units, which implies production pace and flow controls to avoid oscillations between high and low productivity. In other words, the mills should be able to operate at less than full capacity when there are large stockpiles of raw material or pulp in the intermediate stages of processing, so that they can maintain the same pace when supplies are reduced. This enables the rational use of energy, equipment and labor, reducing costs and increasing productivity.

In 2011, productivity gains from improved operational stability at Fibria's three Industrial Units yielded 131 thousand additional tonnes of pulp. This is equivalent to almost the entire volume produced in 2010 by CONPACEL, which was sold in January 2011. Hence, our three mills produced 5.26 million tonnes of hardwood pulp, almost the same amount produced in 2010, when CONPACEL was part of the company.

The improvement in industrial performance, especially at the Aracruz Unit, which increased production by 90 thousand tonnes in 2011, also provided the company with Net Present Value (NPV) gains of R\$4.5 billion in synergies (surpassing the original target, which was to achieve this value over 20 years).

## Recovery and Utilities

### MATERIAL USED BY WEIGHT OR VOLUME (GRI EN1)

Direct materials	Aracruz Unit		Jacarei Unit		Três Lagoas Unit		Total	
	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)
Wood		8,480,694		3,736,893		4,042,480		16,260,067
Chemicals (soda, chlorate, sulfuric acid, hydrochloric acid, oxygen, peroxide, etc.)	262,366.70		81,387.20		77,808.06		421,561.96	

Non-renewable materials	Aracruz Unit		Jacarei Unit		Três Lagoas Unit		Total	
	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)	Total weight (tonne)	Total volume (m³)
Chemicals (calcium oxide, bunker c oil, methanol, limestone, sand, etc.)	47,376.60				9,778.71		57,155	
Natural gas		101,329,716		85,292,765		54,895,210		241,517,691
Diesel		25,691						25,691
Inks and solvents		8,532			0.31		0.31	8,532
Lubricant and hydraulic oils		161,891						161,891
Grease	16,849						16,849	
Fuel oil 3A			2,337		4,824		7,161	
Fuel oil 7A			36,332				36,332	
<b>Total</b>	<b>64,225.60</b>	<b>101,525,830</b>	<b>38,669</b>	<b>85,292,765</b>	<b>14,603</b>	<b>54,895,210</b>	<b>117,497</b>	<b>241,713,805</b>

## Energy

Electrical energy <sup>1</sup>	Unit	BRACELPA benchmark report		Aracruz Unit			Jacareí Unit			Três Lagoas Unit		
		Min	Max	2009	2010	2011	2009	2010	2011	2009	2010	2011
Total energy generated by the Units	MWh/adt <sup>2</sup>	0.6999	0.7355	0.6585	0.6614	0.6342	0.6613	0.5817	0.6328	0.6916	0.8207	0.7795
Energy used in the production of pulp	MWh/adt <sup>2</sup>	–	–	0.6333	0.6333	0.6056	0.6619	0.6464	0.6336	0.5056	0.5694	0.5361
Electrical energy bought	MWh/adt <sup>2</sup>	–	–	0.0152	0.0132	0.0105	0.1499	0.2093	0.1356	0.0080	0.0063	0.0068

1. Specific consumption is only for electrical energy

2. adt = air dried tonne

## DIRECT AND INDIRECT ENERGY CONSUMPTION, BROKEN DOWN BY PRIMARY ENERGY SOURCE (GRI EN3 AND EN4)

Industrial										
		Jacareí Unit			Aracruz Unit			Três Lagoas Unit		
		2009	2010	2011	2009	2010	2011	2009	2010	2011
Fossil fuels										
Natural Gas	GJ	2,465,071	2,845,940	2,944,767	3,338,750	3,347,069	3,512,753	1,294,518	1,999,686	1,937,934
Oil 1A	GJ	—	—	—	464,469	318,425	301,296	—	—	—
Oil 3A	GJ	573,027	202,878	93,545	—	—	—	654,219	284,094	361,331
Oil 7A	GJ	1,294,427	1,304,850	1,398,884	—	—	—	—	—	—
Diesel	GJ	—	—	—	498	1,147	918	11,451	9,004	14,944
Marine Fuel	GJ	—	—	—	—	—	—	—	—	—
Renewable fuels										
Biomass – Liquid	GJ	19,862,220	20,559,821	20,507,369	44,334,713	44,894,750	45,861,049	16,250,916	22,961,334	23,103,864
Biomass – Solid	GJ	626,562	216,258	642,653	7,494,995	7,215,916	5,965,161	1,132,954	1,192,739	1,198,494
CNG	GJ	—	—	—	119,923	133,917	187,822	15,530	34,171	28,584
Methanol	GJ	101,784	69,627	66,148	208,423	218,250	164,894	109,286	184,538	161,416
Sustainability Matrix										
		83%	83%	83%	93%	93%	93%	90%	91%	91%

Specific energy consumption varies according to availability and equipment stability. Projects are developed to improve operational conditions and can lead directly to reductions in fuel consumption and increased productivity.

Industrial									
	Jacareí Unit			Aracruz Unit			Três Lagoas Unit		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
MWh	160,466	225,442	149,529	35,537	32,722	24,380	6,458	7,446	8,320

Note: Figures for 2011 are higher because there was better control of electricity consumption and, therefore, other sources have been taken into consideration.



## Energy saved through conservation and efficiency (GRI EN5)

### Aracruz Unit:

- Steady reduction in fuel oil consumption, from 11,597 tonnes in 2009 to 7,950 tonnes in 2010 and 7,523 tonnes in 2011;
- In May 2011, a new bleaching plant came into operation resulting in reduced thermal energy and electricity consumption;
- There has been steady reduction in the consumption of electricity from the grid, which indicates our best level of self-generation to date;
- Efforts continue to increase the share of renewable fuels in the energy matrix;
- Work is also ongoing to reduce steam loss and improve processes with the aim of improving energy efficiency

### Jacareí Unit:

- Showed no reduction in gross energy consumption in 2011. There was a small oscillation in specific fuel consumption due to internal efforts to improve energy efficiency.

### Três Lagoas Unit:

- Continually seeking improvements in operational performance. Energy balances are examined monthly by specialists in search of new opportunities for savings.

## Initiatives to provide products and services with low power consumption or that use energy generated by renewable sources, reducing energy requirements as a result of these initiatives (GRI EN6)

### Aracruz Unit:

- In May 2011, deployment of our bleaching plant in Fiberline A, in replacement of an aging plant that had been in operation since 1978. The mean reduction in energy consumption was 3 MWh and average steam consumption registered a decrease of 22 tonnes/h. We began our energy conservation work by forming a multidisciplinary group to seek reductions in waste, such as leakages of steam, air, and water, among other things.

### Jacareí Unit:

- Continues to develop initiatives aimed at reducing energy consumption. These initiatives are supported by P+L and Six Sigma tools that ensured reductions in both gross and specific energy consumption, in relation to 2010.

### Três Lagoas Unit:

- Seeks to enhance its operations through the maximum use of biomass or renewable energy sources in its operational processes.

## Water

One of Fibria's main environmental challenges is to optimize water consumption in the pulp manufacturing process. The consumption levels of the company's three pulp production units are already lower than the best available practices and technology benchmarks.

Indicator	Unit	Reference <sup>1</sup>	Aracruz Unit			Jacareí Unit			Três Lagoas Unit		
			2009	2010	2011	2009	2010	2011	2009	2010	2011
- Specific consumption of water	m <sup>3</sup> /adt <sup>2</sup>	30 - 50	36.1	35.6	34.1	21.2	19.8	22.5	43.68	40.11	37.18

1. Values according to the publication Best Available Techniques (BAT) by the Integrated Pollution Prevention and Control (IPPC) (2001) bleached hardwood Kraft pulp.  
2. air dried tonne.

The Jacaré Unit, in the state of São Paulo, is a global benchmark, consuming an average of 22.5 m<sup>3</sup> of water for every tonne of pulp produced in 2011, below the reference value (of 30 to 50 m<sup>3</sup>). The Três Lagoas Unit, in Mato Grosso do Sul, consumes an average of 37.18 m<sup>3</sup> of water per tonne of pulp. Meanwhile, the Aracruz Unit, in Espírito Santo State, which has three mills, consumes 34.1 m<sup>3</sup> of water for every tonne of pulp manufactured. The company has been reducing its consumption of water. Approximately 20 years ago the water necessary to produce a tonne of pulp today was almost twice as much as that used today.

Water capture to supply the mills is carried out under grant schemes, in accordance with the environmental legislation governing each location and the Units' operating licenses.

#### TOTAL WATER WITHDRAWAL, BY SOURCE<sup>1</sup> (GRI EN8)

	Aracruz Unit			Jacaré Unit			Três Lagoas Unit			Total Fibria (2011)
	2009	2010	2011	2009	2010	2011	2009	2010	2011	
Total (m <sup>3</sup> )	108,394,560	110,395,296	107,325,576	26,654,814	25,535,665	28,591,030	NA	47,553,023	45,740,070	181,656,676
Volume consumed (m <sup>3</sup> /day)	217,965	219,705	217,116	73,027	69,961	78,332	NA	129,926	125,315	420,763

1. All water consumed by Fibria's Industrial Units is from surfacewater sources.

#### Water sources that have been significantly affected by water withdrawal (GRI EN9)

##### Aracruz Unit<sup>1</sup>

■ Our surface water is taken from the Gimuhuna river (Mãe Boa point of capture), that is affected by adduction of the Gimuhuna river basin and the Caboclo Bernardo channel (Doce River). No water resources are presently significantly affected by the company's water withdrawal.

##### Jacaré Unit

■ The average flow rate of the River Paraíba do Sul, the source of water of the Jacaré Unit, is 75m<sup>3</sup> per second. The average withdrawal of the Unit is 0.7m<sup>3</sup> per second, or 0.93% of the river flow. Although there are no significant impacts on the body of water, we conduct environmental monitoring for the purpose of prevention and control, checking for possible changes. Water samples are taken for qualitative and quantitative analysis of the physical, chemical, biological and microbiological parameters.

##### Três Lagoas Unit

■ The average water capture rate is between 1.3 and 1.5 m<sup>3</sup>/s, while the average flow rate of the Paraná River, which is the source of water for the Três Lagoas Unit, is 9,500 m<sup>3</sup>/s. In other words, our withdrawal represents 0.01% of the river flow. Although there is no impact on the body of water, we conduct environmental monitoring, for the purpose of prevention and control, checking for possible changes. Water samples are taken for qualitative and quantitative analysis of the physical and chemical, biological and microbiological parameters.

1. Fibria and the municipality of Aracruz were jointly sentenced in the Public Civil Action case proposed by Federal Public Prosecutor, to conduct within six months, an Environmental Impact Assessment and an Environmental Impact Report (EIA / RIMA) for for the project to transpose the Doce River to the Riacho River. In judgment of the appeal brought by Fibria, the Federal Court of the 2nd Region issued a decision suspending the obligation to submit the EIA / RIMA within six months, because that deadline is exiguous given the complexity of the study. In parallel, Fibria presented an appeal which questions, among other things, the existence of damage capable of justifying the requirement for an EIA / RIMA for the project. The appeal is currently pending decision.

#### Percentage and total volume of water recycle and reused (GRI EN10)

None of Fibria's Units makes use of the final effluent after treatment in Wastewater Treatment Plants. Some companies and processes make use of the effluent after treatment, for example in drip irrigation. Before the Treatment

the water undergoes various processes that make recycles and reuses it, such as in cooling towers, counter-current circuit for the filtered in-line fiber.

	Aracruz Unit			Jacaré Unit			Três Lagoas Unit		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Percentage of recycled and reused water	76%	76%	77%	84%	84%	79%	NA	NA	87%
Volume of recycled and reused water (m³)	NA	NA	263,949,399	163,987,200	163,987,200	136,717,534	NA	NA	302,400,000
<b>Total water withdrawal (m³)</b>	<b>NA</b>	<b>NA</b>	<b>107,325,576</b>	<b>NA</b>	<b>NA</b>	<b>28,591,030</b>	<b>NA</b>	<b>NA</b>	<b>45,740,070</b>

## Emissions

Because of the nature of its business, based on commercial forest plantations in association with native vegetation restoration and conservation areas, Fibria has a positive balance between its emissions and the carbon sequestered from the atmosphere.

According to Fibria's greenhouse gas (GHG) emissions inventory for 2010 (base year 2009), the company sequestered the equivalent of around 25 million tonnes of carbon through its eucalyptus plantations and native forest reserves. Emissions from the operations of the Aracruz, Três Lagoas, Jacaré and Guaíba (sold in December 2009) Units came to around 2 million tonnes, on top of the roughly 9 million tonnes emitted by the burning of biomass to generate electricity. Consequently, for every tonne of pulp that it produces, Fibria sequesters 3.17 tonnes of carbon within its forest areas. Learn more about this topic in the chapter entitled Climate Governance.

In addition to seeking to control and reduce the sources (equipment and processes) that generate odors, the company maintains an Odor Perception Network (RPO), comprising volunteers in the neighboring communities who are trained to identify odors and advise the company when such detection is made in the vicinity of the mill.

Indicators	Unit	BAT <sup>1</sup>	Aracruz Unit			Jacaré Unit			Três Lagoas Unit		
			2009	2010	2011	2009	2010	2011	2009	2010	2011
- AOX	kg/adt <sup>2</sup>	< 0.25	0.10	0.08	0.09	0.042	0.048	0.048	0.06	0.09	0.08
Particulate matter	kg/adt <sup>2</sup>	0.2 - 0.5	0.3205	0.2326	0.1887	0.822	1.256	1.247	0.43	0.23	0.22
- Sulfur dioxide	kg/adt <sup>2</sup>	0.2 - 0.4	0.0517	0.0241	0.0556	0.155	0.13	0.095	0.085	0.02	0.035
- NOx	kg/adt <sup>2</sup>	1.0 - 1.5	0.3009	0.2945	0.1965	0.7	0.81	0.67	2.58	1.60	1.52
- TRS	kg/adt <sup>2</sup>	0.1 - 0.2	0.0028	0.0027	0.0102	0.008	0.006	0.013	0.05	0.025	0.03
- CO <sub>2</sub>	kg/adt <sup>2</sup>	ND	360	330	360	470	460	450	360	310	330

1. Values according to the publication Best Available Techniques (BAT) by the Integrated Pollution Prevention and Control (IPPC) (2001) bleached hardwood Kraft pulp.

2. Air dried tonne.

## Initiatives to reduce greenhouse gas (GHG) emissions and reductions achieved (GRI EN18)

### Aracruz Unit

■ The Aracruz Unit reduced its consumption of fuel from 7,951t in 2010 to 7,523t in 2011 through operation adjustments that allowed for greater stability in the production process, complementing the energy demand with black liquor and biomass.

A reduction was also observed in the consumption of electricity from 32,722 MWh (2010) to 26,246 MWh (2011). As well as the strategy of bringing stability to the factory, we implemented in May 2011 we implemented a new bleaching line that significantly reduced the thermal and electric energy required to maintain the same level of production.

Additionally, the Unit reduced its NOx emissions in its recovery boilers and kilns through adjustments and operational improvements. The Unit's operational stability increased from 90.77% in 2010 to 93.4% in 2011.

#### Jacaré Unit

■ The Unit reduced its CO<sub>2</sub> and NOx emissions in 2011 through the reduction of consumption of non-renewable fuels auxiliary boilers. The Unit also intensified the use of renewable energy sources (biomass), and promoted a greater operating stability influencing this reduction. In relation to the SO<sub>2</sub> emissions, the reduction is mainly due to the optimization in the recovery boilers.

#### Três Lagoas Unit

■ NA

#### EMISSIONS OF OZONE-DEPLETING SUBSTANCES, BY WEIGHT (GRI EN19)

##### ARACRUZ UNIT

		Tonnes of NOx (NO and NO <sub>2</sub> )	Tonnes of SOx (SO <sub>2</sub> and SO <sub>3</sub> )
Emissions of substances that deplete the ozone layer	2009	663,000	113,990
	2010	663,509	54,302
	2011	456,582	129,188

Substances (in kg)	2009	2010	2011
141 B (SUVA)	44.5	60.0	60.0
134 A (SUVA)	340.0	1,863.4	1,564.0
R-22 (FREON)	1176.4	926.2	698.0
SUVA 404A, 407C e 410A	38.8	8.0	270.5
<b>Total</b>	<b>1,599.7</b>	<b>2,857.6</b>	<b>2,592.5</b>

##### JACARÉ UNIT

		Tonnes of NOx (NO and NO <sub>2</sub> )	Tonnes of SOx (SO <sub>2</sub> and SO <sub>3</sub> )
Emissions of substances that deplete the ozone layer	2009	882,129	388,596
	2010	1,073,522	338,046
	2011	846,712	242,492

Substances (in kg)	2009	2010	2011
141 B (SUVA)	69.4	153.0	45.0
134 A (SUVA)	6.0	11.0	5.2
R-22 (FREON)	1,532.0	1,629.0	2,089.0
SUVA 404A, 407C and 410A	—	—	—
<b>Total</b>	<b>1,607.4</b>	<b>1,793.0</b>	<b>2,139.2</b>

TRÊS LAGOAS UNIT			
		Tonnes of NOx (NO and NO <sub>2</sub> )	Tonnes of SOx (SO <sub>2</sub> and SO <sub>3</sub> )
Emissions of substances that deplete the ozone layer	2009	NA	NA
	2010	2,176,567	66,760
	2011	1,866,585	83,376

Substances (in kg)	2009	2010	2011
141 B (SUVA)	NA	NA	0
134 A (SUVA)	NA	NA	612
R-22 (FREON)	NA	NA	272
SUVA 404A, 407C e 410A	NA	NA	0
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>884</b>

#### NOx, SOx, AND OTHER SIGNIFICANT AIR EMISSIONS, BY TYPE AND WEIGHT (GRI EN20)

##### ARACRUZ UNIT<sup>1</sup>

Significant atmospheric emissions (kg)	2009	2010	2011
NOx (direct emissions)	663,000	663,409	456,582
SOx (direct emissions)	113,990	168,850	129,188
Particulate matter (PM)	706,000	523,909	438,375
Others (TRS)	6,220	6,064	23,687

1. Data are generated for atmospheric emissions requiring control in accordance with environmental license that complies with determination of the court issuing the license based on resolution and / or legislation. The Unit does not generate data for indirect emissions (NOx and SOx), persistent organic pollutants (POP), volatile organic compounds (VOC), hazardous air pollutants (HAP), chimney and fugitive emissions.

##### JACAREÍ UNIT<sup>1</sup>

Significant atmospheric emissions (kg)	2009	2010	2011
NOx (direct emissions)	882,129	1,073,522	846,712
SOx (direct emissions)	388,596	338,046	242,492
Particulate matter (PM)	10,140,750	1,376,321	1,580,313
Others (TRS)	20,893	14,736	31,559

1. Data are generated for atmospheric emissions requiring control in accordance with environmental license that complies with determination of the court issuing the license based on resolution and / or legislation. The Unit does not generate data for indirect emissions (NOx and SOx), persistent organic pollutants (POP), volatile organic compounds (VOC), hazardous air pollutants (HAP), chimney and fugitive emissions.

##### TRÊS LAGOAS UNIT<sup>1</sup>

Significant atmospheric emissions (kg)	2009	2010	2011
NOx (direct emissions)	NA	2,176,567	1,866,585
SOx (direct emissions)	NA	66,760	83,376
Particulate matter (PM)	NA	268,048	273,358
Others (TRS)	NA	57,154	68,119

1. Data are generated for atmospheric emissions requiring control in accordance with environmental license that complies with determination of the court issuing the license based on resolution and / or legislation. The Unit does not generate data for indirect emissions (NOx and SOx), persistent organic pollutants (POP), volatile organic compounds (VOC), hazardous air pollutants (HAP), chimney and fugitive emissions.

## Effluents ★

Indicators	Unit	BAT <sup>1</sup>	Aracruz Unit			Jacareí Unit			Três Lagoas Unit		
			2009	2010	2011	2009	2010	2011	2009	2010	2011
- Volume of effluents	m <sup>3</sup> /adt <sup>2</sup>	ND	30.9	30.4	29.3	18.5	18.1	19.9	29.29	27.67	25.16
- COD <sup>3</sup>	Kg/adt <sup>2</sup>	8 - 23	16.4	13.7	14.6	7.54	8.99	8.11	7.39	11.82	6.91
- BOD <sub>5</sub> <sup>4</sup>	Kg/adt <sup>2</sup>	0.3 - 1.5	1.65	1.94	2.84	0.815	0.767	0.565	1.13	1.28	0.73
- Suspended particulates	Kg/adt <sup>2</sup>	0.6 - 1.5	1.85	1.59	2.06	2.56	2.65	3.4	2.55	2.23	2.63
- Total Nitrogen	Kg/adt <sup>2</sup>	0.1 - 0.25	0.232	0.198	0.301	0.0018	0.00159	0.00075	0.08	0.13	0.09
- Total Phosphorus	Kg/adt <sup>2</sup>	0.01 - 0.03	0.038	0.049	0.071	0.028	0.024	0.013	0.89	0.09	0.07

1. Values according to the publication Best Available Techniques (BAT) by the Integrated Pollution Prevention and Control (IPPC) (2001) bleached hardwood Kraft pulp.

2. air dried tonne.

3. Chemical oxygen demand.

4. Biochemical oxygen demand.

## TOTAL WATER DISCHARGE, BY QUALITY AND DESTINATION (GRI EN21)

Unit	Destination	Treatment method	Year	Was it utilized by another organization?	Total volume discharged (m <sup>3</sup> /year)
Aracruz	Atlantic Ocean	Biological	2009	No	67,911,745
			2010		67,955,571
			2011		68,003,010
Jacareí	Paraíba do Sul River	Two-stage activated sludge	2009	No	29,213,243
			2010		25,421,226
			2011		23,509,630
Três Lagoas	Effluent discharged in the Paraná River	Activated sludge subjected to prolonged aeration	2009	Not Directly	NA
			2010		47,553,023
			2011		35,859,938

## Waste ★

Fibra has been endeavoring to utilize pulp production waste, which is transformed into products that can be used in the forestry area. Approximately 40,000 tonnes a year of dregs, grits, lime sludge and boiler ashes produced at the Aracruz Unit are used to correct the acidity of the soil in the company's eucalyptus plantations. This practice yields both environmental and economic gains, with reduced waste disposal in landfills and the substitution of purchased raw materials with reutilized waste in the forestry operations.

## TOTAL WEIGHT OF WASTE, BY TYPE AND DISPOSAL METHOD (GRI EN22)

(in t)	Aracruz Unit			Jacaré Unit			Três Lagoas Unit			Fibria Total (2011)
	2009	2010	2011	2009	2010	2011	2009	2010	2011	
Total <sup>1</sup>	626,237.10	688,844.08	687,151.31	95,255.00	140,989.00	112,639.19	NA	151,569.41	161,437.57	940,380.37
Hazardous waste generated	604.10	748.42	139.40	137.00	181.00	89.79	NA	92.94	161.19	390.38
Non-hazardous waste generated	625,633.00	688,095.66	687,011.91	95,118.00	140,808.00	112,549.40	NA	151,476.47	161,276.38	939,989.99
Hazardous waste generated, by final waste method	604.10	748.42	139.40	137.00	181.00	89.79	NA	92.94	161.19	390.38
Re-refined	189.50	195.32	23.00	44.00	38.00	29.14	NA	42.10	76.08	128.22
Reprocessed / recycled	0	0	0	54.00	69.00	15.45	NA	0	0	15.45
Co-processed	414.60	183.05	0	39.00	74.00	45.20	NA	50.84	69.80	115.00
Incinerated	0	0	0	0	0	0	NA	0	0.31	0.31
Internal industrial landfill	0	0	0	0	0	0	NA	0	0	0
External landfill	0	370.05	116.40	0	0	0	NA	0	15.00	131.40
Non-hazardous waste generated, by final waste method	625,633.00	688,095.66	687,011.91	95,118.00	140,808.00	112,549.40	NA	151,476.47	140,428.68	939,989.99
Reutilized	392,960.00	469,269.00	410,524.64	0	0	0	NA	0	0	410,524.64
Reprocessed / recycled	88,800.00	76,946.86	76,063.64	45,644.00	84,205.00	62,156.98	NA	60,491.09	61,772.68	151,422.72
Composted	18,976.00	26,267.80	77,663.36	0	0	0	NA	0	0	77,663.36
Internal industrial landfill	124,897.00	114,139.00	120,540.05	29,566.00	33,321.00	37,825.00	NA	90,736.63	78,656.00	280,156.05
External landfill	0	0	0	19,908.00	23,282.00	20,241.63	NA	0	0	18,003.00
Others <sup>2</sup>	0	1,473.00	2,220.22	0	0	0	NA	248.74	0	2,220.22

1. The method of disposal was directly determined by Fibria

2. Others: Scrap in general (metal scrap ferrous and non-ferrous, various plastic and wooden packaging)



# IDENTITY, SIZE, PROTECTED STATUS AND BIODIVERSITY VALUE OF WATER BODIES AND RELATED HABITATS SIGNIFICANTLY AFFECTED BY DISCHARGES OF WATER AND RUNOFF BY THE ORGANIZATION REPORTED (GRI EN25)

## ARACRUZ UNIT

Volume of water body (m³)	Protected area?	Value of biodiversity
Atlantic Ocean	NA	NA
Effluent 68,003,010 m³/year		

## JACAREÍ UNIT

Volume of water body (m³)	Protected area?	Value of biodiversity
Paraíba do Sul River (average flow 75 m³/s)	NA	NA
Effluent 23,509,630 m³/year (0.745 m³/s)		

## TRÊS LAGOAS UNIT

Volume of water body (m³)	Protected area?	Value of biodiversity
29 billion (the entire Paraná river watershed)	No	Not measured
Effluent 35,859,938 m³/year		

## Investments

During the year Fibria invested a total of R\$117 million in processes and equipment for the purpose of improving the eco-efficiency of its industrial operations. Another important field for Fibria's activities is socioenvironmental education for internal stakeholders (employees, contract workers and local communities). The goal of the programs is to inform, and stimulate the adoption of sound environmental practices, in regard to both professional activities and personal lifestyle choices.

## TOTAL ENVIRONMENTAL PROTECTION EXPENDITURES AND INVESTMENTS BY TYPE (GRI EN30)

(in R\$)	Aracruz Unit	Jacareí Unit	Três Lagoas Unit	Fibria
Investments	11,304,201.00	41,174,198.61	6,043,856.00	58,522,255.61
Costs	9,649,668.00	29,820,596.82	19,415,242.00	58,885,506.82
<b>Total</b>	<b>20,953,869.00</b>	<b>70,994,795.43</b>	<b>25,459,098.00</b>	<b>117,407,762.43</b>

## Climate governance (GRI EC2) ★

Climate change may affect the results of Fibria's business as it is strongly reliant on the use of natural resources. The company's business strategy addresses physical, regulatory and image risks associated with climate changes, although it still does not quantify the financial implications of climate changes on the planet.

Besides the issues involving international agreements, such as the Kyoto Protocol, the company is aware of the regulatory actions being designed at the local, state and federal levels. This includes the National Policy on Climate Changes and the State Policy on Climate Changes (PEMC), of São Paulo state.

The physical risks associated with climate changes and water availability may negatively affect environmental services, such as regional climate regulation and water availability, with direct impacts on the company activities and occasionally on its suppliers and customers. Therefore, the company has assessed its vulnerability to climate changes in light of the whole value chain and adopts the principle of precaution (GRI 4.11) to manage and operate its industrial and forest activities.

Fibria's main actions to prevent physical risks are as follows:

- control and monitoring of production
- studies for genetic improvement in the production of eucalyptus, seeking to identify the species more adaptable to different climate conditions
- monitoring of water consumption in forest areas
- mapping of areas with potential conflicts involving water
- start of monitoring of the Company's water footprint
- projects for energy efficiency and improvement of industrial process stability
- exploitation of different transportation types
- reduction and reuse of wastes
- preparation of a survey on greenhouse gas (GHG) emissions from company activities, focused on carbon footprint of pulp and CDP Supply Chain

Fibria also assesses the opportunities to generate carbon credits in the financial market, but the current uncertainty of markets has rendered difficult to make projects feasible. This scenario prompted the company to monitor the issues being debated internationally under the United Nations Framework Convention on Climate Change (UNFCCC). In 2011, together with other 184 global companies, Fibria participated as an observer in the Conference of the Parties in Durban (COP-17), South Africa, and signed the Communiqué of Durban ([www.2degreecommunique.com](http://www.2degreecommunique.com)), a document laying out the necessary actions by governments and corporations to restrict the increase in temperatures on the planet to 2°C.

A global carbon credit market would benefit Fibria, whose forest plantations at industrial scale allow reaching a positive balance of carbon with the expansion of forests and accumulation of organic matter in the soil.

The company is also a party to international initiatives of environmental management targeting the reduction of risks and impacts of climate changes and control over human actions which may lead to climate changes on the planet:

**Carbon Efficient Index (ICO2)** – Fibria was the first forest company to become a member of the Carbon Efficient Index (ICO2), launched in 2010 by the BM&FBovespa and by the Brazil's National Bank for Economic and Social Development (BNDES). The second edition of the index in 2011 comprised a portfolio of 36 companies listed on IBr-X 50,



which brings together the 50 companies leading trades on the São Paulo Stock Exchange. The ICO2 aims to strengthen the companies' commitment to environmental management practices targeting climate changes and prepare the market for a low carbon economy.

**CDP Investors** – Please refer to chapter “Management and strategies” > “Sustainability” > “Main commitments undertaken”.

**CDP Supply Chain** – Please refer to chapter “Management and strategies” > “Sustainability” > “Main commitments undertaken”.

**Water Footprint Network** – Please refer to chapter “Management and strategies” > “Sustainability” > “Main commitments undertaken”.

**Forest Footprint Disclosure** – Please refer to chapter “Management and strategies” > “Sustainability” > “Main commitments undertaken”.

### Carbon Footprint ★

In 2011, Fibria completed its third GHG inventory based on January to December 2010 data. This inventory took into consideration the industrial and forest operations of Aracruz (ES), Três Lagoas (MS) and Jacaré (SP) Units, as well as pulp export logistic operations for the three Units.

The inventory found a positive balance of emissions with 1.8 tonnes of CO<sub>2</sub> equivalent, captured for every tonne of pulp produced. Also a 25% drop was reported on carbon gas in relation to the previous survey, mainly as a result of removing the Gualba (RS) Unit from the inventory. The company was awarded a Carbon Footprint certificate by BRTÜV, the Brazilian subsidiary of German company TÜV Nord.

Fibria's GHG emissions inventory in 2010 was carried out in view of various calculation protocols, including the GHG Protocol of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), adapted by the International Council of Forest and Paper Associations (ICFPA) for the pulp and paper industry.

This inventory was carried out in view of the following documents prepared by the WRI, together with the WBCSD:

- The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard – revised edition;
- Calculation Tools for Estimating Greenhouse Gas Emissions from Pulp and Paper Plants of the ICFPA Climate Changes Working Group, version 1.3;
- Calculation Tools for Estimating Greenhouse Gas Emissions from Mobile Combustion, version 1.2;
- CO<sub>2</sub> Emissions from Business Travel, version 2.0.

Fibria reports the direct emissions from industrial and forestry operations (Scope 1 – emission sources owned or controlled by the organization), the import of energy (Scope 2 – emissions generated by the production of electricity consumed in the forestry and industrial operations of the company), and other sources attributable to the company, such as transport vehicles within the fleet itself or not operationally controlled by the company (Scope 3 – emissions sources that are not owned or controlled by the organization), used for the export of products and business travel. Fibria considered the capture of carbon equivalent provided by eucalyptus plantations and native reserves.

SUMMARY TABLE – CARBON FOOTPRINT 2011

Business Units			Jacarei	Aracruz	Três Lagoas	Fibria 2010	Fibria 2009	Fibria 2008
Production		ADT/y	1.076.888	2.252.758	1.181.840	4.511.486	4.518.820	3.638.545
Emissions Forestry (Operations + Transportation)	Fossil Fuel	tCO <sub>2</sub> eq	79,453	179,155	46,595	305,204	253,160	224,075
	Fertilizers	tCO <sub>2</sub> eq	14,175	6,833	14,073	35,080	45,076	94,234
	Electricity	tCO <sub>2</sub> eq	50	224	53	327	28	39
	Total Forestry	tCO <sub>2</sub> eq	93,679	186,212	60,721	340,611	298,265	318,348
	Share	%	28%	55%	18%	82%	100%	1
	Specific Emission	tCO <sub>2</sub> eq/ADT	0.09	0.08	0.05	0.08	0.07	0.09
	Specific Emission (2009)	tCO <sub>2</sub> eq/ADT	0.06	0.07	0.05	—	—	—
Emissions Industrial (BEKP)	Stationary Combustion*	tCO <sub>2</sub> eq	302,253	234,227	167,136	703,616	1,116,606	947,137
	Waste Management	tCO <sub>2</sub> eq	5,037	32,323	0	37,360	74,671	110,433
	Internal Transportation	tCO <sub>2</sub> eq	2,152	3,933	1,784	7,870	6,701	3,329
	Imported Electricity	tCO <sub>2</sub> eq	8,050	1,675	381	10,106	7,192	10,547
	Total Industrial	tCO <sub>2</sub> eq	317,492	272,159	169,301	758,952	1,205,170	1,074,606
	Share	%	42%	36%	22%	78%	100%	1
	Specific Emission	tCO <sub>2</sub> eq/ADT	0.29	0.12	0.14	0.17	0.27	0.30
Specific Emission (2009)	tCO <sub>2</sub> eq/ADT	0.29	0.16	0.16	—	—	—	
Emissions Logistics (BEKP)	Road Transportation	tCO <sub>2</sub> eq	2,034	411	26,586	29,031	29,675	3,730
	Rail Transportation	tCO <sub>2</sub> eq	3,541	0	14,141	17,682	11,564	2,133
	Shipments	tCO <sub>2</sub> eq	87,014	285,245	106,165	478,424	584,533	402,057
	Total Logistics	tCO <sub>2</sub> eq	92,589	285,656	146,892	525,138	627,147	409,293
	Share	%	18%	54%	28%	100%	100%	1
	Specific Emission	tCO <sub>2</sub> eq/ADT	0.09	0.13	0.12	0.12	0.14	0.11
	Specific Emission (2009)	tCO <sub>2</sub> eq/ADT	0.12	0.14	0.16	—	—	—
Emissions Operations	Share	%	31%	46%	24%	100%	100%	100%
	Total Emissions	tCO <sub>2</sub> eq	503,760	744,027	376,914	1,600,856	2,130,582	1,802,248
	Specific Emissions	tCO <sub>2</sub> eq/ADT	0.47	0.33	0.32	0.35	0.47	0.50
	Specific Emission (2009)	tCO <sub>2</sub> eq/ADT	0.47	0.36	0.36	—	—	—
Forestry CO <sub>2</sub> Sequestration (Base CAI including conservation areas)	Eucalyptus Forest	tCO <sub>2</sub> eq	4,107,649	9,369,476	6,784,508	20,261,632	24,985,243	15,867,205
	Conservation Areas**	tCO <sub>2</sub> eq	399,927	471,611	178,408	1,049,946	1,049,946	0
	Share	%	21%	46%	33%	100%	100%	100%
	Specific Sequestration	tCO <sub>2</sub> eq/ADT	4.19	4.37	5.89	4.72	5.76	4.36
	Specific Sequestration (2009)	tCO <sub>2</sub> eq/ADT	4.30	4.27	8.10	—	—	—
Biomass	Biomass Emissions	tCO <sub>2</sub> eq	2,294,649	6,014,198	2,763,621	11,072,468	9,060,139	7,388,444
	Share	%	21%	54%	25%	100%	100%	100%
	Specific Emission (2009)	tCO <sub>2</sub> eq/ADT	24.49	32.30	45.51	32.51	30.38	4.36
	Specific Emission	tCO <sub>2</sub> eq/ADT	29.13	35.34	38.23	—	—	—
Balance	Total Reduction	tCO <sub>2</sub> eq	1,509,203	2,847,056	3,733,177	8,113,282	14,319,495	14,064,958
	Total Reduction (2009)	tCO <sub>2</sub> eq	1,942,502	3,298,441	4,620,933	—	—	—
	Balance (Sequestration – Emissions)	tCO <sub>2</sub> eq/ADT	1.40	1.26	3.16	1.80	3.17	3.87
	Balance (Sequestration – Emissions) (2009)	tCO <sub>2</sub> eq/ADT	1.82	1.50	5.73	—	—	—
	Ratio Sequestration / Emission	n	4:1	5:1	11:1	6:1	8:1	9:1
	Ratio Sequestration / Emission	n	5:1	5:1	17:1	—	—	—

The main results of the GHG inventory for 2011 based on 2010 are summarized below:

- Forest and industrial operations and logistics issued 1,600,856 tonnes of carbon equivalent (t/CO<sub>2</sub>eq);
- The forest plantations and native reserves captured 21,311,578 t/CO<sub>2</sub>eq, of which 20,261,632 t/CO<sub>2</sub>eq were captured in eucalyptus plantations and 1,049,946 t/CO<sub>2</sub>eq in conservation areas;
- The balance between CO<sub>2</sub> emissions and sequestration, discounting emissions from combustion of biomass and the capturing of 50% of conservation areas, was 19,185,750 t/CO<sub>2</sub>eq. Also considering emissions from biomass burning (11,072,468 t/CO<sub>2</sub>eq), the net reduction was 8,113,282 t/CO<sub>2</sub>eq, showing that for every tonne of pulp produced 1.8 t/CO<sub>2</sub>eq were captured.

Figure 1  
Origin of direct emissions of GHG

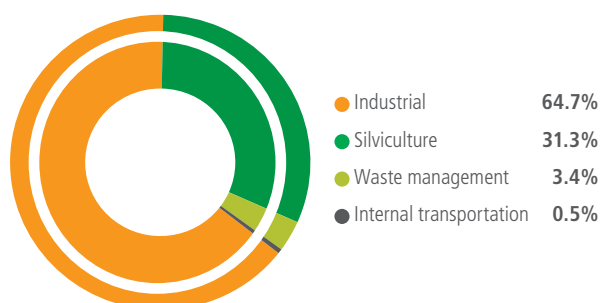


Figure 2  
Emissions of GHG from forest activities

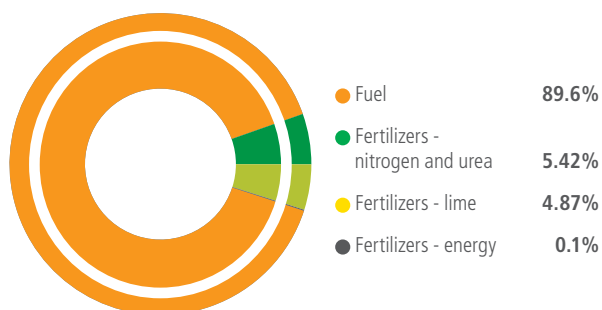


Figure 1 shows that the direct emissions from industrial sources, including waste management, account for more than 65% of the total.

Figure 2 shows that the emissions generated by the consumption of fuel are responsible for approximately 90% of the total forest emissions.

Figure 3  
Indirect emissions of GHG from transport

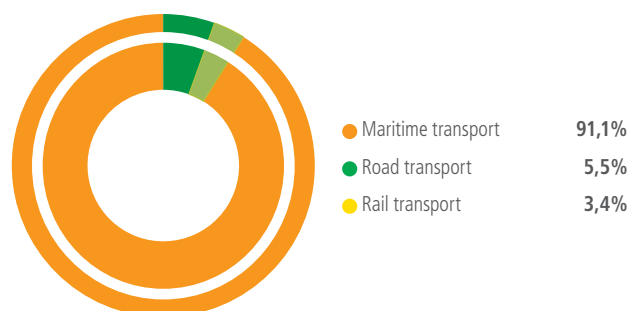


Figure 3 shows that maritime transport is responsible for over 90% of total logistics emissions.

TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS BY WEIGHT (AND SIGNIFICANT INDIRECT GREENHOUSE GAS EMISSIONS) (GRI EN16 AND EN17)

FIBRIA PERFORMANCE

	Unit	2008	2009	2010	% 2008/2009	% 2009/2010
Direct emissions – scope 1 <sup>1</sup>	Aracruz	532,050	493,328	456,471	-7%	-7%
	Jacareí	377,355	372,557	394,869	-1%	6%
	Três Lagoas	0	166,369	213,945	100%	29%
	Guaíba <sup>2</sup>	425,821	463,961	0	9%	-100%
	<b>Fibria</b>	<b>1,335,225</b>	<b>1,496,215</b>	<b>1,065,285</b>	<b>12%</b>	<b>-29%</b>
Indirect emissions – scope 2 <sup>1</sup>	Aracruz	2,027	890	1,900	-56%	113%
	Jacareí	3,184	3,953	8,100	24%	105%
	Três Lagoas	0	162	434	100%	167%
	Guaíba <sup>2</sup>	5,376	2,215	0	-59%	-100%
	<b>Fibria</b>	<b>10,587</b>	<b>7,220</b>	<b>10,434</b>	<b>-32%</b>	<b>45%</b>
Indirect emissions – scope 3 <sup>1</sup>	Aracruz	200,063	306,649	285,656	53%	-7%
	Jacareí	123,167	125,869	92,589	2%	-26%
	Três Lagoas	0	127,622	146,892	100%	15%
	Guaíba <sup>2</sup>	86,063	67,007	0	-22%	-100%
	<b>Fibria</b>	<b>409,293</b>	<b>627,147</b>	<b>525,138</b>	<b>53%</b>	<b>-16%</b>
Biomass	Aracruz	4,581,464	5,077,183	6,014,198	11%	18%
	Jacareí	2,039,263	1,959,126	2,294,649	-4%	17%
	Três Lagoas	0	1,529,531	2,763,621	100%	81%
	Guaíba <sup>2</sup>	767,717	494,299	0	-36%	-100%
	<b>Fibria</b>	<b>7,388,444</b>	<b>9,060,139</b>	<b>11,072,468</b>	<b>23%</b>	<b>22%</b>
Total	Aracruz	734,139	800,867	744,027	9%	-7%
	Jacareí	503,706	502,378	495,559	0%	-1%
	Três Lagoas	0	294,153	361,271	100%	23%
	Guaíba <sup>2</sup>	517,260	533,183	0	3%	-100%
	<b>Fibria*(ADJ)</b>	<b>1,237,845</b>	<b>1,597,399</b>	<b>1,600,856</b>	<b>29%</b>	<b>0.22%</b>
	<b>Fibria</b>	<b>1,755,105</b>	<b>2,130,582</b>	<b>1,600,856</b>	<b>21%</b>	<b>-25%</b>

1. Fibria reports the direct emissions from industrial and forestry operations (Scope 1 – emission sources owned or controlled by the organization), the import of energy (Scope 2 – emissions generated by the production of electricity consumed in the forestry and industrial operations of the company), and other sources attributable to the company, such as transport vehicles within the fleet itself or not operationally controlled by the company (Scope 3 – emissions sources that are not owned or controlled by the organization), used for the export of products and business travel. Fibria considered the capture of carbon equivalent provided by eucalyptus plantations and native reserves.

2. The Guaíba Unit was sold in 2009.



## Financial-economic performance

### Market context

2011 was characterized by high volatility in Europe and reduced global commodity demand. The market pulp industry had two distinct phases. During the first half of the year, the global demand for market pulp increased by 7.7%, mostly due to strong demand from China, which reached a record 6.3 million tonnes. The European list price of hardwood pulp (FOEX<sup>1</sup>) showed an upward trend, rising from US\$849/t in January to US\$874/t in June, above the average of US\$600/t (from 1998 and 2011). Beginning in July, the European crisis and its effects on the global economy had a negative impact on demand for pulp, increasing the producers' inventories to 38 days (above the 33-day average), resulting in successive price reductions – by December, the European FOEX reached US\$648/t. In this scenario, several producers announced reduced production schedules in 4Q11, thus establishing a floor for price decreases.

1. FOEX Indexes Ltd. is a private company located in Helsinki, Finland, that provides weekly price indexes for the main types of pulp and paper.

### Performance analysis

The following Performance Analysis of the 2011 fiscal year considers the operating results of the Piracicaba Unit until September of that year, when this asset was sold to Oji Paper Co., Ltd. For the fiscal year ended in 2010, the results of the Piracicaba Unit were included in full. For the 2010 and 2011 fiscal years, information regarding the CONPACEL and KSR operations was reclassified in the Income Statement under "Discontinued Operations" as per IFRS.

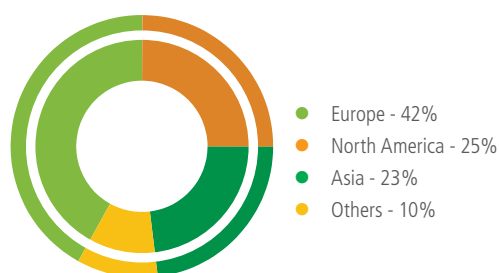
In 2011, Fibria's pulp production totaled 5.184 million tonnes from its 4 production Units and 93 thousand tonnes of paper from its former paper mill (Piracicaba), sold in September of 2011. Pulp production increased by 3% in 2010 due to productivity gains and increased operating stability at plants.

This efficiency allowed us to reach record annual production at the Aracruz, Três Lagoas and Jacaré Units. The 19% decline in paper production reflects the sale of the Piracicaba Unit that concluded Fibria's strategic repositioning to focus exclusively on the pulp business.

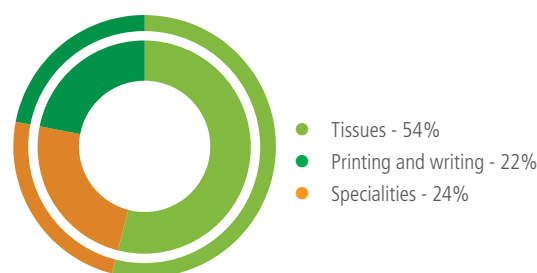


The volume of pulp sales in 2011 reached 5.141 million tonnes, 5% higher than in the previous year, mainly due to higher demand from Europe and North America in the first half of the year, and strong demand from Asia, mostly in the second half of 2011. The end use for Fibria's pulp is mainly for high quality tissue paper and specialty papers, representing 76% of the total pulp volume sold. These two markets are the most resilient to economic crisis and have the highest growth projections according to Pulp and Paper Products Council (PPPC).

2011 Sales distribution by region



2011 End use



The volume of paper sales totaled 100,000 tonnes, down 17% compared to 2010 due to the sale of the Piracicaba Unit in September of 2011.

Fibria's net operating revenue totaled R\$5,854 million in 2011, down 7% over 2010. This result was due in part to the 9.6% decrease in the average net pulp price and also the absence of income from the paper operation – the Piracicaba Unit – in the last quarter of the year as the sale of this Unit was concluded in September.

The cost of goods sold totaled R\$5,124 million, up 9% over 2010, mainly affected by the (i) increased depreciation, amortization and exhaustion, (ii) the higher sales volume and (iii) the increased production cash cost for the year.

Administrative expenses held stable at R\$310 million. This result is due to cost control initiatives implemented throughout the year that offset the collective pay raise and expenses with indemnifications in the second half.

Sales expenses totaled R\$295 million, up 5% over the previous year, mostly due to the increased sales volume in the period (5%).

Pro-forma EBITDA was R\$1,964 million with margin at 34%. EBITDA in the period was 22% lower than the R\$2,526 million registered in 2010 (40% margin), mostly due to the 9.6% lower average net pulp price in reais and the lower average exchange rate in the period (2011: R\$1.6746 | 2010: R\$1.7608) that offset the higher sales volume in the year.

Financial income totaled R\$1,869 million expense, compared to the R\$364 million expense in 2010. This difference is chiefly due to the accounting effect of the dollar's 12.6% appreciation against the real in the year on the conversion of the Company's dollar-denominated debt into reais, which is 92% of the total.

As a result, the accounting loss registered in 2011 was R\$868 million, compared to the R\$603 million profit in the previous year.

## Strategy

The sale of Fibria's paper assets, CONPACEL, KSR and the Piracicaba Unit, was an important event in 2011: this allowed the company to execute its strategy of repositioning itself in the pulp business and helped improve Fibria's capital structure. In the same year, in line with our expansion goals, the company received the installation license for the Três Lagoas II Project while we continued developing our forestry areas to be ready to expand this Unit at the opportune moment.

Fibria consolidates itself as a global leader in the pulp industry, with quality, sustainable products that meet the needs of increasingly demanding clients and consumers.

## CAPEX

In 2011, Fibria's capital expenditures reached R\$1,240 million and were allocated as follows:

CAPEX (R\$ million)	
Industrial Expansion	26
Forest Expansion	128
<b>Expansion Subtotal</b>	<b>154</b>
Safety / Environment	62
Forest Renewal	624
Maintenance / IT / R&D / Modernization	310
<b>Maintenance Subtotal</b>	<b>996</b>
50% Veracel	90
<b>Total CAPEX</b>	<b>1,240</b>

For 2012, the company's management approved a capital budget at approximately R\$1 billion, mostly allocated to operation maintenance.

## Debt management

Debt management is still one of Fibria's top priorities. Thus, during 2011, the company completed the sale of non-strategic assets, with the CONPACEL and KSR sales concluded at R\$1.5 billion and the Piracicaba Unit, at US\$313 million. The proceeds from these operations were used for reducing gross debt and reinforcing liquidity. The company issued the Fibria 2021 Bond in the amount of US\$750 million. With these 10-year bonds paying a semiannual coupon of 6.75% p.a., Fibria extended its debt profile and was able to close the year with an average debt maturity of 73 months. In addition, the company settled the debt with former Aracruz shareholders, making the final payments of R\$856 million and R\$626 million in January and July, respectively.

These initiatives allowed Fibria to close 2011 with a solid financial position. The company's cash position, net of marked-to-market hedge instruments, totaled R\$1,846 million, equal to 1.6x the debt maturing in 2012. Net debt totaled R\$9,478 million, down 3% over 2010. It should be noted that the dollar's 12.6% appreciation against the real in 2011 significantly increased almost all – 92% – of the company's debt upon conversion from dollars to reais. Given the deterioration of the global macroeconomic scenario, the company preventively renegotiated its covenants with its creditors to increase the maximum leverage limits for the periods ending December 31, 2011 and March 31 and June 30, 2012. The renegotiation was concluded satisfactorily in an environment of reciprocity and without a waiver fee. The impact of the dollar's appreciation on dollar-denominated debt and the reduced EBITDA for the period, brought net debt/EBITDA up to 3.6x in 2010 to 4.8x in 2011.

Continuing with the debt reduction target, Fibria has worked toward increasing liquidity events, with the sale of the Losango forest assets and other non-strategic assets.

## Dividends

The company's bylaws guarantee a minimum dividend of 25% of net income after constitution of legal reserves, as provided by Brazilian corporate law. No dividends were proposed for the fiscal year ended December 31, 2011 due to losses for the year.

## Capital market

Fibria's stock listed on the BM&FBovespa's Novo Mercado under ticker code FIBR3 closed the year at R\$13.87. On the New York Stock Exchange (NYSE), the Level III ADRs traded under the ticker symbol FBR were quoted at US\$7.77. The average daily trade volume on the BM&FBOVESPA and the NYSE was 3.2 million, with a financial volume of US\$36.7 million.

Free float	467.934.646 common shares
American Depositary Receipts (ADRs)	1 ADR = 1 common share
Market value on December 31, 2011	R\$ 6.5 billion

Fibria's shares are part of the theoretical portfolio of the Bovespa Index, with a 0.82% share in the index. In addition, Fibria was also selected for the BM&FBOVESPA's Corporate Sustainability Index (ISE) for the third consecutive year and is the only company in the pulp business to be included in the Dow Jones Sustainability Index (DJSI World). Fibria was also selected for inclusion in the BM&FBOVESPA's Carbon Efficient Index (ICO<sub>2</sub>).

## Synergies

Best practices are already widely disseminated in Fibria's culture. By the end of 2011, accumulated synergy gains totaled approximately R\$4.5 billion at net present value, two years ahead of schedule. This result was achieved by adapting structures, simplifying procedures and improving operating performance. This generated important gains such as increased production and reduced costs with the implementation of the new management model that consolidates the best practices of the two former companies. For 2012, the company believes there are more opportunities for generating value through synergies, as some initiatives have not yet matured, especially in the operating and research areas.

## Relationship with independent auditors

The company's policy regarding contracting services unrelated to external auditing with our independent auditors is based on the principles of preserving the auditor's independence. These internationally recognized principles state that (a) the auditor should not audit their own work; (b) the auditor should not exercise management functions for their client; and (c) the auditor should not promote the interests of their client.

## Public financing (GRI EC4)

During the last two years, Fibria has obtained public financing for some of its expansion projects. Contracts were signed with institutions linked to the Brazilian government and those of other countries and the profile at the end of 2011 was as follows:

- **BNDES (2011)** – two credit contracts: one with a limit of R\$303 million, to finance forestry projects during the period 2008 to 2011, and the other for up to R\$1.7 billion, to finance forestry projects and other investments during the period 2012 to 2015. As of December 31, 2011, the outstanding balance on contracts with the BNDES in force since 2005 was R\$1.78 billion (principal + short-term interest), of which R\$1,51 billion is indexed to the TJLP (Long Term Interest Rate), R\$ 269 million to a basket of currencies and R\$ 10 million through Finame (BNDES Exim), by means of on-lending.
- **FINNVERA (Finnish Export Credit Agency) (September 2009)** – a loan to cover the partial financing of the first fiberline at the Três Lagoas Unit (Mato Grosso do Sul state), with final maturity in 2018. As of December 31, 2011, the outstanding balance on this facility was R\$260 million.
- **FCO (Constitutional Fund for Financing the Brazilian Mid-West) (December 2009)** – a Grant for the purchasing of components and spare parts for the lime kiln and causticizing and bleaching equipment at the Três Lagoas Unit (Mato Grosso do Sul state). With final maturity in 2017, the outstanding balance on the contract was R\$68 million on December 31, 2011.
- **FINEP (Funding Agency for Studies and Projects) (April 2011)** – a subsidy for the "Tailor-made pulp" project. The outstanding balance on December 31, 2011 was R\$2 million, with final maturity in September 2019.
- **European Investment Bank (EIB) (2001)** – a loan for the partial financing of the Veracel mill, with final maturity in 2012. As of December 31, 2011, the outstanding balance was R\$800,000.

Since Fibria is essentially an exporter, the company was able to obtain a tax benefit in 2011 from the Receita Federal (Brazilian IRS), which involved the suspension of the PIS/COFINS taxes (9.25%) on the acquisition of inputs, intermediate materials, packaging and the respective shipping charges, as well as on fixed asset acquisitions.



## Portocel

Just 4.3 kilometers from the Aracruz Unit's mill in Barra do Riacho (ES), the Portocel specialized private terminal belonging to Fibria (51%) and CENIBRA handles roughly 70% of Brazil's pulp exports. In 2011, 5.8 million tonnes of pulp were channeled for export through the port, which on September 14th set a new handling record by loading 52,000 tonnes of cargo onto a single vessel.

Portocel, which is used not only by Fibria and CENIBRA, but by other companies in the industry, has three berths, with a draft of 11.2 meters, allowing it to receive ships of up to 70,000 tonnes. Some of the wood from Fibria's Forest Units in Espírito Santo and Bahia is delivered to Portocel by sea, which is cheaper and has less environmental impact than transporting it by road or rail. The volume of eucalyptus transported by barge to Portocel during 2011 amounted to 1.99 million tonnes, 15,000 tonnes more than in 2010.

Since its operational start-up, in 1978, Portocel has exported nearly 66 million tonnes of pulp.

### Diversification

Bales of pulp always dominate the landscape around the Portocel storage area. It is, after all, a port specializing in pulp shipments. But appearance of other types of cargo in the storage areas is an increasingly common occurrence. This is because Portocel has increased its handling of other cargoes, notably steel products (wire rod), logs, salt and even aluminum. The handling of other cargoes had been important in generating extra revenue for the port, telling us that, "It has made it possible to make investments leading to improved working conditions". He also added that the increased cargo volume is good for the workforce, providing them with more work opportunities.

**Expansion Project** – Portocel has a project to build a new terminal (Portocel II), an increase of the current draft and number of berths to meet the demand for shipment of pulp and other cargoes, including containers. After licensing, the forecast is for three years of construction, with an investment of approximately R\$243,879,000.00, generating 850 direct jobs during construction and 863 during operation, and approximately 7,940 indirect workers at the end project. The project received a Preliminary Permit from the State Institute of Environment and Water Resources (IEMA-ES), according to the Environmental Impact Assessment Study (RIMA) and Minutes of the Public Hearing available at the agency's website ([www.meioambiente.es.gov.br](http://www.meioambiente.es.gov.br)). The Environmental Impact Assessment Study describes potential environmental and social impacts and initiatives that both mitigate – preventative, corrective and compensatory – and optimize the impacts. Originally scheduled to start work in 2010, the shareholders (Fibria and CENIBRA) await favorable market conditions to define the implementation of the project.



# Independent assurance



## INDEPENDENT ASSURANCE STATEMENT – BUREAU VERITAS CERTIFICATION

### Introduction

Bureau Veritas Certification Brazil (Bureau Veritas) was hired by Fibria Celulose S.A. (Fibria) to conduct an independent assessment of its Sustainability Report (hereinafter referred to as the Report), encompassing assessment of the content, quality and limitations of same, with regard to the year 2011. The information published in the report is the sole responsibility of Fibria's management. Our responsibility was limited to the independent verification, in accordance with the scope of the work defined below.

### Scope of the work

Fibria asked Bureau Veritas Certification to include the following within the scope of its assessment:

- data and information included in the 2011 Report;
- adequacy and reliability of the systems and underlying processes used to collect, review and compile the reported information;
- assessment of the Report in accordance with the principles of materiality, stakeholder inclusiveness, sustainability context, completeness, balance, comparability, accuracy, timeliness, clarity and reliability, as defined in the Global Reporting Initiative™ GRI G3.1 guidelines (2011) for sustainability reports.

Excluded from the scope of this work was any assessment of information relating to:

- activities outside the defined assessment period;
- statements of position (expressions of opinion, beliefs, goals or future intentions) on the part of Fibria, as well as statements of future commitments;
- economic and financial information contained in this report that has been taken from financial statements that have been verified externally by independent auditors.

### Methodology

Our work was carried out in accordance with the Bureau Veritas protocol for the Independent Assessment of Sustainability Reports, based on current best practices<sup>1</sup> and covering the following activities:

1. interviews with people (responsible for the process) involved in the preparation of the Report;
2. analysis of documentary evidence provided by Fibria in relation to the reporting period (2011);
3. verification of information and performance data relating to the principles that ensure the quality of the report, pursuant to the GRI G3.1;

1. The Bureau Veritas independent assessment protocol is based on the ISAE 3000 International Standard on Assurance Engagements and the GRI G3.1 guidelines for Sustainability Reports.

4. visits to the Aracruz (Espírito Santo state), Jacaré (São Paulo state), Três Lagoas (Mato Grosso do Sul state) Units and the Central Administration office in São Paulo (São Paulo state);
5. analysis of Fibria's stakeholder engagement activities;
6. evaluation of the method used to determine the material issues included in the Report, taking into consideration the sustainability context and the completeness of the information published.

The activities were planned and carried out with a view to providing a reasonable assessment, rather than an absolute assessment, as an acceptable basis for our conclusions.

Considering the principle of the Sustainability Context and the performance demonstrated by the company, in relation to its goals and short and long term targets, in addition to issues relating to the published Report's faithfulness to the GRI guidelines, our report also addressed matters relating to the company's management.

## Technical report

- The Report has evolved compared to that of the previous cycle, with regard to the presentation of the goals and targets in relation to the topics of the Materiality Matrix and of the long-term targets. This provides the reader with higher quality information regarding Fibria's sustainability strategy.
- During the course of our verification, certain inconsistencies were found and classified as follows: six relating to the principle of clarity, five relating to the rendering of accounts, five relating to the principle of balance, and six relating to the principle of reliability;
- The inconsistencies relate to nine indicators, as follows: EN9 (additional – Water sources significantly affected by withdrawal of water), EN12 (core – Description of significant impacts on biodiversity), EN20 (core – Other significant atmospheric emissions), EN22 (core – Total weight of waste), EN27 (core – Reclaimed products and packaging), SO9 (core – Operations with significant potential or actual negative impacts on local communities), LA7 (core – Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities), LA8 (core – Education training, counseling, prevention, and risk-control programs) and PR1 (core – Life cycles stages in which health and safety impacts of products and services).
- All the inconsistencies that were found were corrected over the course of the assessment process, such that the information and data presented in the Report were considered to be precise, free of significant errors or false statements, accessible and understandable to the various stakeholder groups.
- The assessment process identified six opportunities for improvements, and details of these are shown further ahead in this report.
- Most of the published indicators were presented for a period of three years, which had not been possible previously, due to the newness of the company. Hence, the Report complies with the principle of comparability.
- The internal mechanisms for collecting, analyzing and compiling the information to be published and the control over important documents and their traceability can be considered reliable. Significant improvements have been made in data collection that have enabled Fibria to meet in full all the core GRI G3.1 indicators.
- The Materiality Matrix used in 2009 to guide the topics developed in the Report was used as a basis for the 2011 Report. Fibria understands that the topics identified at that time continue to be the most significant.
- Fibria has demonstrated that significant topics identified by means of the Materiality Matrix are internalized and handled through the risk management process, since many of these topics, identified during engagement with stakeholders, were considered equally vital to the mapping of risks carried out in 2010.
- The six long term sustainability targets were published, thereby clearly demonstrating the strategic focus up to 2025.
- Fibria's self-assessment, pursuant to the GRI G3.1 guidelines, as demonstrated in the Report's Content Index, was confirmed by us, earning the company an A+ application level.

## Recommendations for the next Report

- The information regarding water availability, in quantitative and qualitative terms, still does not allow the reader to draw any conclusions as to the true impact of the forests planted by Fibria on local water resources. We found information in the publication about



technical studies, which should be continued and the results presented, in order to provide conclusive evidence on the issue.

■ The publication of information about new channels of communication with stakeholders, set up by Fibria in 2011, generates considerable interest regarding the practical results of this engagement with local stakeholders. A rendering of accounts for these new processes will be fundamental to meeting the principle of clarity in the next publication.

### Recommendations regarding the sustainability context

■ In regard to the policy of giving priority in spending to local suppliers, Fibria should adopt a clear definition as to what is understood by local suppliers. The purpose of the EC6 economic indicator is to show the participation of the reporting organization in boosting the local economy, through a consistent hiring policy. In the context of Fibria, which is active in regions with distinct characteristics, from the socioeconomic perspective, a suitable definition of the concept of local supplier is essential to understanding its contribution to the local socioeconomic scenario.

■ With regard to the local water resources, the company should give priority to ascertaining the water balance of the Riacho river basin and the Caboclo Bernardo Canal (municipality of Aracruz, in Espírito Santo state), which will provide a reliable technical basis for learning the contributions of each body of water to the total water volume drawn off by the Aracruz Industrial Unit.

■ Greater emphasis should be given to meeting the short-term sustainability goals and targets, given the partial failure to meet approximately 50% of the defined targets and total failure to meet 13% of them.

■ Fibria could make an effort to develop a policy on the hiring of local labor, since many of its operational Units are located in areas that are lacking in job opportunities.

### Declaration of independence and impartiality

Bureau Veritas Certification is an independent professional services firm specializing in quality, health, safety, social and environmental management, with almost 180 years' experience in independent assessment.

No member of the assessment team has any commercial links with Fibria. We performed this assessment independently and understand that there was no conflict of interest.

Bureau Veritas has implemented a Code of Ethics throughout its business, in order to preserve high ethical standards among its staff in the performing of their activities.

At the end of the assessment, a detailed report was drawn up, showing all the topics verified, any irregularities found, corrective action taken and opportunities for improvements. This report ensures the traceability of the process and is kept as a Bureau Veritas management system record.

### Contact

Bureau Veritas Certification is available for further clarification, by means of the website [www.bureauveritascertification.com.br/faleconosco.asp](http://www.bureauveritascertification.com.br/faleconosco.asp) or by telephone (55 11) 5070-9800.

São Paulo, March 2012.

Alexander Vervuurt

Lead Auditor; Assurance Sustainability Reports (ASR)

Bureau Veritas Certification – Brazil

## Awards and Recognitions in 2011

- Fibria – Selected for the third consecutive time as part of the Dow Jones Sustainability Index (DJSI World) of the New York Stock Exchange, now as the only representative of the forest industry
- Carlos Aguiar, former CEO of Fibria – Nominated for Business Leader Award 2011, by TV Vitória (ES), in the Leader of the Year, Leader Largest Company and Sustainable Leader categories
- Ergílio Cláudio-da-Silva Jr., general manager of Technology Fibria – appointed TAPPI Fellow for his technical contributions to the pulp industry, by TAPPI, the international organization that brings together industry professionals
- Fibria – Voted one of the five best companies in terms of Social and Environmental Sustainability, in a survey conducted by *IR Magazine* and the Brazilian Institute of Investor Relations (IBRI) among 500 stock market professionals in Brazil
- Lícia Cantarella, Fibria Community Relations Consultant – Awarded Social Leader Prize 2010 by Votorantim Institute, for Caravelas Entrepreneurial project
- José Luciano Penido, Chairman of the Board of Fibria – Honored by the conservation organization The Nature Conservancy (TNC), by the Ethos Institute and by the Institute for Ecological Research (IPE), for his contribution to the Brazilian environmental agenda for discussion about the revision of the Forest Code
- Fibria's Center for Environmental Education (NEA) in Santa Branca (SP) – Honored by the city of Paraibuna (SP) for participation in the ECODia project
- Fibria's Center for Environmental Education (NEA) in Jacareí (SP) – Honored by the City Council for the Ecoagentes Mirins (Young Ecoagents) project
- Fibria – Highlight of the Pulp and Paper Industry 2011 by the Brazilian Pulp and Paper Technical Association (ABTCP), in the Forest Development and Market Pulp Manufacturer categories
- Fibria – Distinguished with the Resocialization at Work seal of recognition, awarded by the Department of Justice of the state of Espírito Santo, awarded to companies that offer job opportunities to prison inmates or former prisoners
- Fibria – Honoree in the 96<sup>th</sup> anniversary parade of the city of Três Lagoas (MS) by the Flausina de Assunção Marinho and Maria de Lourdes Lopes municipal schools, with the theme of industrialization
- Carlos Aguiar, former CEO of Fibria – Chosen Latin American CEO of the Year by RISI, the international agency for information about the forestry industry
- Fibria Posto da Mata Forestry Office (BA) – QualiAR Prize 2011, the Federation of Transport Companies of Espírito Santo (FETRANSPORTES), for the performance of its fleet in the measurement of pollutants as part of the Clean Up Environmental Transportation Program
- Fibria – Chosen as one of the five favorite companies by Espírito Santo students, according to the survey "Espírito Santo Dream Companies", selected by Pius XII College, Cariacica (ES)

- Fibria – Subject of a congratulatory motion from the City Councilmen of Jacareí (SP), for installing an air quality monitoring station in the city
- Fibria – Voted one of 21 model companies in sustainability by *Exame's Sustainability Guide 2011*
- Fibria 2010 Sustainability Report – 6<sup>th</sup> place in the Brazilian Association of Public Companies' (ABRASCA) 13<sup>th</sup> Annual Ranking of the best sustainability report. Category: publicly traded company with annual net revenues equal to or over R\$2 billion
- Fibria's Investor Relations (IR) Program – Featured among the best in the pulp and paper industry in Latin America in a survey by *Institutional Investor Magazine*, for the second consecutive year
- Fibria – Among three companies in the pulp and paper industry that best relate to the press, according to the list of "Companies that communicate best with journalists", awarded by *Negócios da Comunicação* magazine
- Fibria – 2<sup>nd</sup> place in Communities category and among the hundred most prestigious companies in terms of sustainability in the ranking "The most sustainable companies according to the media", a survey conducted by *Imprensa* magazine
- Fibria – 1<sup>st</sup> place in the Natural Resources Conservation Ecology Award 2011, sponsored by the Government of the state of Espírito Santo, for the project "Program for Ecological Conservation and Restoration of Forest Remnants of Espírito Santo"
- Carlos Aguiar, former CEO of Fibria – Honored by the business organization Espírito Santo in Action with the Americo Buaiz Medal, which recognizes the most outstanding entrepreneurs contributing to the development of the state
- Marcelo Castelli, CEO of Fibria – Elected a New Leader in the Business Leaders Forum, nominated by businessmen from around Brazil
- Fibria – Featured at the 44<sup>th</sup> International Pulp and Paper Congress and Exhibition (ABTCP 2011) for its study "Predicting the impact of wood in eucalyptus kraft mill", as the best paper presented in the Technical Session on Pulp and Biorefinery
- Fibria – Received the Corporate Citizen Seal for the 8<sup>th</sup> consecutive year, granted by the Municipality of Jacareí to companies that practice good social and environmental actions
- Fibria – selected for the third consecutive year to be listed on BM&FBOVESPA's Corporate Sustainability Index (ISE)
- Fibria – voted among the five Latin American companies with the best financial disclosure practices, according to 2011 IR Global Rankings

# Content Index

## GRI G3.1 AND GLOBAL COMPACT PRINCIPLES

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2.4	Location of organization's headquarters	About Fibria p. 29-34
2.5	Number of countries where the organization operates and names of countries	About Fibria p. 29-34
2.6	Nature of ownership and legal form	About Fibria p. 29-34
2.7	Markets served	About Fibria p. 29-34
2.8	Scale of the reporting organization	Main results p. 21-28 About Fibria p. 29-34
2.9	Significant changes in 2011	Message from the management p. 9-12 About Fibria p. 29-34
2.10	Awards received in 2011	Awards and recognition in 2011 p. 173-174
3. Report parameters		Location within Report
Report profile		
3.1	Reporting period	January 1 to December 31, 2011
3.2	Date of most recent previous report	2010 Sustainability Report, launched in April 2011 (available at <a href="http://www.fibria.com.br/rs2011">www.fibria.com.br/rs2011</a> )
3.3	Reporting cycle	Annual
3.4	Contact point for questions regarding the report or its contents	comunicacao@fibria.com.br or Fibria Celulose S.A. – Comunicação Corporativa – Alameda Santos, 1.357 – 10º andar – CEP 01419-908 – São Paulo – SP – Brazil
Report scope and boundary		
3.5	Process for defining report content	Message from the management p. 9-12 Creation, development and management p. 187
3.6	Boundary of the report	About this Report p. 13-17
3.7	State any specific limitations on the scope or boundary of the report	Covers the whole range of the company's relevant economic, social and environmental impacts
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	About this Report p. 13-17

3.9	Data measurement techniques and the bases of calculations	About this Report p. 13-17
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	About this Report p. 13-17
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	There were no significant changes
<b>GRI Content index</b>		
3.12	Table identifying the location of the Standard Disclosures in the report	Content Index p. 175
<b>Assurance</b>		
3.13	Policy and current practice with regard to seeking external assurance for the report	Independent assurance p. 170-172
<b>4. Governance, commitments and engagement</b>		<b>Location within Report</b>
<b>Governance</b>		
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	Management p. 35-39
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	NA
4.3	Number of members of the highest governance body that are independent and/or non-executive members	Two members of the Board of Directors are independent. Management p. 35-39
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	Management p. 35-39
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	Management p. 35-39
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	Code of Conduct p. 40 Ombudsman p. 40 Anticorruption practices p. 41
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	The members of the Board of Directors and its committees are chosen based on their qualifications, striving for a diversity of knowledge and experience in each body. Management p. 13-14
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	About Fibria p. 29-34 Code of Conduct p. 40 Ombudsman p. 40 Anticorruption practices p. 41 Recruitment and training p. 112-116
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles	Management p. 35-39 Risk management p. 42-43
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	Management p. 35-39















Commitments to external initiatives		
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Climate governance p. 159
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	Main commitments p. 61
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations	Main commitments p. 61 Public policies p. 106-107
Stakeholder engagement		
4.14	List of stakeholder groups engaged by the organization	About Fibria p. 29-34
4.15	Basis for identification and selection of stakeholders with whom to engage	Message from the management p. 9-12 About this Report p. 13-17 About Fibria p. 29-34 Sustainability p. 52-61 Pulp sales p. 68-69 Communities p. 74-100 Suppliers p. 102-105 Government p. 106-107 Personnel management p. 108-122 Wood supplies from third parties p. 125-127
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	Message from the management p. 9-12 About this Report p. 13-17 Sustainability p. 52-61 Communities p. 74-100 Relationship model p. 76-77 Impacts on communities p. 78-79 Suppliers p. 102-105 Government p. 106-107 Personnel management p. 108-122
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	Message from the management p. 9-12 About this Report p. 13-17 Sustainability p. 52-61 Communities p. 74-100 Relationship model p. 76-77 Impacts on communities p. 78-79 Suppliers p. 102-105 Government p. 106-107 Personnel management p. 108-122

Economic	Location within Report	Compliance	Global Compact Principle
<b>Economic performance</b>			
DMA	Management approach: Fibria's economic management is shared among officers of the following areas: Treasury, Investor Relations, Controllershship, Budget and Performance, Audit, Strategic Planning, Supplies, Sales, and Global Logistics. The Sales and Logistics departments have offices in São Paulo, Miami (United States), Nyon (Switzerland), Csomád (Hungary), Beijing (representative office) and Hong Kong (China). Fibria's seven pulp distribution centers are based in North America, Europe and Asia. Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Message from the management p. 9-12, About Fibria p. 29-34, Risk management p. 42-43, Strategic planning p. 48-49, Agroforestry p. 135-136 and Financial-economic performance p. 164-168		
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	Main results p. 21-28	2
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Climate governance p. 159-163	7

EC3	Coverage of the organization's defined benefit plan obligations	Workforce p. 112	●	
EC4	Significant financial assistance received from government	Public financing p. 168	●	
Market presence				
A EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Workforce p. 110 Online	●	
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	Suppliers p. 104	●	
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation	Online	●	
Indirect economic impacts				
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, inkind, or pro bono engagement	Communities p.75	●	
A EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	Communities p. 74-87 Suppliers p. 102-105	◐	
Environmental		Location within Report	Compliance	Global Compact Principle
DMA	Management approach: Environmental management is conducted by the areas of Forest Environment, Industrial Environment, Technology, Sustainability, and Corporate Relations. These departments are responsible for monitoring consumption and disposal of materials, water and energy, biodiversity, water and air emissions, and solid waste production and transport. They are also responsible for compliance with environmental laws. Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Strategic planning p. 48-49, Certifications p. 50-52, Long-term commitments p. 52-54, Short-term goals and targets p. 55-60, Relationship model p. 76-77 and Socioenvironmental education p. 99-100			
Environmental performance				
Materials				
EN1	Materials used by weight or volume	Forestry operations: www.fibria.com.br/rs2011 Industrial operations: Recovery and utilities p. 149	●	8
EN2	Percentage of materials used that are recycled input materials	Fibria's forestry operations do not use recycle materials with the exception of waste from industrial operations used for fertilizer and soil corrective (such as dregs, grits and lime mud). The industrial process, of pulp production does not use recycled materials	●	8 and 9
Energy				
EN3	Direct energy consumption by primary energy source	Forestry operations: Energy p. 145 Industrial operations: Energy p.150	●	8
EN4	Indirect energy consumption by primary source	Forestry operations: Energy p. 145 Industrial operations: Energy p. 150	●	8
A EN5	Energy saved due to conservation and efficiency improvements	Forestry operations: NA Industrial operations: Energy p. 151	◐	8 and 9



<b>A</b> EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	Forestry operations: Energy p. 145 Industrial operations: Energy p. 151		8 and 9
<b>A</b> EN7	Initiatives to reduce indirect energy consumption and reductions achieved	There were no initiatives to reduce indirect energy consumption in either forestry or industrial operations in 2011		8 and 9
<b>Water</b>				
<b>G</b> EN8	Total water withdrawal by source	Forestry operations: Management of water resources p. 132 Industrial operations: Water p. 152		8
<b>A</b> EN9	Water sources significantly affected by withdrawal of water	Forestry operations: Management of water resources p. 131-132 Industrial operations: Water p. 152		8
<b>A</b> EN10	Percentage and total volume of water recycled and reused	Forestry operations do not recycle or re-use water Industrial operations: Water p. 152-153		8 and 9
<b>Biodiversity</b>				
<b>G</b> EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity p. 139 Online		8
<b>G</b> EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Biodiversity p. 140-141		8
<b>A</b> EN13	Habitats protected or restored	Biodiversity p. 141		8
<b>A</b> EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	Biodiversity p. 142		8
<b>A</b> EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Biodiversity p. 143		8
<b>Emissions, effluents and waste</b>				
<b>G</b> EN16	Total direct and indirect greenhouse gas emissions by weight	Climate governance p. 161-163		8
<b>G</b> EN17	Other relevant indirect greenhouse gas emissions by weight	Climate governance p. 161-163		8
<b>A</b> EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	In 2011 there no initiatives to reduce greenhouse gases, beyond the energy efficiency target. We are currently evaluating projects that may allow the reduction of GHGs, but these have not yet been scheduled for deployment		7, 8 and 9
<b>G</b> EN19	Emissions of ozone-depleting substances by weight	Emissions p. 154-155		8
<b>G</b> EN20	NO, SO, and other significant air emissions by type and weight	Forestry operations do not have equipment to monitor these emissions by mobile sources. A monthly control is conducted with the in relation to black smoke, using the Ringelmann scale, to identify the monochromatic color of the smoke		8





















EN21	Total water discharge by quality and destination	Forestry operations: Management of water resources p. 133 Industrial operations: Effluents p. 156	●	8
EN22	Total weight of waste by type and disposal method	Forestry operations: Waste p. 146 Industrial operations: Waste p. 157	●	8
EN23	Total number and volume of significant spills	There were no significant spills in 2011	●	8
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	Fibria does not transport waste deemed hazardous under the terms of the Basel Convention	●	8
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	Fibria's forestry operations do not discharge water into water bodies. This indicator is not significant for the industrial operations, according to the definitions in the protocol. The indicator is reported in the chapter Effluents p. 158	●	8
<b>Products and services</b>				
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Fibria's product, pulp, is the raw material for other products, and has no dangerous products and does not turn into waste. In our 2010 Sustainability Report we reported initiatives to mitigate environmental impacts in the forestry and industrial operations	●	7, 8 and 9
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	We do not reclaim packages of pulp bales, as the packaging itself is made of pulp, that is used in the process. Wires are used to tie the pulp bale. The separation and reuse of the wires as scrap are made by Fibria's clients. The company does not have the percentage of reuse	●	8 and 9
<b>Compliance</b>				
EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	Forestry operations: Wood supplies from third parties p. 127 Industrial operations: In 2011, Fibria received 3 fines, 2 at the Aracruz Unit (total: R\$136,500) and one at the Três Lagoas Unit (R\$540,000). No fines have been paid as Fibria awaits the final decision	●	8 and 9
<b>Transport</b>				
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	Pulp logistics p. 68 Wood logistics p. 129-131 Portocel p. 169	●	8
<b>Overall</b>				
EN30	Total environmental protection expenditures and investments by type	Forestry operations: Investments p. 147 Industrial operations: Investments p. 158	●	7, 8 and 9









Labor practices and decent work		Location within Report	Compliance	Global Compact Principle
DMA	<p>Management approach:</p> <p>People management is led by the departments of Human and Organizational Development, Supplies, Sustainability and Corporate Relations, and Environment (Forestry and Industrial). Fibria's labor policy also involves contractors, who account for about two thirds of the company's 18,000 strong workforce.</p> <p>Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Strategic planning p. 48-49, Long-term commitments p. 52-54, Short-term goals and targets p. 55-60, Relationship model p. 76-77 and Socioenvironmental education p. 99-100</p>			
<b>Employment</b>				
LA1	Total workforce by employment type, employment contract, and region	Main results p. 21-28 Workforce p. 108-109	●	
LA2	Total number and rate of employee turnover by age group, gender, and region	Workforce p. 109	●	6
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	Workforce p. 111-112	●	
LA15	Return to work and retention rates after parental leave, by gender	Workforce p. 111 Online	●	
<b>Labor/management relations</b>				
LA4	Percentage of employees covered by collective bargaining agreements	Relationship with labor unions p. 121	●	1 and 3
LA5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements	Relationship with labor unions p. 122	●	3
<b>Occupational health and safety</b>				
LA6	Percentage of total workforce represented in formal joint management – worker health and safety committees that help monitor and advise on occupational health and safety programs	Health and safety p. 117	●	1 and 3
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of workrelated fatalities by region and by gender	Workforce p. 109 Health and safety p. 117-118 Online	●	1
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Quality of life p. 120-121 Health and safety p. 119 Online	●	1
LA9	Health and safety topics covered in formal agreements with trade unions	Relationship with labor unions p. 122	●	1
<b>Training and education</b>				
LA10	Average hours of training per year per employee by employee category	Recruitment and training p. 115	●	6
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Recruitment and training p. 116	●	
LA12	Percentage of employees receiving regular performance and career development reviews, by gender	Recruitment and training p. 113	●	
<b>Equal remuneration for women and men</b>				
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Management p. 38 Workforce p. 109-110	●	1 and 6
<b>Diversity and equal opportunity</b>				
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	Workforce p. 111	●	1 and 6

Human Rights		Location within Report	Compliance	Global Compact Principle
DMA	<p>Management approach:</p> <p>The management of aspects related to society are concentrated in the sustainability and corporate relations department, as well as the Conduct Commission, the Ombudsman and the Legal department. The main features of this aspect relate to the relationship with neighboring communities, the relationship with government bodies and representatives, policies and mechanisms to combat corruption and unfair competition, as well as compliance to the legislation.</p> <p>Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Strategic planning p. 48-49, Long-term commitments p. 52-54, Short-term goals and targets p. 55-60, Relationship model p. 76-77 and Socioenvironmental education p. 99-100</p>			
<b>Investment and procurement practices</b>				
■ HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening	No significant investments were made in 2011	●	1, 2, 3, 4, 5 and 6
■ HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken	Suppliers p. 102	●	1, 2, 3, 4, 5 and 6
■ HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	Code of Conduct p. 40 Recruitment and training p. 116	●	1, 2, 3, 4, 5 and 6
<b>Non-discrimination</b>				
■ HR4	Total number of incidents of discrimination and corrective actions taken	Code of conduct p. 41	●	1, 2 and 6
<b>Freedom of association and collective bargaining</b>				
■ HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights	Relationship with labor unions p. 121-122	●	1, 2 and 3
<b>Child labor</b>				
■ HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	Suppliers p. 102-103	●	1, 2 and 5
<b>Forced and compulsory labor</b>				
■ HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	Suppliers p. 102-103	●	1, 2 and 4
<b>Security practices</b>				
■ HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	Code of Conduct p. 40 Online	●	1 and 2
<b>Indigenous rights</b>				
■ HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	There were no incidents of violations involving rights of indigenous people in 2011	●	1 and 2



Assessment				
■ HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments	The process of evaluation of human rights exists in operations (all in Brazil) in two ways: Evaluation of the workforce – delivery of the Code of Conduct in the contract – signing a receipt – and addressing the themes mentioned in the Code at monthly results meetings. Evaluation of external stakeholders – the process for approval of suppliers includes items of commitment to human rights (related to forced and child labor)	●	1 and 2
Remediation				
■ HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms	Code of Conduct p. 41	●	1 and 2
Society		Location within Report	Compliance	Global Compact Principle
DMA	Management approach: The management of issues related to society are of the responsibility of the department of Sustainability and Corporate Relations, as well as the Conduct Committee, the Ombudsman and Legal department. The main features are the relationship with neighboring communities, the relationship with the government bodies and representatives, policies and mechanisms to combat corruption and unfair competition, as well as compliance. Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Strategic planning p. 48-49, Long-term commitments p. 52-54, Short-term goals and targets p. 55-60 and Socioenvironmental education p. 99-100			
Community				
■ SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	Relationship model p. 76-77 Impacts on communities p. 78-79	●	
■ SO9	Operations with significant potential or actual negative impacts on local communities	Relationship model p. 76-77 Impacts on communities p. 78-79 Consultation with communities p. 88-99	●	
■ SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	Relationship model p. 76-77 Impacts on communities p. 78-79 Consultation with communities p. 88-99	●	
Corruption				
■ SO2	Percentage and total number of business units analyzed for risks related to corruption	Anticorruption practices p. 41	●	10
■ SO3	Percentage of employees trained in organization’s anti-corruption policies and procedures	Code of Conduct p. 40	●	10

 S04	Actions taken in response to incidents of corruption	Anticorruption practices p. 41		10
Public policy				
 S05	Public policy positions and participation in public policy development and lobbying	Contributions to public campaigns p. 106 Public policies p. 106-107		1 and 5
 S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	Main results p. 24 Contributions to public campaigns p. 106		10
Anti-competitive behavior				
 S07	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	Fines and lawsuits p. 44		
Compliance				
 S08	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations	Fines and lawsuits p. 44-47		
Product responsibility		Location within Report	Compliance	Global Compact Principle
DMA	Management approach: Aspects related to product responsibility (health and safety of the client, labeling of products and services, marketing communications, customer privacy and compliance) is mainly of the responsibility of the areas of Hygiene, Safety and Occupational Health (HSMT) and Commercial. Information about the management approach on specific topics is available in the chapters mentioned in the following table, as well as in the chapters Strategic planning p. 48-49, Long-term commitments p. 52-54 and Short-term goals and targets p. 55-60			
Customer health and safety				
 PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	Pulp sales p. 68-69		
 PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	There is no history of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle		
Product and service labeling core				
 PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Pulp sales p. 69		
 PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	There is no history of non-compliance with regulations and voluntary codes concerning product and service information and labeling		
 PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Pulp sales p. 69		

Marketing communications				
 PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Pulp sales p. 69		
 PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	Pulp sales p. 70		
Customer privacy				
 PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	There is no history of complaints regarding breaches of customer privacy and losses of customer data		1
Compliance				
 PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services	There were no cases of significant fines for noncompliance with laws and regulations concerning the provision of products and services in 2011		



Fully reported

NA Does not apply



Partially reported

 Core indicator

NR

Not reported

 Additional indicator**The Global Compact Principles:****Human rights**

Principle 1: businesses should support and respect the protection of internationally proclaimed human rights;  
 Principle 2: make sure that they are not complicit in human rights abuses.

**Labour**

Principle 3: businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;  
 Principle 4: the elimination of all forms of forced and compulsory labour;  
 Principle 5: the effective abolition of child labour;  
 Principle 6: the elimination of discrimination in respect of employment and occupation.

**Environment**

Principle 7: businesses should support a precautionary approach to environmental challenges;  
 Principle 8: undertake initiatives to promote greater environmental responsibility;  
 Principle 9: encourage the development and diffusion of environmentally friendly technologies.

**Anti-corruption**

Principle 10: businesses should work against corruption in all its forms, including extortion and bribery.





# GRI Application Level

This document follows the Sustainability Reporting Guidelines (G3.1) issued by the Global Reporting Initiative (GRI)<sup>1</sup>. It was submitted for independent external assurance by Bureau Veritas Certification and met the A+ requirements.

		C	C+	B	B+	A	A+
Mandatory	Self declared						Fibria self-declares an A+ application level.
Optional	Third party checked		Report externally assured			Report externally assured	Bureau Veritas Certification assured this Report and confirmed that it is an application level A+.
	GRI checked						Report externally assured

		C	C+	B	B+	A	A+
Standard Disclosures	G3.1 Profile Disclosures	Report on: 1.1; 2.1 a 2.10; 3.1 a 3.8, 3.10 a 3.12; 4.1 a 4.4, 4.14 a 4.15	Report Externally Assured	Report on all criteria listed for level C plus: 1.2; 3.9, 3.13; 4.5 a 4.13, 4.16 a 4.17	Report Externally Assured	Same as requirement for level B	Report Externally Assured
	G3.1 Management Approach Disclosures	Not Required		Management Approach Disclosures for each indicator Category		Management Approach Disclosures for each indicator Category	
	G3.1 Performance Indicators & Sector Supplement Performance Indicators	Report on a minimum of 10 Performance Indicators including at least one from each of: Economic, Social and Environmental		Report on a minimum of 20 Performance Indicators including at least one from each of: Economic, Environmental, Human Rights, Labor, Society, Product Responsibility		Report on each G3.1 and Sector Supplement Indicator with due regard to the Materiality Principle by either: a) reporting on the Indicator or b) explaining the reason for its omission	

1. Multi-stakeholder organization that brings together - business, civil society, universities, nongovernmental organizations, among others - to discuss, refine and disseminate a methodology for the reporting of sustainability. The GRI guidelines provide principles for defining both content and quality assurance of information. Learn more at [www.globalreporting.org](http://www.globalreporting.org).

# Creation, development and management — Fibria's Sustainability Report

Production on Fibria's 2011 Sustainability Report began in August 2011, based on assessment of the previous Report and planning meetings on budget, schedule, staff, partners and responsibilities. This is the third edition of the document and was the result of a process of data collection, consolidation and writing, validation with reporting areas, visual production and dissemination. In other words, it is the collective work of over 200 professionals from different areas, which generated a final product, with 10 versions, and gathers the most relevant information about our operations, results and interactions in 2011.

We highlight below the main actions carried out in 2011 with the objectives of learning and developing our Sustainability Report:

## 1. Fibria participated in initiatives aimed at defining and refining models of sustainability reporting:

- GRI public consultations on the next generation of its guidelines (G4), as well as the Brazil National Annex, Review of the Portuguese version of the G3.1 guidelines, meetings and seminars organized by GRI in Brazil;
- public consultation on integrated reporting methodology of the International Integrated Reporting Committee (IIRC);
- in-house lecture by Michael Krzus, co-author of One Report;
- themed events organized by the BM&FBOVESPA;
- participation in the ABRASCA Annual Report Prize;
- responding to questions from the blog *Testando os limites da sustentabilidade*.

## 2. The use of the Materiality Matrix has evolved within and outside of the Sustainability Report, in addition to directing the content of the publication:

- analysis in relation to the company's risk matrix (pages 43 and 44);
- inclusion in the definition of Long-Term Targets (pages 53-55);
- understanding of the 10 most material issues highlighted by internal and external stakeholders (pages 15-17);
- identification of parts of the Report that relates to the Materiality Matrix;
- selecting the most relevant topics of the Report based on the Matrix and the Long-Term Targets for the further prioritization and directing the external assurance process.

## 3. We sought to strengthen the adherence to the principles of balance and comparability through:

- meeting fully all core performance indicators, reaching an A+ GRI application level;
- benchmark on the process of sustainability reporting with companies in Brazil and abroad;
- inclusion of industry indicators, such as specific consumption per tonne of pulp and Best Available Techniques (BAT – that show reference values for each indicators);
- carrying out an internal discussion table to enhance the accountability of social impacts of our forestry operations.

## 4. We advanced in our effort to incorporate sustainability performance indicators reported into the company's operational routine.

We invite readers to submit their comments on this Report. For this purpose, we provide an evaluation form in the online version ([www.fibria.com.br/rs2011](http://www.fibria.com.br/rs2011)) and the electronic address ([comunicacaoofibria@fibria.com.br](mailto:comunicacaoofibria@fibria.com.br)) and the Administration Office (Fibria Celulose SA – Corporate Communications – Alameda Santos, 1.357 – 10º andar – CEP 01419-908 – São Paulo – SP – Brazil).

# Glossary

**Agroforestry system:** system of production that combines the simultaneous cultivation of fruit and/or timber trees with agricultural practices.

**Apiculture:** also known as beekeeping, it is the name given to the system of raising bees to produce honey and related products.

**APPs (Permanent Preservation Areas):** sites with or without vegetation, located close to water sources, on the banks of rivers and streams, around reservoirs, in salt marshes (restingas), on the fringes of tableland, areas above 1,800 meters in altitude, slopes of 45° or more, and the tops of hills, the environmental function of which is to preserve water resources, the landscape, geological stability, biodiversity, and the genetic flux of fauna and flora, to protect the soil and ensure the well-being of the human population.

**Archaeological sites:** locations where there are vestiges of pre-historic human occupation.

**Atlantic Forest biome:** a collection of forests and pioneer formations (such as salt marshes and mangroves) found along the Brazilian coastal belt, between the states of Rio Grande do Sul and Piauí.

**Barges:** also known as lighters, these are flat bottomed boats with a shallow draft, which Fibria uses to transport forest products (wood and pulp) from Bahia to Portocel, the maritime terminal located in Aracruz (Espírito Santo State). Fibria's barges are not self propelled, but are pushed by tugs.

**Biodiversity:** the combination of life forms (living organisms and ecological complexes) and genes contained within each individual, and their inter-relationships, or ecosystems, whereby the existence of any given species directly affects the others. UN Convention on Biodiversity definition: the variability among living organisms from all sources and the ecological complexes of which they are part, including diversity within species, between species and of ecosystems.

**Biodiversity corridors:** strips of vegetation linking large forest fragments (or blocks of native vegetation) that have become isolated by human activity, thereby providing local fauna with unhindered movement between these fragments and consequent genetic exchange between populations.

**Biomass:** organic matter used to generate electricity, through burning, or the burning of fuel derivatives (oils, gases, alcohol), and employing special techniques and technology. Part of the energy consumed at Fibria's industrial units is generated from biomass, such as wood residues and the waste from the manufacturing process (black liquor).

**Biotechnology:** technology that employs biological agents (organisms, cells, organelles or molecules) to produce useful products.

**Bleached eucalyptus pulp:** the product of the industrial extraction and subsequent bleaching of cellulose fibers from wood. The transformation of the wood into bleached pulp (pulping) involves four main processes: reducing the wood to chips; cooking the chips to extract the brown stock; bleaching the brown stock; and drying and baling of the bleached pulp.

**CERFLOR:** The Brazilian Forest Certification Programme (Cerflor) was conceived by the Brazilian Society for Silviculture (SBS), with collaboration of several associations, entities, research institutes and NGO's, as a voluntary national forest certification programme, in 1991.

**Chain of Custody (CoC):** certification of the traceability of forest raw materials through all the stages until it reaches the end customer.

**Clean Development Mechanism (CDM):** The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO<sub>2</sub>. These CERs can be traded and sold, and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol.

**Cloned seedlings:** seedlings of plants that are genetically identical, developed from the cells or fragments of a "donor" plant.

**Cloning:** process whereby one obtains a clone – a genetically identical copy. In the case of the eucalyptus, cloning is performed using cuttings from selected mother trees.

**Corporate governance:** system whereby organizations are run, monitored and stimulated, involving relations between the stakeholders, Supervisory Board, Management Board and internal and external regulatory bodies.

**EBITDA:** stands for "earnings before deducting interest, taxes, depreciation and amortization". The term is utilized in the analysis of the accounting statements of publicly listed companies.

**Eco-efficiency:** providing goods (or services), at competitive prices, that satisfy human needs and yield quality of life, involving a steady reduction in environmental impact and the consumption of natural resources in the manufacturing, transporting and commercializing of said goods (or services).

**Edaphic resources:** qualities of the soil, such as mineral content, texture and drainage, particularly in regard to its usefulness to humans.

**Effluent:** liquid waste that is discharged into the environment, usually bodies of water.

**Emissions:** the discharging into the atmosphere of any solid, liquid or gaseous material.

**Forest management:** the management of a forest in order to obtain economic and social benefits, while respecting the mechanisms that sustain the ecosystem.

**Forest partnerships:** the sponsored production of wood on private rural properties in order to supply the forestry industry (pulp mills, sawmills, steel plants, etc.).

**Forest protection:** set of activities designed to protect forests from pests, diseases, fires and weeds or anything else that might come to threaten forest assets.

**Forest Stewardship Council® (FSC®):** established in 1993, the FSC® is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests.

**Genetic improvement:** the use of science for the selection and reproduction of plants or animals bearing desirable characteristics, based on knowledge about the heredity of such characteristics.

**Genetic material:** the material found in cells that contains the genetic information of living organisms.

**Global Reporting Initiative (GRI):** a network-based organiza-

tion that pioneered the world's most widely used sustainability reporting framework.

**Hectare (ha):** a unit of measurement of area, corresponding to 10,000 m<sup>2</sup>, approximately equivalent to the area of a soccer field.

**Herbicides:** chemical product used to control or eliminate undesirable plants or weeds.

**HCVAs (High Conservation Value Areas):** an area that has certain biological, ecological, social or cultural attributes that are considered to be exceptional or critical, from a global, national, regional or local perspective, and are therefore places of special interest to the local community or to society in general. Such areas need to be managed in a suitable manner, in order to maintain or enhance their conservation value.

**Hydrographic watershed:** a small drainage system, basically comprising gullies, springs, brooks and streams.

**Joint-venture:** a business enterprise in which two or more companies are involved in a partnership.

**Legal Reserve (RL):** an area of any given rural property, not including APPs, which is set aside for the sustainable use of the natural resources, the conservation and rehabilitation of the ecological processes, the conservation of the biodiversity, and the sheltering and protection of the native fauna and flora. The Brazilian law specifies that the legal reserve must represent not less than 20% of the total area of the rural property.

**NGO (Non-governmental organization):** a non-profit civil society association set up for a public purpose.

**Pesticides:** products used for the extermination of pests or diseases that attack agricultural crops.

**RPPNs (Private Natural Heritage Reserves):** conservation units located on private land and set up at the initiative of the landowner.

**Stakeholders:** interested parties who affect and/or are affected by the company's activities.

**Sustainability:** a concept that gained force in the 1980s, through the expression "sustainable development", meaning being able to satisfy one's needs without diminishing the opportunities of future generations (Brundtland Report, 1987). Sustainability is based on three pillars: environmental, social and economic (hence the expression "triple bottom line"). For an activity to be sustainable, it must promote economic growth while, at the same time, respecting the environment and satisfying human needs and aspirations.

**tCO<sub>2</sub>eq:** measurement for converting and standardizing greenhouse gases in terms of carbon dioxide (CO<sub>2</sub>), taking into consideration the potential greenhouse effect of each gas. By reducing the causes of the greenhouse effect to a single factor, it facilitates the measuring of the impact a given activity can have on the temperature of the earth's atmosphere.

**tCO<sub>2</sub>eq /t pulp:** Tonnes of carbon dioxide equivalent per tonne of pulp.

**TRS (Total Reduced Sulfur):** a range of sulfur compounds that are generated in the pulp production which, under certain circumstances of the process, mill location and meteorological conditions, can release a characteristic odor into the atmosphere.

**Waste:** materials in a solid or semi-solid state, generated by the activities of a community, industrial or commercial business, homes, hospitals, agriculture, services and street cleaning. The term also includes certain liquids that, due to their characteristics, should not be disposed of in the public sewage system, much less bodies of water.

**Water cycle:** the set of different phases through which water passes under natural conditions, chief among which are: rain, evaporation, transpiration, infiltration, surface run-off and underground seepage. This cycle occurs within the atmosphere (air), the hydrosphere (water) and the lithosphere (land), extending between a depth of around 1 km into the lithosphere and roughly 15 km into the atmosphere.













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