

SUSTAINABILITY REPORT 2012



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THE VALUE OF ALLIANCES

Native forests and
eucalyptus plantation
in Três Lagoas (MS)



1

Message from the Management

Fibria achieved notable operating results and equally important advances in terms of socioenvironmental responsibility in 2012. This demonstrates how seriously we take the promise of generating economic wealth in a manner that is responsible, shared and inclusive.

The macroeconomic situation continued to be unstable, impacting on the prices of the main commodities, overseas, and the performance of the foreign exchange rate, in Brazil. These factors were prejudicial to our financial performance, despite the fact that the pulp market's fundamentals were consistent over the year: balanced inventory levels, the resumption of demand and the startup of new sanitary paper machinery.

For its part, 2012 was a year of major achievements, including certification by the Forest Stewardship Council® (FSC®) of the forest management and the chain of custody in the Aracruz Unit's operations, encompassing our activities in the states of Espírito Santo, Bahia and Minas Gerais. It was a tough job, which was positively reflected in the market and strengthened our commitment to best practices in the industry.

Our debt management strategy also moved forward. Designed to adjust our capital structure and reduce leveraging, we conducted a public share offer totaling R\$1.4 billion. Moreover, we divested forest and land as-

sets in the south of Bahia and concluded the sale, to CMPC Celulose Riograndense S.A. to the amount of R\$615 million, of forest and land assets that had been a part of the Capão do Leão Forest Unit's properties in Rio Grande do Sul, totaling approximately 100,000 hectares of our own lands and 39,000 hectares of eucalyptus plantations. We were also able to resolve matters outstanding from the past, definitively ending the issue of Aracruz Celulose's derivatives trades through agreements with the involved parties. Through these actions, we reduced the company's debt – our net debt over EBITDA went from 4.8 to 3.4 times – returning it to a healthy level.

The relationship with communities neighboring our operations deserved special attention. We resolved important conflicts, by participating in initiatives to fight illegal charcoal sales in the South of Bahia, and promoted the self-development of local communities. After years of negotiations, we established an agreement with the Landless Workers' Movement (MST) for the settling of 1,200 families and the creation of a vocational, professional school for the development of agricultural-forestry technologies on a 12,000-hectare plot of land belonging to Fibria. We believe that, more than living in harmony with them, it is our duty to contribute to their training so they are in a position to make a positive change to the reality of their communities.



Despite taking considerable care regarding worker safety and our record of making substantial improvements in this field, we unfortunately registered two serious accidents: one in our pulp operations and another at Portocel, where a freelance worker was fatally injured. We are reviewing our policies and procedures to reduce the possibility of these lamentable incidents recurring.

Looking ahead, Fibria will continue to concentrate on its core business – supplying pulp. The company is prepared to boost its production capacity through expansion of the mill in Três Lagoas, Mato Grosso do Sul at the appropriate moment. We are also investing in innovation and diversification of our businesses. One excellent opportunity is the development and marketing of biofuels deriving from forest plantations. To make this project feasible, we acquired a stake in Ensyn Corporation of the U.S., which produces fuel oil from a renewable matrix. Another possibility is to offer our structure and knowledge of logistics to other companies, optimizing the use of our assets both in transportation as well as in port handling operations of pulp and other products.

For the coming years, we have defined six Long-Term Sustainability Targets that should help us achieve our objective of obtaining admired profits. These are public commitments to fundamental topics, such as optimal use of the land, the protection of biodiversity, mitigation of the greenhouse effect, eco-efficiency and the quality of our relations with society, including our contribution to the self-sustainability of the communities. In 2012, our focus was to disseminate these targets to employees and other stakeholders. For 2013, we are working to develop indicators that allow us to manage, account for and measure our progress regarding each point.

We would like to express our special thanks to every person and institution – employees, customers, NGOs, partners, suppliers, investors – that contributed so we could end 2012 better off than when it began. For society, both inside Fibria and outside of it, we are cooperating to put in place the underpinnings of a future that is richer in opportunities and accomplishments. And we will continue to abide by the promises we have made.



Marcelo Castelli
CEO



José Luciano Penido
Chairman of the Board of Directors



Our commitment to sustainability

Henri Phillipe Van Keer, Commercial and International Logistics Director

"In 2012, the global pulp supply and demand ratio was more balanced than expected. This is a positive sign for the beginning of 2013, when the first impacts will be felt from the startup of new producers. We will continue to invest in the strategy of being close to our customers, allowing us to better understand their needs, adding value to our services."

Aires Galhardo, Director of Forest Operations

"The highlight of the year was to obtain forest certification from the Forest Stewardship Council® (FSC®) for the Aracruz Unit. In addition, we shifted a few outstanding issues. One of them involved an agreement with the Landless Workers Movement (MST) and the state government of Bahia for a settlement on land belonging to Fibria and the construction of a school for training the residents in agroforestry technology. We also established effective dialogue with traditional communities in southern Bahia and northern Espírito Santo, with very promising results."

Eduardo Andretto, General Counsel

"In 2012, we definitively resolved the remaining issues relating to the derivative trading crisis at the former company, Aracruz Celulose, through agreements with investors, regulators and others involved in the problem. Turning this page in the company's history was a major achievement for Fibria."

Guilherme Cavalcanti, Director of Finance and Investor Relations

"A series of initiatives allowed Fibria to end 2012 with a debt level that is considered to be healthy – the ratio of net debt to EBITDA, which was 4.8 times earlier in the year, went to 3.4 times, a very significant improvement. We conducted a successful share offering, fully placed in the global market; we sold off non-operational forest assets in Bahia and Rio

Grande do Sul; and we generated R\$836 million in free cash flow in 2012. As a result, our financial flexibility in 2013 will be much greater."

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

"This year was important in terms of fully consolidating the integration of our operating units. Today, employees, contractors and suppliers of the three Units work in full cooperation, aiming to overcome challenges and grow together. We also focused on safety, but despite all of our care, we registered two serious accidents in 2012. We are reviewing our safety strategy, in order to return to the path of continuous improvement that we had been on."

Luiz Fernando Torres Pinto, Director of Human and Organizational Development

"In the third year of Fibria's operations, we moved forward in consolidating the corporate culture. We increased our development efforts, which drive our training activities, retention and attraction of professionals and the management of the succession process. In 2013, the company will increase its investment in training to better prepare leaders for the challenges of the future, always in line with our vision and mission statements and our focus on sustainability."

Carlos Alberto de Oliveira Roxo, Director of Sustainability and Corporate Affairs

"The year was particularly important for three reasons: we strengthened Fibria's identity as a company committed to sustainability, improved the quality of relations with communities near our plantations and strengthened our relationships with national and international stakeholders. We are motivated by the reason underlying our business: that it brings gains for the company, for the local communities and for the planet as a whole."



External Views

We invited two experts to make a critical reading of Fibria's Sustainability Report 2012

Comments:

Fibria Celulose's 2012 Sustainability Report

I appreciate the opportunity to comment on Fibria's 2012 Sustainability Report and make a contribution to improving future sustainability reports and building a foundation for integrated reporting.

The 2012 Sustainability Report excels in the use of graphics to explain complex matters.

Business Model – A two-page graphic of the Fibria business model presents the company's value creating activities. The graphic clearly illustrates the resources consumed by each activity and the resulting positive and negative impacts.

Strategy – Another graphic identifies nine strategic objectives and, for each objective, the related the 2012 target and performance against the targets. Performance results for 2012 are linked to material issues and to long-term targets.

Materiality – A materiality graphic identifies the top ten issues facing Fibria and categorizes each issue as an economic, environmental, governance and social matter. Notes within the graphic provide a brief explanation of why each issue is important in terms of positive and negative impacts. Current year performance metrics and targets for each issue are also presented.

Like many corporate reports, Fibria's 2012 Sustainability Report is a mix of leading edge ideas, excellent reporting practices and areas where improvement is necessary. Opportunities, risks and uncertainties. The presentation of short- and long-term targets would be improved by including a robust discussion of actions Fibria intends to

take to achieve the goals and a candid presentation of the challenges and uncertainties the company faces for each target.

Linking of financial and nonfinancial performance. Future reports should discuss whether and how initiatives to generate less waste, use less water and reduce CO2 emissions—which clearly create value for society—also drive innovation that enables the company to reduce costs and increase revenues, thus creating value for shareholders.

Community investment initiatives. The presentation of community investment initiatives should provide more specific information about the nature and effect of these investments. The report should answer questions such as, what types of infrastructure projects are supported? As a result of these investments, how many temporary and permanent jobs were created? Or, how many people got access to clean drinking water or electricity or sanitation facilities or schools or hospitals?

I look forward to following Fibria's progress on its sustainability and integrated reporting journey.



Mike Krzus
President, Mike
Krzus Consulting

Mike Krzus is an integrated reporting consultant, author and speaker (www.mikekrzus.com). He provides advisory services to both companies and consulting organizations and is co-author of *One Report: Integrated Reporting for a Sustainable Strategy*.



Comments:

Fibria Celulose's 2012 Sustainability Report

Fibria Cellulose's 2012 Sustainability Report is an education in the detail of sustainable forest management practices, and projects a deep-seated commitment to high standards of environmental stewardship and good citizenship. It covers all the bases, and in some sections, goes well beyond what I see as good reporting practice in the many reports I analyze from all over the world.

Positive highlights for me in this report:

- **Materiality:** A focus on ten material issues throughout the report, demonstrating alignment of business and sustainability leadership, including an infographic representation of the issues, their relevance, impacts and Fibria's performance and targets.
- **Value Chain:** A graphical depiction of the company's business model, showing the positive and negative impacts of Fibria's core business activities enables the reader to understand the fuller picture.
- **Stakeholder Engagement:** The presentation of local community engagement interviews and the critical analysis of their expectations of Fibria is fascinating and includes, for example, criticism leveled at the company regarding water use in planted forests. This provides context and balance.

Aspects which I would recommend considering for future reports:

- **Fibria's role in society:** Fibria's impacts, in addition to its performance, could be more fully reflected throughout the value chain to articulate how the company is driving change, beyond the efficient management of its own resources. In areas where Fibria reports on socio-economic impacts, for example, projects to help local communities become more sustainable, reporting is limited to a percentage of proj-

ects which have succeeded in self-financing, without provision of further detail. In the Supply Chain, where Fibria has encouraged suppliers to engage with the Carbon Disclosure Project, more thorough examination of the impacts of this would be of interest.

- **Employee Engagement:** As an employer of 17,000 direct and outsourced employees, Fibria devotes only minor narrative in this report to employee relations, engagement, development, diversity and inclusion, health and safety and organizational climate. The quality of employment in the regions in which Fibria operates is critical for local socio-economic development. I would welcome more transparent coverage of Fibria's workplace including detail about outsourced worker practices. Outsourced workers represent over 75% of Fibria's workforce, yet most of the information reported excludes them.
- **Materiality Matrix:** The Fibria matrix, impressive though it is, has not been updated for three years. While the nature of sustainability is long-term, the relative focus of different material issues may change from year to year, or new items may come up on the radar. It is good to see that Fibria commits to reviewing this in 2013.

I am encouraged to read Fibria's report and, for me, it demonstrates credible leadership and a serious approach to sustainable business practice.



Elaine Cohen
Beyond Business

Elaine Cohen, Sustainability Reporting Consultant, Beyond Business Ltd,
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About this Report

Fibra Celulose S.A.'s 2012 Sustainability Report presents the company's performance in the areas of governance, economic, financial, and social and environmental responsibility. The Report was prepared on the basis of the 10 most important topics in the Materiality Matrix and the company's long-term targets and addresses all Fibria's principal stakeholders.

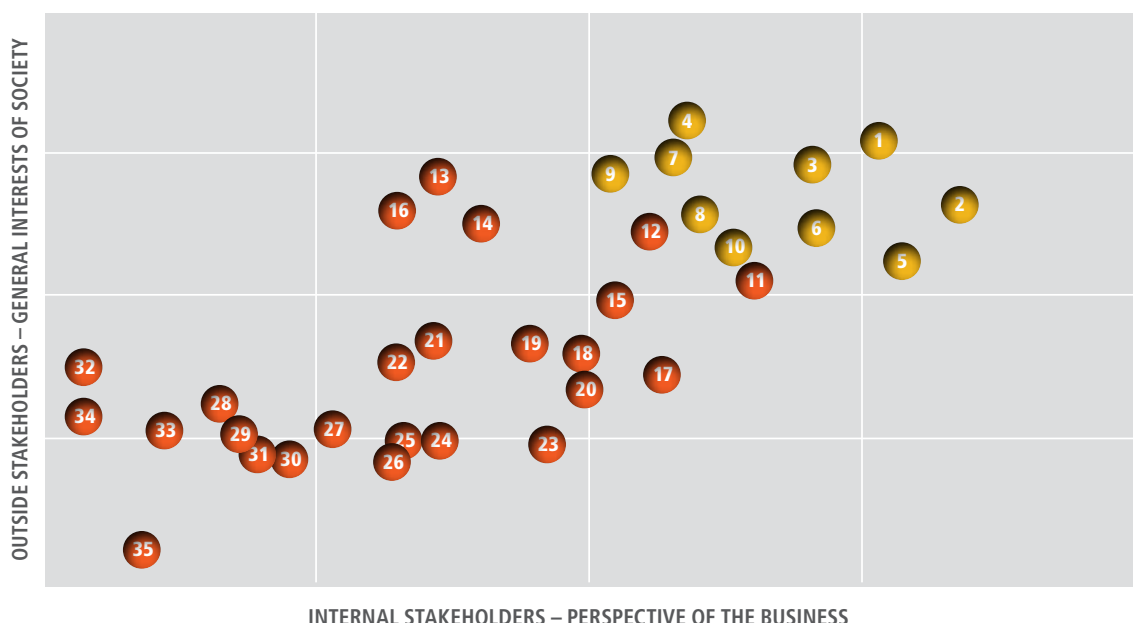
The information covers the Aracruz (ES), Jacaré (SP) and Três Lagoas (MS) industrial units; the forestry units and offices in Bahia (Posto da Mata), Espírito Santo (Conceição da Barra and Aracruz), Mato Grosso do Sul (Três Lagoas), and São Paulo (Capão Bonito and Vale do Paraíba); and the pulp loading operations at the port of Santos (SP).

The performance of the Capão do Leão Forest Unit (RS), sold in 2012, and Veracel, which has its own report, and Portocel are not in the scope of this Report.

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

- impact of the planted forests on biodiversity;
- certification and voluntary commitments;
- ethics;
- use of water;
- strategy/commitment regarding sustainability;
- relations with neighboring communities;
- forest partners (wood suppliers);
- environmental risk;
- emissions, effluents and waste;
- relations with specific communities.

Materiality Matrix



1. Impact of the eucalyptus plantations on biodiversity
2. Certification and voluntary commitments
3. Ethics
4. Use of water
5. Strategy/Commitment towards sustainability
6. Relationship with neighboring communities
7. Forestry partners
8. Environmental risks
9. Emissions, effluents and waste
10. Relationship with specific communities
11. Corporate governance

12. Forest technical management
13. Energy use
14. Product responsibilities
15. Workplace health and safety
16. Use of toxic products
17. Economic results
18. Climate change
19. Communication with employees
20. Compliance with laws and regulations
21. Wood use
22. Relations with outsourced workers
23. Investors

24. NGOs
25. Complaints and Ombudsman
26. Customers
27. Attracting and retaining talent
28. Transport impact
29. Diversity/fair treatment
30. Antagonistic and/or anti-agribusiness groups
31. Press
32. Use of genetic modification
33. Government
34. Suppliers
35. Labor unions

This Sustainability Report began to be produced in August 2012, after evaluation of the previous document, planning meetings – budget, timeline, team, partners and responsibilities – and of the approval of the work plan at an executive officers’ meeting. This fourth edition of the document is the result of a process that involved data collection, consolidation and writing, validation with the reporting areas, art design and dissemination. It is a collective constructive involving over 200 professionals of different areas as well as partners, and has resulted in a final product in 6 versions that brings together the most relevant information about our operations, results and interactions in 2012.

Improvements to the Sustainability Report

- Reducing the number of versions, with an online version geared to fully meeting the G3.1 guidelines of the Global Reporting Initiative (GRI) and a printed version, which selects key information and highlights the relationships among the ten most important themes, according to the Materiality Matrix, and Long Term Targets. The GRI version can be accessed at www.fibra.com.br/rs2012/en;
- Incorporating additional information on the Materiality Matrix and its ten key issues into the Management Report, in an effort to bring together the disclosure of financial and non-financial data in Fibria’s main instrument of financial accountability, thus taking a step toward integrated reporting;

- Advancing by about a month the launch of the Sustainability Report, in relation to the previous year’s publication, with the approaching release dates of the Management Report and the financial Financial Statements, thus taking another step towards integrated reporting;
- Deepening and improving the format of Fibria’s business model, incorporating and linking into a single infographic the resources, activities, positive and negative impacts, materiality, main results and commitments for each material topic;
- Fully disclosing all core performance indicators, reaching an application level A+ according to the GRI guidelines, reinforcing compliance with the principles transparency, balance and comparability. The GRI Report underwent external verification by Bureau Veritas Certification.

For 2013, we commit to updating Fibria’s Materiality Matrix, which will serve as a basis for planning and defining the content of the next Sustainability Report.

Comments, suggestions and requests for additional information regarding this document should be sent to comunicacaofibra@fibria.com.br or Fibria Celulose S.A. Comunicação Corporativa – Alameda Santos 1.357 – 10º andar – CEP 01419-908 – São Paulo – SP – Brazil.

The editors

Key

In the following pages, you will see icons that refer to the Materiality Matrix and the Long Term Targets. See below the meaning of each one.



Biodiversity



Strategy/commitment towards sustainability



Emissions, effluents and waste



Certifications



Relationship with neighboring communities



Relationship with specific communities



Ethics



Forest partners (wood suppliers)



Long-Term Targets



Water



Environmental risks

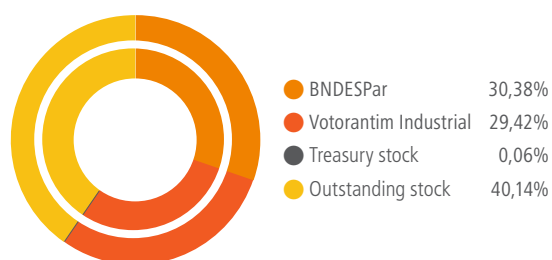


About Fibria

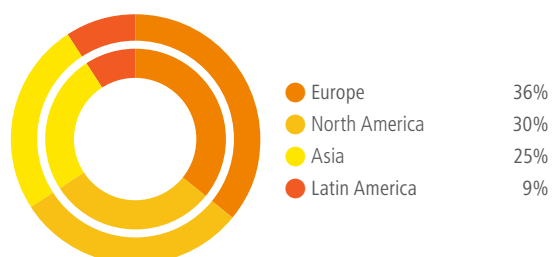
Fibria is a Brazilian company with a strong presence in the global market, and works to ensure that the growing demand for paper can be met in a sustainable manner. Founded in 2009, as a result of the merger between Aracruz Celulose S.A. and Votorantim Celulose e Papel S.A. (VCP), the company is the world's largest producer of hardwood pulp, operating through three industrial units, at Três Lagoas, Aracruz and in the Paraíba Valley.

In 2012, Fibria produced 4.74 million tons of pulp, 4% more than sold in the previous year and also exceeded the production level for that year. The company has approximately 17,170 workers, including direct employees and outsourced workers, and is active in 255 municipalities within seven Brazilian states: Rio Grande do Sul, São Paulo, Rio de Janeiro, Espírito Santo, Mato Grosso do Sul, Minas Gerais and Bahia, in the last of which it also has a joint venture, Veracel, with the Swedish/Finnish group Stora Enso. Fibria's global reach extends into 42 other countries, through distribution centers and commercial or representative offices in Europe, Asia and North America.

Shareholder structure



Sales distribution by region - 2012



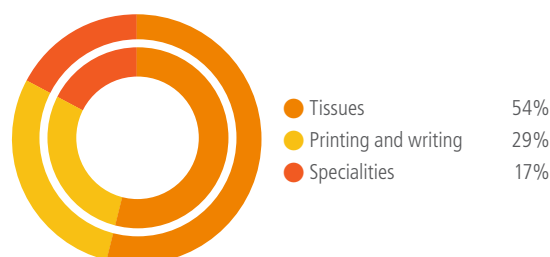
With three Industrial Units and a forest base of 989.381 hectares, of which 354.697 hectares are dedicated to environmental conservation, the company also has independent wood suppliers, which in 2011 totaled 3,321 contracts and 102,300 additional hectares of eucalyptus plantation.

Fibria's commitment to its stakeholders is demonstrated by its signing up to initiatives such as the UN Global

Global presence



2012 End use

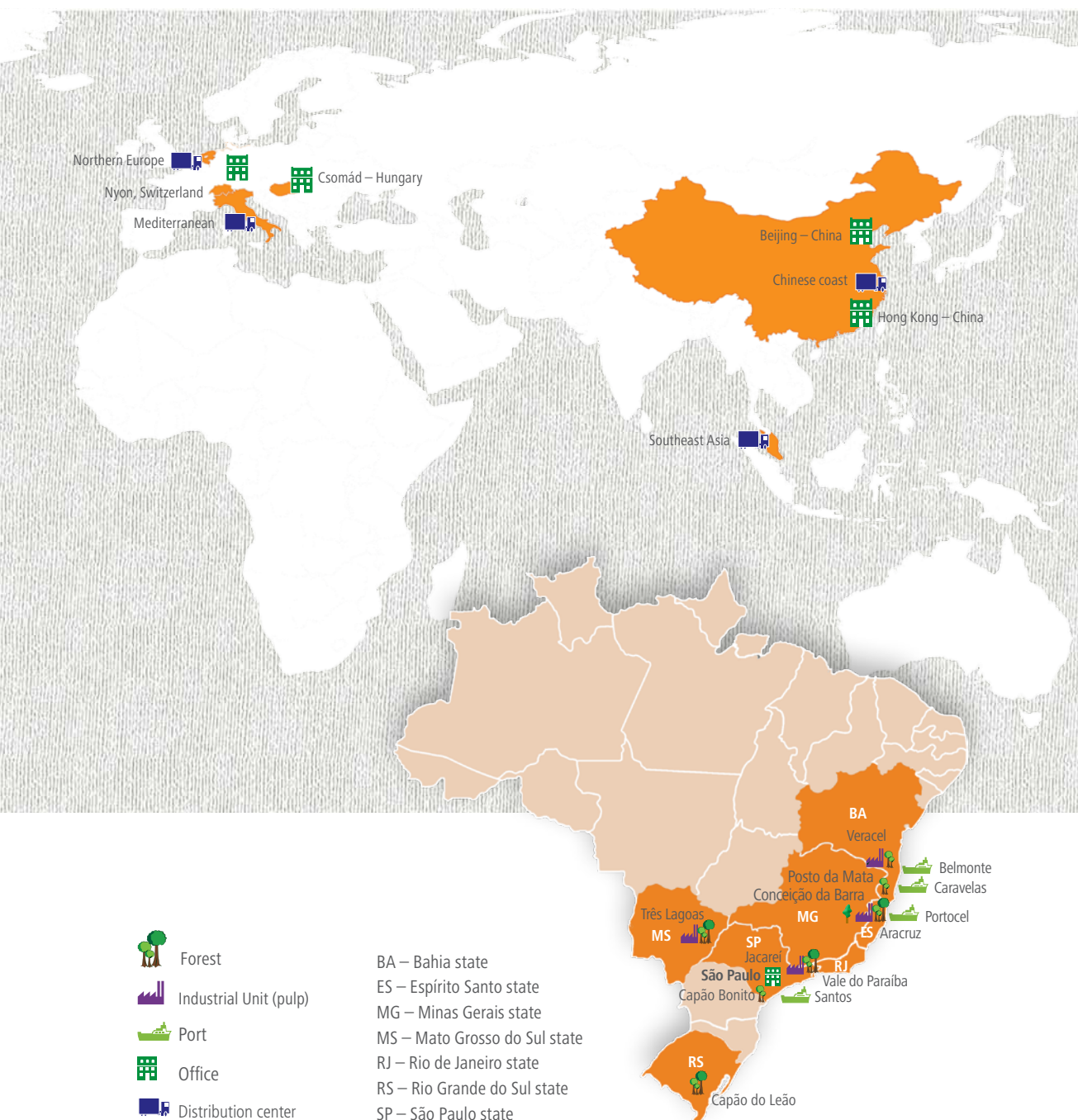


Compact, the Business Pact For Integrity and Against Corruption, the Atlantic Forest Restoration Pact, the National Pact for the Eradication of Slave Labor and the World Childhood Foundation's "On the Right Track" program. The company has been certified by the Forest Stewardship Council® (FSC®) and Cerflor/PEFC and is included in the Dow Jones Sustainability (Emerging Markets) and São Paulo Stock Exchange Sustainability (ISE BM&FBOVESPA) indices.

Mission – Develop the business of renewable forests as a sustainable source of life.

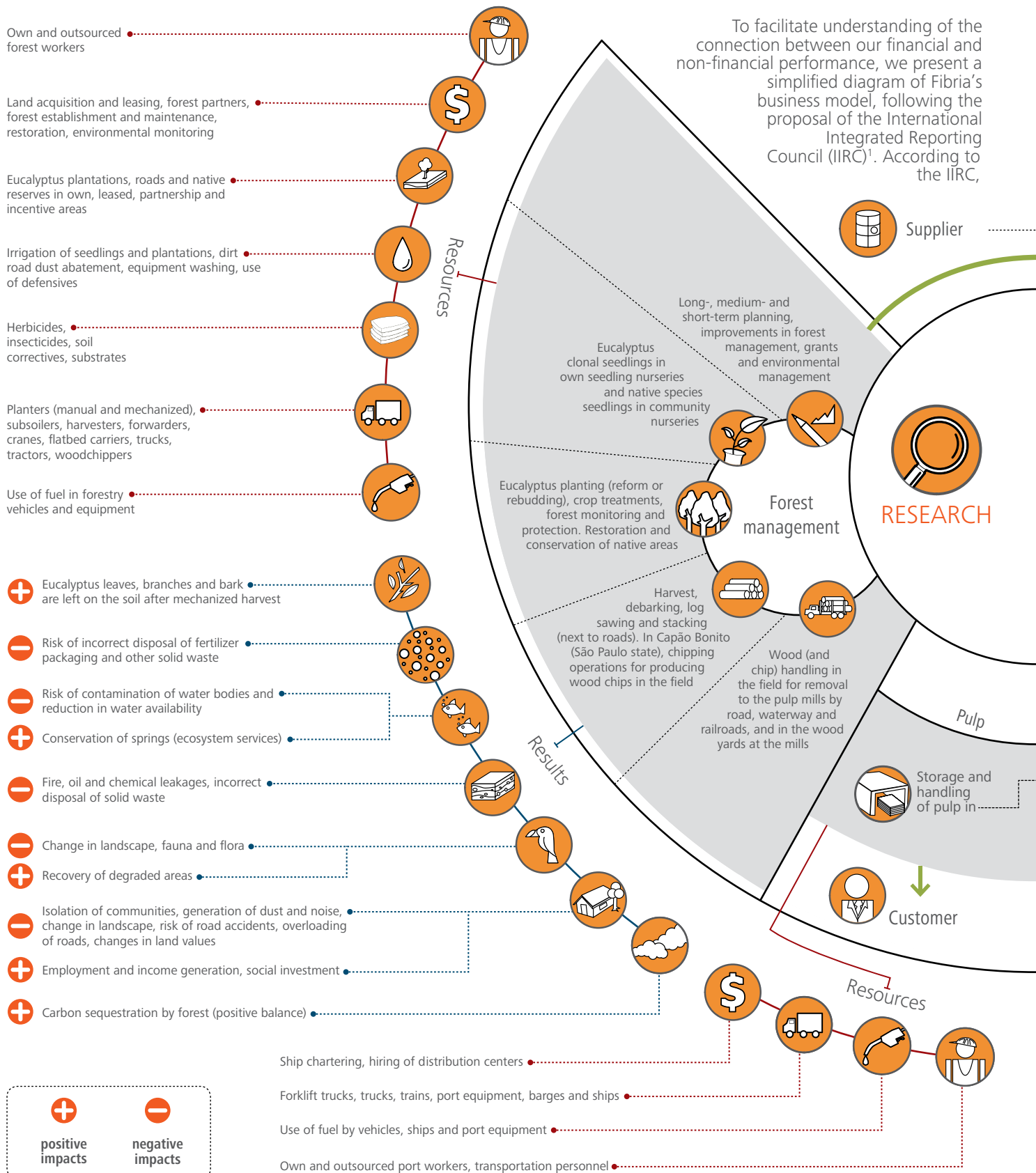
Vision – Consolidate the planted forest as a producer of economic value, generating healthy profits, in tandem with environmental conservation, social inclusion and improved quality of life.

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



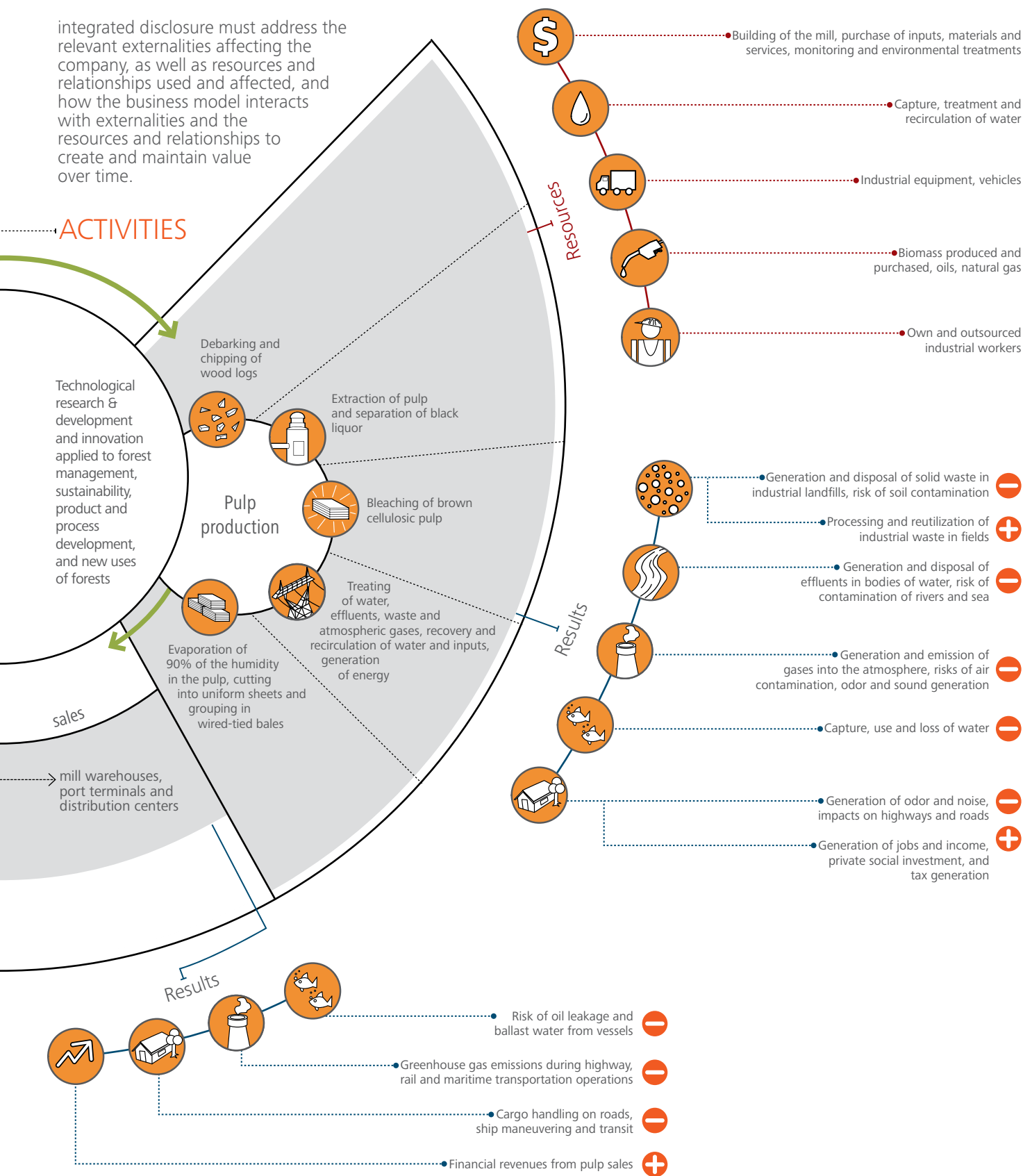
BUSINESS

To facilitate understanding of the connection between our financial and non-financial performance, we present a simplified diagram of Fibria's business model, following the proposal of the International Integrated Reporting Council (IIRC)¹. According to the IIRC,



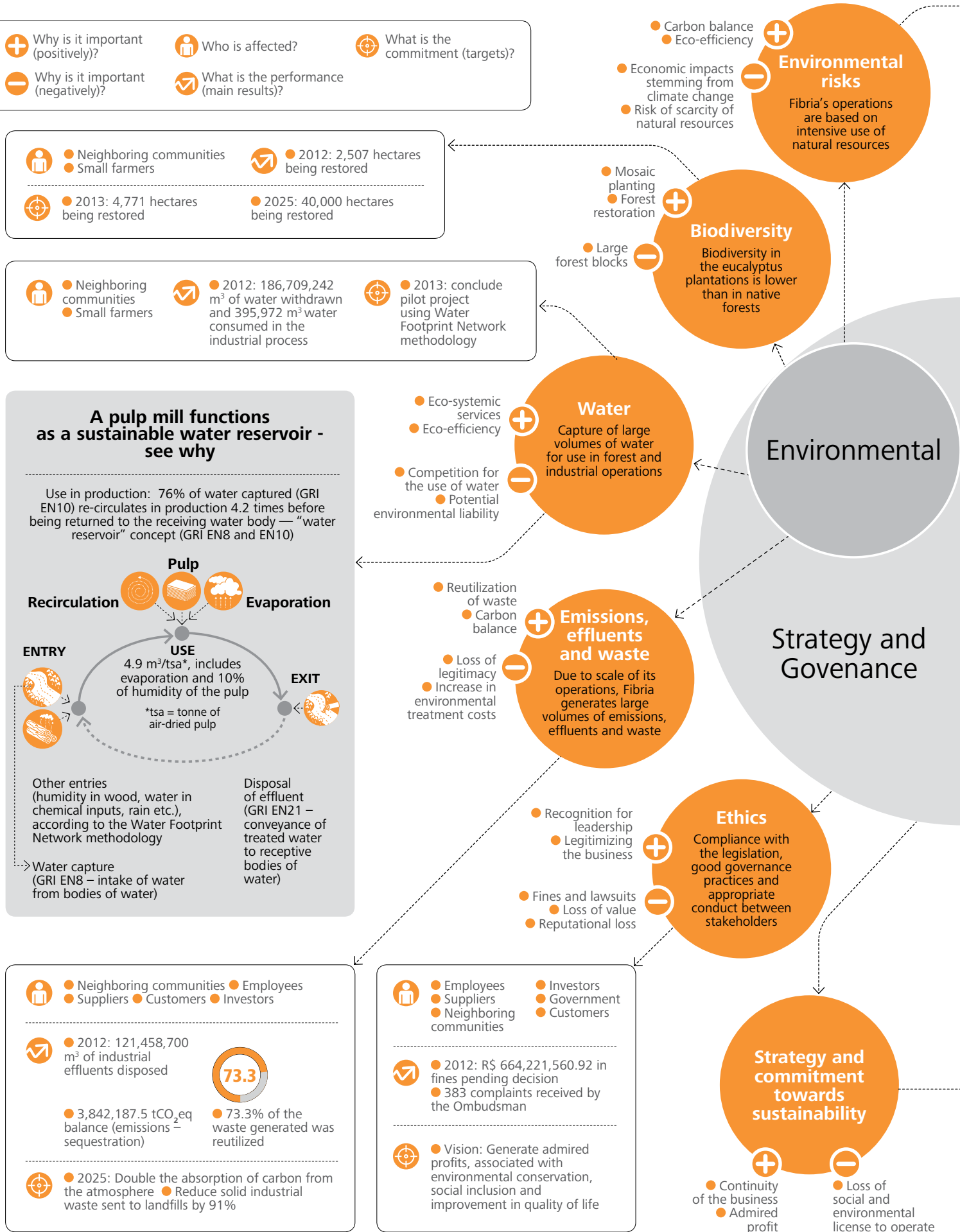
MODEL

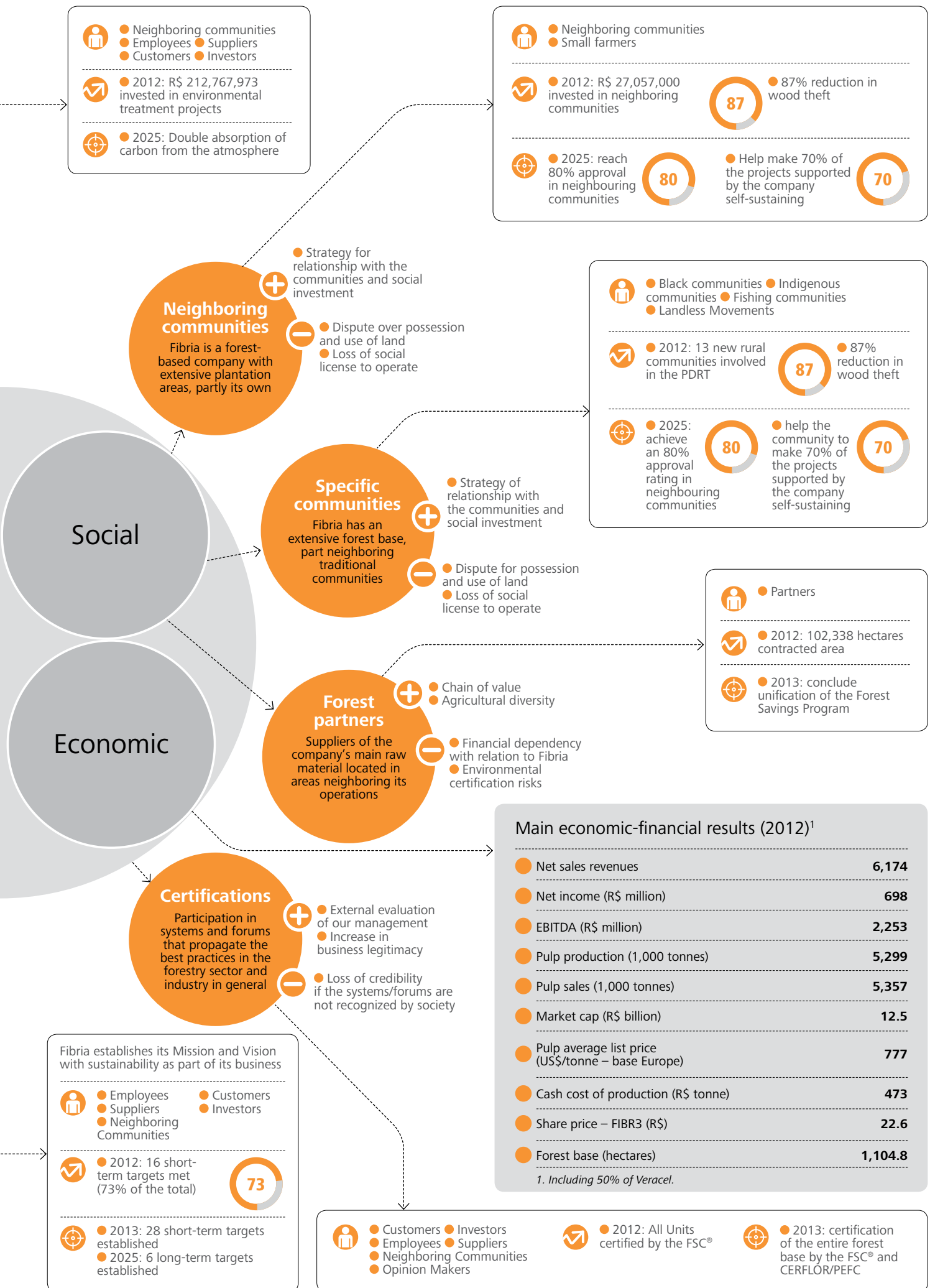
integrated disclosure must address the relevant externalities affecting the company, as well as resources and relationships used and affected, and how the business model interacts with externalities and the resources and relationships to create and maintain value over time.



MATERIALITY: IMPACTS AND PERFORMANCE

The 10 most important topics for the sustainability of Fibria, identified in the orange circles, were chosen by the company's stakeholders for the Materiality Matrix and can be grouped into three categories: environmental, social and governance, and strategy. These complement the economic dimension of sustainability. Learn how materiality is present in Fibria's main relationship categories (stakeholders) and performance indicators (results in 2012 and future commitments).







THE VALUE OF TRANSPARENCY

Digester at the
Três Lagoas Unit (MS)
pulp mill

2

Governance

Management

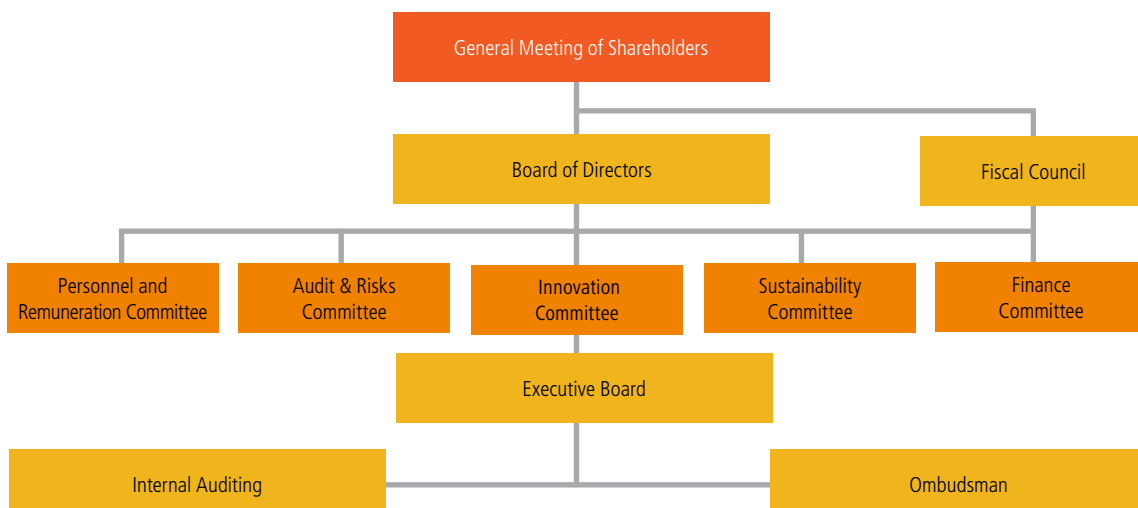
Fibra's corporate governance model is based on best management practices. Its boards and committees are responsible for overseeing the company's activities and operations in order to mitigate risks, be accountable, prevent fraud and ensure administrative transparency.

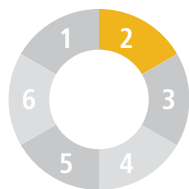
The corporate governance model is fully compliant with the regulatory requirements of the Sarbanes-Oxley Act (SOX) and regulatory bodies such as the Brazilian Securities Commission (CVM) and the São Paulo Stock Exchange (BM&FBOVESPA). It also adheres to the code of the Brazilian Institute of Corporate Governance (IBGC) and incorporates cultural features of Fibra.

Boards and committees

In 2012, Fibra set up an Innovation Committee to advise the Board of Directors in the analysis of research projects and technological innovations.

With their mixed composition – bringing together professionals from the company and other market institutions – the boards help to define the priority of actions, discuss issues and establish a medium and long term vision for the business. Members of the company's boards and committees are listed in the HTML version of the Sustainability Report, available at: www.fibra.com.br.



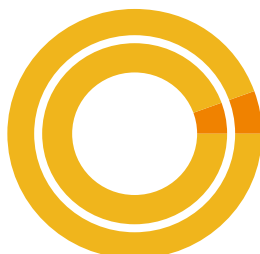


Composition of corporate governance bodies

Board of Directors

Titular and substitute members: 18

Gender



- 17 men – (94,5%)
- 1 woman – (5,5%)

Age groups



- 1 under 30 – (5.5%)
- 7 between 30 and 50 – (39%)
- 10 over 50 – (55,5%)

Minorities (disabled, Asian and Indigenous, Black and mixed): 0

Board of Directors Advisory Committees

Members: 28

Gender



- 26 men – (92,9%)
- 2 women – (7,1%)

Age groups



- 0 - under – 30
- 8 between 30 and 50 – (28,6%)
- 20 over 50 – (71,4%)

Minorities (disabled, Asian and Indigenous, Black and mixed): 1 (3.6%)

Remuneration policy

The elected members of Fibria's Board of Directors who are nominated by the shareholders Votorantim Industrial and BNDES Participações, have waived their right to receive remuneration for performing their tasks.

The remuneration of the executive officers is consolidated and totaled R\$ 24,263,481.21 in 2012. The remuneration of the Board members is consolidated and totaled R\$ 2,136,633.90 in 2012, not including the members of the Auditing & Risk, Finance, Personnel & Remuneration and Sustainability Committees.

and Ombudsman channel, and are disseminated to the teams by the company leadership.

The Code of Conduct is considered to be one of the most important tools for guiding the company's professionals, as it sets out the desired standard of behavior for employees, in their personal relationships and at work, both inside and outside the company. The document applies to all employees, both direct and outsourced, and is presented to each new employee at the time they are hired. The content of the document is reinforced on a monthly basis at the assessment meetings that take place at all industrial and forest units, as well as through specific campaigns, and when required.



Ethics and transparency

Code of Conduct

The company's Code of Conduct was updated in June 2012, to incorporate, among other items, a topic concerning employee behavior when publishing Fibria-related content in social media. These changes are available to all employees over the intranet, internet

To reinforce the application of the Code of Conduct, an Ethics and Conduct Committee, comprising members of the Executive Board and managers, examines possible violations, checks whether reported concerns are valid, ensures that all cases are assessed according to uniform criteria, and recommends steps to be taken concerning matters not addressed by the code. The Ethics and Conduct Committee also oversees the Ombudsman's office. Cases involving fraud, embezzle-



ment or property damage are dealt with by Internal Auditing.

- ❑ In 2012, 10% of the company's employees formally adhered to the Code of Conduct.
- ❑ 374 employees (10% of the total) received formal training in the organization's policies and procedures related to human rights during new employee orientation processes and results meetings.
- ❑ In the Corporate Security area, 3 of Fibria's own (8% of the total) and 230 outsourced professionals (23% of the total) underwent human rights training.

Ombudsman services

The Ombudsman channel was set up to receive complaints about violations of the Code of Conduct from anybody who is connected in any way with Fibria. It is available to employees, former employees, local communities, suppliers, customers and partners, through a toll-free telephone number, by letter, e-mail, intranet or internet, or by direct communication with the corporate ombudsman. All complaints are treated as confidential and are registered using a tool that keeps a record of each case, from the moment it is registered until it is closed.

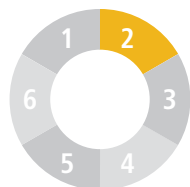
It is a constant learning process: each case is analyzed by the office of the Ombudsman, even if it is considered to be unfounded, as it provides an opportunity to fine-tune the processes, enhance the leadership and revise policies and procedures.

The cases deemed to have grounds resulted in 70 recommendations for revision of policies and procedures or suggestions for improvement of internal controls. In another 60 cases, the company applied the disciplinary actions it considered appropriate, ranging from verbal warnings through to the dismissal of those involved. Of the demands received by the Ombudsman in 2012, 132 were related to human rights (34.5% of the total), being classified as follows: 12 cases of discrimination and prejudice; 89 reports of harassment (moral or sexual) and abuse of power; 22 cases regarding disciplinary measures; and nine cases of retaliation (managers' attitudes). Of the 132 cases, 44 were deemed to have grounds and filed, 82 were considered undue and dismissed and six are still under analysis

Channels of communication with the Ombudsman's office

Telephone	0800 891 1730. To call from other countries: https://secure.ethicspoint.com/domain/media/en/gui/27629/phone.html
Letter	Ouvidoria Fibria Celulose S.A. Caixa Postal nº 72.696, CEP 01405-971
Internet	www.fibria.com.br > Institutional > Ombudsman
Intranet	Fibria Net > International Offices > Code of Conduct

- ❑ In 2012, Fibria's Ombudsman received 383 complaints, of which 355 (92.7% of the total) were dealt with and closed and 28 (7.3%) are being analyzed.
- ❑ Of all the cases registered:
 - 34.5% concerned abuse of power and management behavior
 - 18,3% concerned inappropriate relations with business partners and local communities
 - 11.0% concerned violation of policies
 - 7.0% concerned irregularities regarding health, safety and environmental issues
 - 3.7% concerned the company's image and employee behavior outside the work environment
 - 6.0% were other miscellaneous matters
 - 19.6% were questions for clarification or requests for information.



Internal policies and procedures

Internal auditing

Fibria's Internal Auditing team is responsible for the independent evaluation of processes and verification of compliance with applicable policies, regulations and procedures, through a systematic approach that seeks to improve the effectiveness of the company's operations and add value to the business.

Fibria has an annual auditing plan, based on the risk matrix, the internal controls matrix and the deliberations of the management and members of the Auditing and Risk Committee. Through this plan, it is possible to determine the priority of what is to be audited over the course of the year. At the end of the period, an action plan is drawn up, based on the conclusions of the auditors.

- In 2012, the Internal Auditing team conducted nine projects related to corporate, forest and industrial processes. It also conducted 18 special projects requested by Fibria's Ombudsman. The results of its analyses and the action plans drawn up are submitted to the CEO and the Auditing and Risk Committee.
- With regard to its anticorruption practices, of the eight reports of suspicions of fraud and bribery investigated by the Internal Auditing area in 2012, five were closed, with none of them considered to be valid. The three remaining cases are still under consideration.

Risk management

Fibria's risk management area maps out all significant risks, analyzes them and makes recommendations for resolution. The company's risk management strategy considers various types of risks, ranging from the variables of financial market trading in favor of the business (market

risks) to those arising from the production process (operating risks). Risks are also managed in areas associated with obligations undertaken with third parties (credit risks), negative exposure of the company's name (reputational risks), environmental impacts caused by its operations (socio-environmental risk), impacts on production or the business caused by natural physical phenomena (event risks), and problems from actions that don't meet the regulations in force in different countries and markets (regulatory risks). Fibria has a Risk Management Policy to provide guidance in managing all of these factors.

Internal controls

In confirmation of its effectiveness, Fibria's 2012 internal controls were recertified, in compliance with Section 404 of the Sarbanes-Oxley Act (SOX) and CVM Instruction no 480/09, in an independent assessment carried out by PricewaterhouseCoopers. The consolidated financial statements also received unqualified certification by the independent auditors, as in previous years.

In order to help the company document the performance of its internal controls, Fibria introduced the Control Self Assessment (CSA) methodology, which, among other things, enables the continuous management of operational risks, the establishment of self-assessment routines, the identification of risks and verification of the effectiveness of the controls.

Enterprise Risk Management (ERM)

In 2012, Fibria made advances in the management of strategic risk, through the ERM project, a coordinated and integrated risk management process that strives to encompass the entire organization at all hierarchical levels, fostering communication and cooperation between the different functional areas.

The verification and analysis of new risk is carried out on an ongoing basis. In 2012, a complete review was performed of the company's risk base, which gave rise to a new priority risk matrix. Of the 239 strategic risks found,



58 were considered to be priority and grouped into 14 top risk categories. The risks are classified according to their potential impact and probability.

Thus, a systemic and deeper vision about the way Fibria has been tackling various fronts can be obtained, with special attention to issues with intangible consequences, which include socio-environmental risks whose prevention and repercussions depend on paying close attention to stakeholder relations, whilst also meeting strict standards of certification and international agreements.

Crisis management

In 2012, Fibria initiated an internal analysis of the crisis management process. This included setting up committees and preparing a crisis management manual, as well as training on the subject for professionals

at the company's industrial, forest and port facilities. Through this initial work, it was possible to verify the effectiveness of crisis management and detect points for improvement.

More synergy

Everything related to governance, the ombudsman and internal auditing is subordinate to the Governance, Risk and Compliance (GRC) structure, established in 2011 to ensure synergy between the different areas ensuring everybody is talking on the same wavelength. The year 2012 was marked by the structuring and consolidation of the GRC, leading to the standardized processes, the review of controls and defining of roles and responsibilities for each area.

Fines and legal claims

Administrative tax assessments – in 2012, Fibria was a party to four legal assessments involving significant fines, amounting to R\$664,221,550.92. No fines were paid, nor were there any non-monetary sanctions.

Administrative labor claims – The company (Fibria and Fibria/MS) is a party to 115 administrative claims currently in progress, of which 29 were filed in 2012.

Lawsuits regarding Aracruz Celulose losses – Two actions related to derivative losses at Aracruz Celulose occurred in 2008. The first one is a class action lawsuit filed in federal court by U.S. purchasers of shares of Aracruz Celulose, between April 7 and October 2, 2008, claiming damages due to alleged non-disclosure by the company of derivative transactions. The parties signed an agreement in November 2012, by which Fibria will pay a total of US\$37.5 million to holders of ADRs in the period certified by the class. The agreement will be settled in the first quarter of 2013.

The other process was formulated in view of the resolution made by the Special General Meeting held on November 24, 2008, against Isac Roffé Zagury, former CFO of the company, as the party responsible for losses on derivative operations in 2008. The company entered into an agreement with Isac Zagury Roffé, by which he must pay the company, as compensation, the amount of R\$1.5 million. The agreement shall be settled in the first quarter of 2013.

Legal claims in the interior of the state of São Paulo – Fibria is a party to four legal claims in connection with its forest activities carried out in specific areas of two municipalities of the state of São Paulo.



THE VALUE OF COMMITMENTS

Pulp embarking on the
STX Arborella ship, at
Portocel (Aracruz, ES)

2



Strategy

Fibra's sustainable business consists of generating value for all stakeholders:

- for customers, cultivating long-term relationships and providing a high level of technical and logistical capacity;
- for communities, seeking respected and shared profits, based on dialogue, engagement and social inclusion;
- for shareholders and investors, generating profitability with transparency in information and commitment to accountability;
- for employees, with an emphasis on the development, cultivation of talents and workplace health and safety; and
- for society, focused on operating excellence, eco-efficiency, environmental conservation and technological innovation in the service of better use of forests. Included in this model are the Quality, Environmental

and Forestry Management Systems, developed to ensure that all of the company's processes are carried out with excellence. The management indicators adopted to monitor the performance of the activities are based on a strategic map the company has prepared which follows the Balanced Scorecard (BSC) methodology.

Certifications



One of Fibra's greatest accomplishments in 2012 was being certified by the FSC®, in October, in terms of forest management and the chain of custody of the operations of the Aracruz Unit. To obtain this recognition, the company worked with Imaflores in the SmartStep project, a methodology for adjusting to the processes created by the international Rainforest Alliance organization. An action plan was established involving 500 measures – all implemented – involving ad-

Certified forest area¹

Unit	Total area (ha)	Area certified by the FSC®	Area certified by CERFLOR (PEFC)
Aracruz	348,297.00	310,174.00	348,297.00
Capão do Leão ²	—	—	—
Jacareí	161,086.49	160,823.82	—
Três Lagoas ³	350,201.05	283,232.77	283,232.77
Total	859,584.54	754,230.59	631,529.77

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

2. Unit sold in 2012.

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



justments to environmental, social, operational and workers rights processes.

Also in October, the Três Lagoas Industrial Unit was certified to the ISO 9001 quality and ISO 14001 environmental management system standards.

At the same time, the new certifications of the Forest Management System made it possible for Fibria to verify the consistency of its processes, to measure and monitor them to increase competitiveness and, as a result, ensure customer satisfaction. Independent institutes also certify Fibria's management systems. The company's Units were audited by the Bureau Veritas Certification (BVC) and the Instituto de Manejo e Certificação Florestal e Agrícola (Imaflora).

Fibria's Certifications

Fibria today has the following certifications:

- Quality Management System – ISO 9001
- Environmental Management System – ISO 14001
- Occupational Safety And Health System – OHSAS 18001
- Forest Management – CERFLOR/PEFC and FSC®
- Chain of Custody – CERFLOR/PEFC and FSC®

To learn more about which units have the above certifications, please access the GRI version of the Sustainability Report at www.fibria.com.br/rs2012.

Program for Verification of Controlled Wood and Controversial Sources

In order to monitor the sources of uncertified timber provided by its suppliers, Fibria created the Controlled Wood Verification/Controversial Sources program, which lays down a set of responsibilities and procedures for sponsored producers, such as training, identification of raw material (wood) sources, a public commitment not to acquire illegal wood, and setting up a hotline for the reporting of any misconduct.

In accordance with the FSC® and CERFLOR chain of custody management systems and practices of responsible forest management, Fibria has a Wood Acquisition Policy wherein it states that it does not support, directly or indirectly, activities such as illegal cutting of wood or illegal trading in forest or timber products as well as any violation of traditional and human rights in forestry operations.

Controlled wood in 2012

In 2012, about 45% of the wood supplying the Aracruz Unit's mills came from controlled sources; forestry partners and its own areas that lie outside the scope of the FSC® certification.

About 5% of the wood purchased in 2012 from third parties – including sponsored producers – came from Paraíba Valley producers supplying the Jacaré Unit.

Upcoming challenges

Fibria's goals for the coming years are Cerflor certification for the Jacaré Unit and obtaining ISO 9001 certification for Santos Port Terminal, as well as restructuring to meet the OHSAS 18001 requirements at all Units. Another challenge is to help improve the forest management adopted by its forestry partners (independent producers that supply wood to the company), so that they too can register for FSC® and CERFLOR certification.

Commitments



Upon completing three years of activities, Fibria continues to maintain its commitment to sustainability as being fundamental to major achievements, such as certification by renowned international organizations and the strengthening of relations with neighboring communities, the third sector and other important civil society organisations. Through this, the company improves its practices and contributes to a fairer and more inclusive society.

This commitment includes engagement in movements that discuss our common future. In 2012, with this objective in mind, Fibria participated in national and international groups and forums, such as the World Business Council for Sustainable Development, The Forests Dialogue, the New Generation Plantations Project, the Ethos Institute and the Brazilian Forest Dialogue. Topics such as biofuels, climate change, the inclusion of women in the rural economy, genetically modified plants and forest management by less favored communities were discussed.

At the same time, the company continued its social and environmental responsibility initiatives, assisted by its Sustainability Committee which, in 2012, organized two editions of its Constructive Dialogues program – in Jacaréi (SP) and Três Lagoas (MS). During these meetings, Fibria presented its plan of local actions to the community and received suggestions and demands from them. The considerations received during these meetings help the company decide upon some of its initiatives, including updating the materiality matrix that defines – from the point of view of the company and of society – the topics most relevant to the future of the company.

The Sustainability Committee was also responsible for the recommendation to create long-term targets for Fibria that establish commitments to be met by 2025. The definition of these sustainability targets takes into account priority subjects that have been highlighted in the Materiality Matrix and the social and environmen-



tal risks that have been identified in the Enterprise Risk Management (ERM) system. These are:

Objective: optimize the use of natural resources

Target: reduce by one-third the quantity of land needed to produce pulp.

Objective: help to mitigate the effect of greenhouse gases

Target: duplicate absorption of carbon from the atmosphere.

Objective: protect biodiversity

Target: foster environmental restoration of 40,000 hectares of own land between 2012 and 2025.

Objective: boost eco-efficiency

Target: reduce by 91% the quantity of solid industrial waste sent to landfills.

Objective: strengthen the interaction between the company and society

Target: reach 80% approval level in neighboring communities.

Objective: strengthen the interaction between the company and society

Target: help the community to make self-sustainable in 70% of the income generation projects supported by the company.

These targets are neither exhaustive nor static, and may evolve or encompass new commitments to satisfy the demands of the market, the company or society. In 2012, Fibria sought to disseminate the Long-Term Targets among all employees. It also initiated a process to develop indicators to measure the progress of each one of the targets and an agenda, with detailed stages of actions to be carried out to achieve these goals. For 2013, the monitoring of each target will be conducted based on pre-defined indicators.

Objective	1	2	3	4
	Improve the relations with local communities, through engagement and measures to promote their economic and social development	Develop activities related to climate change	Review the forest partnership models, adapting them to the new guidelines	Protect and enhance natural resources
	2012 Targets	2012 Targets	2012 Targets	2012 Targets
	<ul style="list-style-type: none"> 1 • Attain a 55% favorability rating for Fibria's activities within the local communities (taken from long-term targets) 2 • Help to make 10% of the local development projects supported by Fibria self-sustaining (taken from Long-Term Targets) 3 • Increase by 30% (from 22 to 29) the number of rural communities under the Rural Territory Development Program (PDRT) (continuation from 2011) 4 • Implement the Project for Sustainable Settlements through Agroforestry and Biodiversity in the far south of the state of Bahia, benefiting around one thousand families, on 5 farms totaling 11,000 hectares (continuation of 2011) 	<ul style="list-style-type: none"> 1 • Increase the response rate (by Fibria's supply chain) under the Carbon Disclosure Project (CDP) Supply Chain, from 71% to 90% 2 • Compile and consolidate the quarterly carbon footprint results, thereby assisting operational management to take immediate action, as well as in internal and external disclosure 	<ul style="list-style-type: none"> 1 • Introduce "family forestry" partnership model, which aims to include smallholders in the Fibria supply chain of forestry operations in the states of São Paulo, Mato Grosso do Sul, Espírito Santo and Bahia (not achieved in 2011) 	<ul style="list-style-type: none"> 1 • Initiate environmental restoration of 2,000 hectares of conservation areas on property owned by the company (taken from Long-Term Targets) 2 • Develop a pilot project for the appraisal of ecosystem services to assist company management 3 • Start implementing the Forest Management Plan for the Restinga de Aracruz Private Natural Heritage Reserve (RPPN) 4 • Prepare a case study to act as a benchmark for the exploitation of non-wood forest products within Fibria's conservation areas
	2012 Results	2012 Results	2012 Results	2012 Results
	<ul style="list-style-type: none"> 1 The first assessment, through a public opinion survey, was close to 60% 2 At the present time, 7% of the development projects no longer require Fibria investment 3 There are now 35 communities under the PDRT (in the states of Espírito Santo, Bahia, Mato Grosso do Sul and São Paulo) 4 The Project for Sustainable Settlements through Agroforestry and Biodiversity was officially launched at what is now called the Fazenda Colatina Settlement. The land is in the final stages of expropriation by INCRA (National Institute for Settlement and Agrarian Reform) and the families are being chosen by the MST 	<ul style="list-style-type: none"> 1 In 2012, 93% of suppliers responded 2 Monthly report prepared to keep departments informed 	<ul style="list-style-type: none"> 1 Model is approved and ready to be implemented 	<ul style="list-style-type: none"> 1 The restoration of 2,200 hectares was begun in 2012 2 A tool was developed for the appraisal of the company's socio-environmental recommendations 3 Implementation of the RPPN Management Plan has begun 4 The case study "Production of Brazilian peppertree (Schinus terebinthifolius) seeds in areas belonging to Fibria Celulose S.A." was developed
Materiality Matrix				
Long-Term Target	<ul style="list-style-type: none"> → Attain an 80% approval rating within the local communities → Help to make 70% of the income generating projects supported by the company to be self-sustaining 			
	<ul style="list-style-type: none"> → Double the absorption of carbon from the atmosphere → Help to make 70% of the income generating projects supported by the company to be self-sustaining → Conduct environmental restoration of 40,000 hectares of company land, between 2012 and 2025 			
2013 targets	<ul style="list-style-type: none"> • Achieve a 60% favorability rating for neighboring communities and help to make 10% of the projects supported by Fibria self-sustainable • Increase the number of rural communities under the PDRT from 35 to 59 • Begin the activities of the Agroforestry Training, Education and Research Center in Prado (BA) • Complete the sale of all the Fibria properties occupied by landless movements in southern Bahia • Begin dialogue over the quilombola issue and set up a pilot project involving various protagonists • Complete all the community infrastructure activities in Helvécia and Caravelas (BA) • Consolidate the Plan for the Socioenvironmental Sustainability of the Indian Lands in Aracruz • Standardize the Beehives Program: access of beekeeping associations; standardization of practices; specialized technical assistance; establishing of standards and resultant indicators; fostering of the apiculture chain • Offer the environmental training program to social projects supported by Fibria 	<ul style="list-style-type: none"> • Maintain the level of participation in the CDP Supply Chain and improve the average by 10% • Quantify the emissions reduction potential in 2013 	<ul style="list-style-type: none"> • No specific targets have been set for 2013. Two targets set in 2011 in relation to Fibria's forest partners programs were not continued in 2012, for the following reasons: <ul style="list-style-type: none"> • Target 1 - Along with WWF Brasil, develop a national standard for FSC® certification of small groups of forest producers and service providers. Status - Together with WWF Brasil, Fibria set up, tested on three forest partners and submitted its FSC® certification proposal, thereby completing its participation in the project • Target 2 - Educate and develop awareness of forest partners regarding the FSC® principles and criteria, based on an analysis carried out in 2010. Status - The target was changed to "conduct an analysis to check forest partner adherence to FSC® "principles and criteria", which was completed in 2012. 	<ul style="list-style-type: none"> • Initiate the restoration of 4,771 hectares in the Atlantic Rainforest and Cerrado biomes • Apply the tool for the appraisal of ecosystem services that was developed in 2012 • Define Fibria's Water Units and align the monitoring of water resources
Target fully achieved Target partially achieved Target not achieved 1- Impact of plantations on biodiversity 2- Certification and voluntary commitments				

5 Promote the development, awareness and engagement of the Fibria supply chain

- 1 • Evaluate, develop and set up a suppliers' and customers' socioenvironmental investment fund, for the financing of high-priority Fibria socio-environmental projects and activities (not achieved in 2011)
- 2 • Develop and introduce a Code of Conduct for suppliers, which includes sustainability concepts

- 1  Responsible Network set up and launched by Fibria's CEO, together with the first participant, Plantar, and the beneficiary communities (Helvecia and Espora Gato)
- 2  Postponed to 2013






→ Help to make 70% of the income generating projects supported by the company to be self-sustaining

- Develop and launch a Code of Conduct for suppliers that includes the concepts of sustainability
- Raise R\$ 4 million for the suppliers and customers socioenvironmental investment fund, the Responsible Network, to be used in priority socioenvironmental projects and activities (continuity from 2012)

6 Increase eco-efficiency

- 1 • Finalize the work on identifying the water footprint of the pulp produced at the company's Forest and Industrial Units (not achieved in 2011)
- 2 • Prepare an analysis of the Pulp Life Cycle, from the plant nursery to the port of destination (not achieved in 2011)
- 3 • Reduce by 6.5% the amount of solid waste sent to industrial landfills by the company's industrial units, through the operational start up of treatment plants at the Jacarei and Três Lagoas Units (not achieved in 2011).

- 1  The water footprint was completed for the forest base and mills at Jacarei, Aracruz and Três Lagoas, with measurement of the green, blue and gray waters, according to the international methodology of the Water Footprint Network, of which Fibria is a member. Fibria is running an amendment to the service contract with the consultant to evaluate the water footprint in the Cerrado and Atlantic Rainforest
- 2  The work is still in progress, in the stage of involvement of customers in Europe and in the tissue paper segment
- 3  The target was not achieved at Três Lagoas, because the Unit had not yet started the production of the corrective agent for soil acidity using inorganic waste (dregs, grits, lime sludge and ash). At Jacarei, the target was partially achieved, with a 6.0% reduction, due to the Proactiva plant not operating at full capacity in the production of soil acidity corrective agent



→ Reduce by 91% the amount of solid industrial waste being sent to landfills

- Complete the Pulp Life Cycle Analysis, from the seedling nursery to the ports of destination (stage involving European customers and the tissue paper segment)
- Elevate the ecoefficiency of the Industrial Units:
 - energy consumed (MWh/adt) – 0.582 (2012: 0.584)
 - water withdrawn (m³/adt) – 30.5 (2012: 30.6)
 - waste generated¹ (kg/adt) – 227.5 (2012: 234.5)
 - NOx² (kg/adt) – 0.79 (2012: 0.69)
 - DBO (mg/l) – 2.0 (2012: 2.0)
 - AOX² (kg/adt) – 0.097 (2012: 0.082)
 - suspended solids (mg/l) – 2.05 (2012: 2.05)

1. Not converted to dry weight basis.
2. The company works with NOx and AOX indicators below international benchmarks (IPPC), so the figures are treated as control parameters.

7 Certify Fibria's forests

- 1 • FSC® certification of the Aracruz Unit's managed forests in Espírito Santo, Minas Gerais and Bahia

- 1  Imaflora awarded Fibria FSC® certification in those states, in October 2012. Now, all of Fibria's forests have FSC® certification



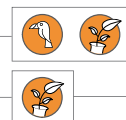
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- Obtain CERFLOR/PEFC certification of the Jacarei Unit's managed forests

8 Strengthen the relationship with civil society

- 1 • Continue participating in study groups looking into the best forest management practices under the WWF's New Generation Plantations (NGP) project (continuation of 2011)
- 2 • Continue participating in national and international forums on the best forest management and sustainability practices, notably The Forests Dialogue (TFD), the Diálogo Florestal Brasileiro, the Sustainable Forest Products Industry Working Group, the World Business Council for Sustainable Development (WBCSD), and the Global Compact (continuation of 2011)

- 1  We participated in the Lisbon and Uruguay meetings. The GMO Working Group was set up. A social case study was produced. Work was begun on company disclosures
- 2  Active participation in the WBCSD forums, involvement in Rio+20, including backing for the Business Day, and participation in various TFD and Diálogo Florestal Brasileiro forums. Fibria was co-organizer of the 4Fs event in Brazil, in November




→ Reduce by 1/3 the amount of land needed for pulp production

- Continue to participate in national and international forums discussing the best forest management and sustainability practices, notably The Forests Dialogue (TFD), the Diálogo Florestal Brasileiro, the WBCSD Forest Solutions Group and the Global Compact (continuity from 2012)

9 Consolidate sustainability as part of the company's corporate governance

- 1 • Hold a second discussion panel for Fibria stakeholders (Constructive Dialogues), on a regional basis (continuation of 2011)
- 2 • Prepare and introduce an Educate for Sustainability program for company employees and permanent outsourced staff, in order to disseminate concepts and promote action in favor of sustainability at every level of the company, as well as to present sustainability projects to other Fibria departments (not achieved in 2011 and postponed to 2012)
- 3 • Carry out public consultations and disclosure of the company's strategic plans for the conservation of biodiversity and water resources, as well as the plan for environmental distance training, over the internet

- 1  Constructive Dialogues were held in São José dos Campos (São Paulo state) and Três Lagoas (Mato Grosso do Sul state)
- 2  20 lectures were conducted at internal events and management meetings, visits to social projects, two regional editions of the Constructive Dialogues (with the presence of professionals and contractors), the launch of the Responsible Network, Sustainable Bazaar, with sales of products originated in social projects supported by Fibria to employees and service providers at the Central Administration, and the campaign Responsible Receipt at Fibria's Units and Office in the state of São Paulo
- 3  There was public consultation over the definition of Areas of High Conservation Value at Aracruz. We published, through the WBCSD, a case study on Fibria's biodiversity strategy



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- Carry out the third round of Fibria stakeholder round tables (Constructive Dialogues), at Capão Bonito (SP) and in Espírito Santo and Bahia (continuity from 2012)
- Set up a road map for achieving the Long-Term Targets, showing KPIs and medium-term targets



THE VALUE OF NATURE

Marcos Aires, Field
Research analyst at the
Aracruz Unit
(ES/BA/MG)

Environmental Performance

Productivity and ecoefficiency

Technological innovation

Innovation and technology are of fundamental importance for Fibria's market leadership position, not only in terms of production volumes but also in the quality of its products and services. In the sector, it is one of the companies that invests the most in research, development and innovation: in 2012, it earmarked around R\$ 42 million for technology projects (8% more than in 2011), at the most advanced stages in the forestry and pulp production areas.

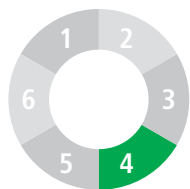
Its Technology Center (TC) is responsible for the company's research and innovation efforts. Towards this end, it operates laboratories in the Jacaré and Aracruz units for the development of biotechnology, bio-refining, pulp and paper and forest protection projects. It is also involved in a series of experimental field and watershed studies with input from all operating units. In 2012, projects were developed in forestry management and natural resources, genetic enhancement and biotechnology, and the development of products and processes with emphasis on bio-refineries.

In forestry management and natural resources, Fibria's TC develops technologies related to soil fertilization and conservation, landscape management and the

biological control of pests, among others. For genetic improvement and biotechnology (*see below*), of particular interest was the introduction of 15 new eucalyptus clones into the company's seedling nurseries and the first hybrid clones of subtropical species that are of strategic interest to the company. These clones were selected to weather conditions found in the states of Espírito Santo and Bahia. These clones deliver gains in the industrial process and in forest productivity, representing an increase of 3% in the volume (tonnes) of pulp produced per hectare per year.

In the industrial area, the research projects are centered on novel technologies for pulp cooking and bleaching processes, seeking to reduce consumption of wood and chemical products. In bio-refining, advances were made and results contributed to a project for the diversification of the business. New partnerships were developed, and the initiatives for the generation of biofuels and bioproducts based on wood already included various stages of the chain of production.

One of the main partnerships established for this purpose was signed with the Ensyn Corporation of the U.S., which owns technology for production of renewable liquid fuels. Fibria is studying the best way to apply the Ensyn technology for converting biomass into bio-oil, to leverage its forestry expertise and develop high-value-added alternatives for the use of wood from its forest plantations.



Forestry improvement and biotechnology

The genetic improvement of forests makes use of recombination techniques and field experiments to develop clones improved for the conditions of each of Fibria's Units. Trees that are capable of producing a larger quantity of raw material per unit of area over a given time are selected with appropriate use of natural resources, in a more economic manner and optimum quality. Furthermore, Fibria conducts biotechnology research, using the molecular marker technique to enhance genetic improvements of the plants and anticipate this selection of superior trees. In 2012, the company also conducted field experiments, which consisted of planting eucalyptus trees that were genetically modified in laboratories, following the legal recommendations and orientation of the certifying bodies.

- In 2012, new facilities were inaugurated at the Technology Center in Jacaréi (SP), consisting of bio-refinery and biotechnology laboratories and a seedling nursery for research purposes, making it possible to conduct studies linked to the forest raw materials and end product.
- The new Regulatory Affairs and Intellectual Property Department was made part of the Technology Center structure in 2012, to handle two important aspects in the management of technological innovation. One of these is the manner in which the company protects and controls the intellectual property that it produces. The other is how it interacts with the certification bodies and institutions linked to biotechnology, in order to present the benefits of its work.

Evolution of the Long-Term Targets



As a contribution to the long-term target of reducing by one-third the quantity of land needed to produce pulp, the Technology Center used genetic improvement and biotechnology techniques to develop, in 2012, clones that present superior productivity and wood quality, generating more efficient production in tonnes of pulp per hectare/year.

Forest management

Forest management is the way one administers forest resources to obtain economic and social benefits, respecting the mechanisms that sustain the ecosystem. Fibria's forest management is designed to supply eucalyptus wood to its industrial units, observing parameters regarding productivity, quality, low cost and environmental and social responsibility in a way that ensures business sustainability and productivity. Because it extracts the maximum productivity from Fibria's areas, it also contributes towards meeting the company's long-term target of reducing, by one-third, the amount of land needed to produce pulp.

To improve its management practices, Fibria uses a series of tools, including:

- **Socio-environmental Performance Index (IDSA)** – measures the environmental performance of the forest operations over the course of a year, with the goal of improving the indicators and correcting eventual mistakes.
- **Socio-environmental recommendations** – seek to ensure that the forestry activities are conducted within the company's social and environmental standards, legal requirements and forest certification guidelines, minimizing and/or mitigating impacts.



Responsible forest management

- Conserves and recovers native forests
- Conserves the soil
- Improves water quality
- Generates income, jobs and social welfare
- Contributes to regional environmental stability

Production and wood supply

Wood consumption in Fibria's Industrial Units in 2012 was 16 million cubic meters. Of this total, the Aracruz Forest Area (ES) supplied 8.5 million cubic meters of wood; the Jacaré Unit (SP), about 3.6 million m³; and the Três Lagoas Unit (MS), 4.2 million m³. The company's own plantations accounted for about 82% of this wood volume with the remainder being supplied by small, medium or large-sized partnering farmers.

The good operational performance of Fibria's mills, which is reflected in the reduction of specific wood consumption (per tonne of pulp produced), positively impacted forest management and reduced the need for new plantation areas.

The highlight of the silviculture program was the startup of the P100 Project, which is designed to maximize the productivity of the forest areas nearest to the mills in order to reduce the cost of wood transportation. To achieve this objective, the project includes changes in forestry management practices, increased fertilization, monitoring of areas and weed control.

In 2012, the rainfall water capture system to be used in

seedlings irrigation was concluded. This system also re-utilizes effluents generated in the seedling production process to apply in fertilization-irrigation of eucalyptus plantations of the Aracruz nursery, reducing the volume of water from both artesian wells and springs.

Wood logistics

The wood that supplies Fibria's industrial units is for the most part transported by trucks. To a lesser extent, Fibria also uses barges – more economical and with a lower impact on the environment – on the route linking the Caravelas Maritime Terminal, in Bahia state, and the Portocel Barge Terminal in Espírito Santo state. It also uses railroad transportation between partnered areas in Minas Gerais and storage facilities in Espírito Santo and the Aracruz Industrial Unit.

In 2012, the Jacaré Unit forestry area delivered 3.6 million cubic meters of wood, of which 4% was from third parties. Of particular note was the accident rate of only 0.98 accidents per million kilometers traveled in transportation services to this Unit. This result reflects the consolidation of the Safe Road program implemented by the company, which renewed the fleet and instituted a committee to discuss the progress in the transportation processes. At the Três Lagoas Unit, approximately 4.2 million cubic meters of wood were transported. The Logistics area guaranteed the supply of the Três Lagoas mill, with safety improving annually, reaching an accident rate of 1.16 accidents per million kilometers traveled in 2012, thereby maintaining the index's downward trend compared to the 1.69 mark posted in 2011. The highlight of this result was the excellent performance turned in by Fibria's own team – zero accidents with

Seedlings

	2010	2011	2012
Production of eucalyptus seedlings ¹	89,017,808	102,756,751	73,008,078
Planting of eucalyptus seedlings	63,137,817	87,802,255	68,029,260
Donations of eucalyptus seedlings	1,426,630	1,922,460	7,400
Production of native seedlings ¹	956,762	15,316,875	1,970,440
Donations of native seedlings	50,007	77,500	20,780

1. In own and third-party nurseries.



lost time over a period extending more than two years. At the Aracruz Unit, 8.5 million cubic meters of wood were transported in 2012 with an accident rate of 1.33 accidents per million kilometers traveled. This mark was achieved thanks to awareness campaigns conducted with suppliers by the Safety Committees and through the Safe Road program, focused on the most problematic stretches of the BR-101 highway.

Industrial eco-efficiency

Eco-efficiency consists of the intelligent use of natural resources, to produce more with less raw material. At Fibria, this concept is put into practice as it is related to the generation of admired profit that is part of the company's vision. The subject is so important for the sustainability of the company that it is part of its established long-term targets for 2025 and the short-term targets referring to 2012. Last year, Fibria invested R\$ 182 million in processes and equipment to improve the eco-efficiency of its industrial operations.

Industrial operations – The industrial process is divided into pulp production, which consists of transforming tree logs into sheets and bales of pulp through the use of chemicals and heat; and in recovery and utilities, which recovers the chemicals used in the production

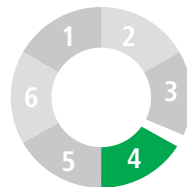
process, supplies the utilities – water, atmospheric gases, waste steam and electric power – for this purpose and treats the water and the effluents. To enable this to occur with maximum efficiency, the company invests in the operational stability of its units.

Operational stability – Maintaining production at a constant level generates value for the company, both in terms of productivity as well as in reduction of costs. Currently, all of Fibria's units operate at an operational stability level higher than 90%.

The constant availability of the mills is based on a system of preventive maintenance, monitoring the operation of the equipment through a structured sense-based inspection program. The inspection is conducted by operators and maintenance personnel who use their senses – hearing, touch, smell – to capture noises, heat and odors that could indicate abnormal performance of the inspected equipment. Furthermore, there are vibration inspections using special instruments for mechanical equipment and heat imaging to identify hot spots subject to failure in electrical equipment. Beyond this, in order to check the environmental quality of the activities inherent in the industrial process, Fibria uses an Environmental Performance Index, a management tool that analyzes the level of pollution control. These check-



Control panel (SDCD) of the Aracruz Unit (ES) pulp mill



ups trigger preventive and corrective actions to avoid production shutdowns or slowdowns.

Fibria conducts annual shutdowns in all of its units designed to recover functions, substitute worn equipment and parts and modify processes, thereby maintaining the quality of the installations. In 2012 these general stoppages occurred between May and August.

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, is based on the exchange of experiences among Industrial Units, with the participation of professionals from all levels involved in pulp production.

Biodiversity, ecosystem services and water

Forest protection

Fibria adopts a series of measures to avoid proliferation of harmful organisms in its forests and to make sure they remain healthy. The successful management of the plantations against attacks by pests and diseases is based on a strategy of prevention, monitoring and control cycles that, furthermore, is designed to reduce the occurrence of weeds and losses due to fire.

One of the prevention initiatives is the evaluation of eucalyptus clones in the genetic improvement process. In this process, clones that are resistant to critical diseases and do not require field control are recommended. In 2012, all of the company's clones were evaluated with regard to their resistance, in accordance with the strategy for protecting future generations of plantations. Fibria also invested in the expansion of a laboratory dedicated to research and creation of natural enemies of Eucalyptus pests.

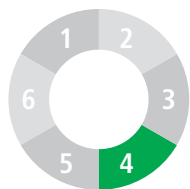
Forest monitoring is conducted continuously, based on the biological aspects of the pests, the pathogens (agents that cause diseases) in eucalyptus trees and weeds. This permanent forest management practice is also designed to permit quick first combat when fires break out. The approach increases the efficiency of the control measures, reduces the use of pesticides and losses in productivity, enhances wood quality and minimizes operating costs. By utilizing monitoring information and guidelines for acceptable limits of infestations, it has been possible to reduce the need to control leaf-cutting ants – a eucalyptus crop's main pest – in all of the company's forest maintenance areas. At the Aracruz Unit (ES), 55% of these areas did not require any control actions in 2012. At the Jacareí Unit (SP), this index was 65%, and at the Três Lagoas Unit (MS), the region with the highest infestation level, it was 35%.

In 2012, Forest Protection research resulted in:

- New opportunities for technological innovation in terms of weed management.
- A technological package for greater efficiency in fighting fires.
- A study into the genetic variability of pathogens, the evaluation of operational clones and review of non-destructive methods for systemic pathogens.
- A cooperative network for the creation and exchange of biological materials and information for the biological control of eucalyptus pests.

Soil management

Soil management deals with the conservation of land and the decision to use practices to prepare the soil in a way that causes the lowest impact possible for the environment and the community. Appropriate soil management plays a key role in the sustainability of our



plantations and their ecosystems. This practice includes plantation area selection based on soil suitability and land preparation; it takes into account environmental constraints that may impact on plant growth. Soil conservation, balanced fertilization and maintenance of crop residues – roots leaves, twigs and bark – are common practices in Fibria's soil management program.

Fibria's soil management techniques take into account regional soil differences, the peculiarities of the genetic material used and results from research and monitoring during successive plantation cycles. Fibria also invests in soil mapping of its plantations and has created a database, allowing the establishment of a single source for technical classification of soils and a set of performance standards according to the soil properties in each area.

Fibria's forest fertilization process recently was reviewed, which led to the enhancement of fertilization management and a reduction in the number of nitrogen (N), phosphorus (P) and potassium (K) formulations in plantations. Furthermore, the company expanded its automated fertilization management and control system,

with gains in logistics, safety in application and costs. In 2012, further studies were conducted on the critical level of organic matter in the soil, through more accurate indicators to evaluate soil use alterations. Studies were continued of models to quantify soil compaction levels and soil and water losses from erosion, as well as newly recommended fertilization tools, with the goal of establishing a single soil fertilization and conservation strategy for the company.

Increased forest productivity is crucial to the company's competitiveness. This is a great challenge in intensive management regimes and increasingly requires the use of specialized and conservationist technologies. A new technology that has started to show good results is the mechanization of sloped areas using the Rotree system, which allows for joint operations of soil tilling, fertilization and herbicide application, thus streamlining these processes. Fibria's Forest Management Plans is available online at (www.fibria.com.br/web/en/midia/publicacoes.htm).

Sustainability in practice



Lime sludge, biomass ash, dregs and grits are all solid wastes generated during the pulp manufacturing process. This waste is reused as soil correctives in plantations of the Aracruz Unit (ES). This process brings economic and environmental advantages, including reduced amount of waste deposited in industrial landfills, greater savings in the purchase of lime and other fertilizers and an improvement in overall recycling efforts. In 2012, the volume of waste that was the utilized in the plantations totaled 65,150 tons, generating overall savings of about R\$9.85 million.

Nearly 100% of the biomass boiler ash, 100% of the lime sludge and 25% of the dregs and grits are reused. With the startup of a waste processing unit in 2013 in Jacaré (SP) and another in Três Lagoas (MS), there will be full reuse of the ash, sludge and dregs produced in these locations. These units will have capacity to recycle more than 86,000 tonnes of waste/year as soil corrective and fertilizer.

Biodiversity



Defined as the variety of living organisms in ecological systems, the Earth's biodiversity is currently threatened by human activity. In Brazil, the historic process of land occupation and use has led to the fragmentation of two important biomes considered to be global conservation hotspots: the Atlantic Forest and the *Cerrado* (Brazilian savanna). Fibria operates within this context. Environmental conservation for Fibria is part of the company's vision, due to the intrinsic relationship of its business with the environment. Its eucalyptus forests are FSC® certified – Aracruz (ES), Jacaré (SP) and Três Lagoas (MS) Units – and Cerflor/PEFC certified (Aracruz and Três Lagoas Units), thus ensuring international standards for the company's forest management. Moreover, about 36% of the total land area owned by Fibria has been set aside for the conservation of biodiversity and ecological processes. For Fibria, caring for biodiversity not only guarantees the continuity of its business, maximizing the productivity of its forest plantations, but is also an opportunity to contribute to the sustainability of the ecosystems in which it operates.

These conservation areas represent different types of ecosystems and are scattered along rivers and in large blocks, forming a mosaic landscape where eucalyptus plantations are interspersed with native vegetation. This practice favors the implementation of Fibria's biodiversity conservation strategy, through which the company seeks to reduce the negative impacts and make use of the positive ones for forest management purposes, increasing the diversity of the habitats for species and protecting High Value Conservation Areas (AAVCs) and endemic, threatened and rare species.

To monitor the efficiency of its actions, Fibria maintains a biodiversity database that lists the species that exist in the company's areas. We have already recorded the presence of 680 species of birds, 132 species of mam-

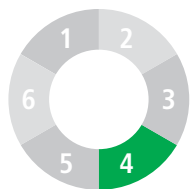
mals and 1,960 plant species. Out of the total number of birds, 21 species are considered endangered or vulnerable at the domestic level (IBAMA list). This demonstrates that Fibria's forests serve as an area for shelter, reproduction and transit for innumerable species, and that the management model has been capable of maintaining an environment that is adequate for the species over various planting and harvest cycles. Some initiatives that have contributed to the conservation of biodiversity in Fibria's areas are:

- **ecological corridors:** strips of eucalyptus plantations connecting patches of native forest in order to contribute to the movement of local animals within the region;
- **tree bridges:** maintenance of standing trees in eucalyptus harvesting areas to facilitate movement of birds between patches of native forest;
- **harvesting mosaic:** maintenance of standing eucalyptus tracts while other trees are harvested within the same area, in order to maintain environmental stability;
- **psittacine parrots, macaws and parakeets quarters:** some eucalyptus tracts are used by groups of psittacines as resting and sleeping quarters. Special care is taken during harvesting not to cause significant impact on these groups;
- **fruit tree species in forest restoration:** use of certain tree species bearing fruit eaten by native fauna in forest restoration planting.



Red-browed Amazon (*Amazona rhodocorytha*) treated by CEREIAS*, Aracruz (ES)

*Center for Reintroduction of Wild Animals.



Fibria's strategy to conserve biodiversity encompasses:

- wildlife protection,
- conservation areas,
- forest restoration,
- landscape management,
- engagement with conservation forums,
- environmental training,
- biodiversity-community projects,
- land and marine environment monitoring.

Significant impacts on biodiversity – One of the main monitoring actions being carried out by Fibria to evaluate the impact of its operations on biodiversity regards birdlife. Due to their great sensitivity to dis-

turbances in the environment, birds are considered to be reliable indicators of the effects produced by forest activities in terms of biodiversity. Therefore, Fibria has been monitoring bird species that frequent or shelter in its area of management. The presence of a high number of species of birds in the forest management area – approximately 15% of those existing on the Atlantic Forest lists and 4% of those existing on the Cerrado lists – indicate that eucalyptus plantations are used as a habitat by many species, as well as working as a transit area and connection between native vegetation fragments.

Strategies, current actions, and future plans for managing impacts on biodiversity – In 2012, a strategic plan for biodiversity research began to be implemented, involving research and development activities such as conservation of threatened species, sustainable use of biodiversity, assessment of the impacts of forest

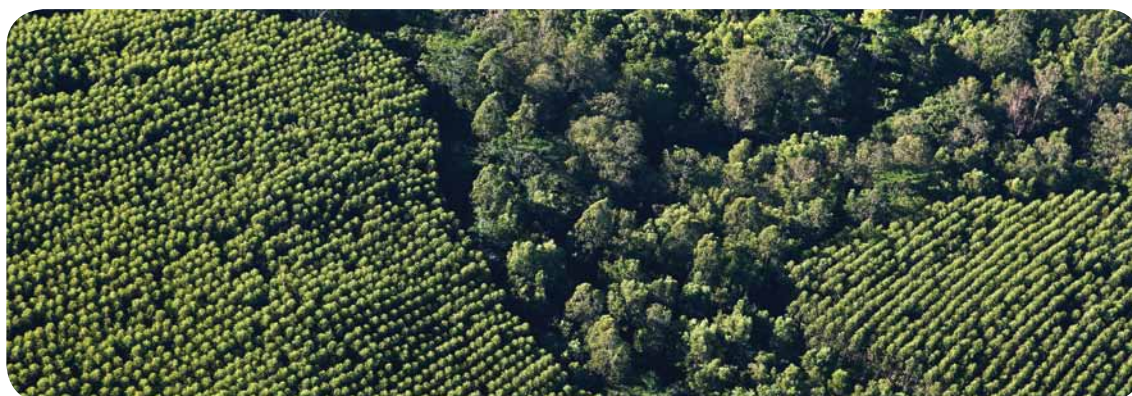
Restored and protected habitats¹

	(in hectares)	Aracruz	Capão do Leão ²	Jacarei ³	Três Lagoas
Size of protected habitats	Atlantic Rainforest				
	2010	123,570.0		55,767.2	6,282.0
	2011	124,060.0	–	55,620.0	10,980.0
	2012	125,023.3	–	56,006.0	6,921.4
	Savanna (Cerrado)				
	2010	–	–	7,420.0	65,576.0
	2011	–	–	7,690.0	88,620.0
	2012	–	–	7,424.2	92,930.4
	Mangrove				
	2010	–	–	–	–
	2011	–	–	–	–
	2012	–	–	–	–
	Restinga biome				
	2010	4,785.6	–	–	–
	2011	5,270.0	–	–	–
	2012	5,402.5	–	–	–
	Pampa biome²				
	2010	–	59,725.2	–	–
	2011	–	60,210.0	–	–
	2012	–	–	–	–

1. The areas cited include areas designated for conservation purposes (Permanent Preservation Areas and Legal Reserves). The restoration in Fibria is made in accordance with the Protocol of the Pact for the Restoration of the Atlantic Rainforest and the Ecology Laboratory for Restoration and Forestry of the University of São Paulo (LERF / USP). The company has a partnership with state governments for protection of Conservation Units. The variations in numbers are mainly due to changes in the area of leasing, partnerships and development, which may fluctuate from year to year, and the purchase of land, mainly in Três Lagoas Unit, for the expansion of production capacity of the mill.

2. Unit sold in 2012.

3. Capão Bonito and Vale do Paraíba.



management practices, ecological landscaping projects and ecosystem services. Furthermore, in São Paulo, Fibria participates in the Paraíba Valley Ecological Corridor Initiative (www.corredorecologico.org.br), and the Pact for the Restoration of the Atlantic Rainforest (www.pactomataatlantica.org.br).

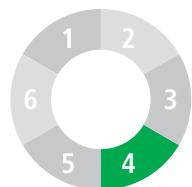
Ecosystem services – Ecosystem services consist of all the benefits obtained by people derived from ecosystems. Fibria conducts studies to identify the main ecosystem services consumed in the company's production, together with all others that stem from the forest management model. The natural fertility of the soil, the use of industrial waste as fertilizer and water

consumed in the industrial processes and in the plantations, among others, were identified as ecosystem services consumed. For their part, the ecosystem services produced included carbon sequestration, climate regulation, control of erosion and production of electricity based on biomass. In 2012, a tool was created – that will be tested in 2013 – to quantify the generation of value of the socio-environmental field actions, such as an ecological corridor. Analysis also began in 2012 regarding the applicability to Fibria's business of tools for measuring the value of environmental services, such as INVEST (in partnership with The Nature Conservancy) and ESR (in partnership with the sustainability area of Votorantim Industrial – VID).

Evolution of the Long-Term Targets



The work of biodiversity conservation, forest protection and soil management enables Fibria to meet its Long-Term Targets. With its restoration techniques and the care it takes regarding soil and plants, the company has achieved a restoration rate of 2,000-2,500 ha per year, a significant improvement in meeting the target of promoting environmental restoration by 40,000 ha of own land by 2025. In the region of the Atlantic Forest Central Corridor (Espírito Santo, Bahia and Minas Gerais), 2,507 ha were restored in 2012, totaling 8,700 hectares in the past three years. One action to have impacted on this target is the biodiversity study that identifies and recommends planting tree species containing fruits that are used mostly as food by the local fauna. After eating the fruit, birds disseminate the seeds around Fibria's lands, helping the restoration process in a natural manner. The initiatives intensifying management, fertilization practices and advanced harvesting favor the increase in the annual production of pulp per hectare, contributing to the target of reducing the amount of land needed to produce pulp by one third.



Water resource management



Water resources are one of the main inputs for pulp production. As a result, Fibria's strategy includes actions for the protection of this resource, which is appropriately managed from initial capture, through use and finally proper disposal as an effluent; always with the aim of achieving what can be considered its ecoefficient utilization (i.e., produce more with less).

The company continuously monitors its watershed areas (learn more in the glossary) within its operational areas, to prevent or minimize potential impacts from forest management as regards the quantity and quality of water.

At the Aracruz Unit (ES, BA and MG), the monitoring of water resources is conducted in 12 watershed areas linked to the Watershed Area Project, in which the water cycle of one of these experimental small areas containing eucalyptus plantations is studied and analyzed in a detailed manner. In this way, we are able to use the experimental area to evaluate environmental impacts and the ecological interactions of the plantations on surface and underground water. In Espírito Santo, in 2012, a new Watershed Area under a eucalyptus plantation was equipped with measuring devices. The studies in this new area, together with the Águas Claras Experimental Watershed Project, created in 2010, also in Aracruz, will enable Fibria to conduct a comparative analysis between the two types of eucalyptus plantations and their respective effects on water production per watershed area.

Monitoring of water resources at the Jacaré Unit, in São Paulo state, is conducted in two watershed areas through the Watershed Area Environmental Monitoring Network (REMAM) by the Institute for Forest Research and Studies of the Luiz de Queiroz College of Agriculture, at the University of São Paulo (IPEF/ESALQ-USP). In 2012, forestry operations at the Jacaré Unit did not alter the quality or quantity of water available, according to a report released by REMAM/PROMAB. Studies and research based on the Watershed Areas Project began in 2012 at the Jacaré Unit, with the installation of monitoring wells for groundwater in two experimental watershed areas at Igaratá and Capão Bonito, and quantification of the growth of eucalyptus plantations in relation to water used per watershed area.

At the Três Lagoas Unit, Mato Grosso do Sul state, monitoring is conducted by Fibria in three watershed areas, where water quality and quantity are assessed. There was no evidence of significant changes as a result of forest management during the year. In 2012, two watershed areas for research purposes were defined at the Três Lagoas Unit. This completes the study on experimental watershed areas conducted under the Fibria Watershed Areas Project. In these two new watershed areas, currently under pasture, the transition from pasture use to eucalyptus plantations, and its effects on water resources, will be tested.

Also in 2012, Fibria's meteorological station network, which is essential for monitoring the water balance of plantations, was extended through the installation of

Total water withdrawn by source in forestry operations

Unit	Type of withdrawal	2010	2011	2012	Number of points of withdrawal
Aracruz	Surface water (m ³)	307,487	386,252	371,365	14
	Ground water (m ³)	—	—	202,017	6
Jacaré	Surface water (m ³)	201,312	77,541	554,675	545
	Ground water (m ³)	204,660	144,470	—	—
Três Lagoas	Surface water (m ³)	198,558	482,566	410,793	107
	Ground water (m ³)	125,940	31,535	22,970	—

In 2012, the values are based on data collected and estimates for the missing months. The volume was higher because, after creating the control of water withdrawal in 2012, all forest operations (nursery, forestry, roads and harvesting) began reporting its respective withdrawals. For the previous years, the data were based on control grants, mostly from the nursery. In Aracruz, after the treatment plant entered operation and rainwater harvesting began at the nursery, there was a reduction of 9% of withdrawal. The Três Lagoas nursery only ran through the month of June 2012 due to the expiration of the operation, which was modified in 2013 and the operation of the nursery will be conducted by commodate, in which Fibria buy the seedlings.

five new stations at the Aracruz, Jacareí and Três Lagoas Units.

Another advance during the year was the establishment of a project to evaluate the overlap of use of water, avoiding interference in water supplies with local communities. The objective is to evaluate the demands related to water resources to develop methodologies that foster community participation in the management of the water basin area.



Identification of water footprint

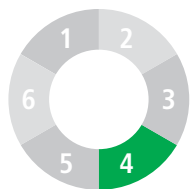
In 2012, the company included management of water resources in its short-term targets. The objective was to conclude during the year the work of identifying the water footprint for producing pulp at its forest and industrial units. The target was reached, with the completion of the study as proposed for the forest base and for the mills at Jacareí, Aracruz and Três Lagoas, pursuant to the methodology of the Water Footprint Network, of which Fibria is an associate member. The next step is to evaluate improvement opportunities based on the results of this study.

Total water discharge by quality and destination –

Water discharged from nurseries comes from two sources: irrigation and domestic wastewater. At the Vale do Paraíba Forest Unit, water is discharged into a filtration pond; at the Capão Bonito Forest Unit (SP), discharge occurs into a filtration trench. In Três Lagoas Unit (MS), the wastewater is routed to septic tanks, and wastewater irrigation, after undergoing a separation box, is released directly into the water body. At the Aracruz Unit (ES), wastewater passes through a gravel box, for the retention of solids, before it is run off. In 2012, a system to capture rainwater and the water treatment plant of the nursery of Aracruz were put into operation. The nurseries in Três Lagoas and Aracruz measured the effluents generated in 2012 that amounted to 102,890 m³. In the Aracruz nursery the effluent is directed to a containment basin to be subsequently reused to irrigate an area of 20 hectares of eucalyptus. The volume of water disposed in forestry operations is not representative compared with industrial operations. It equates to approximately 1% of the volume disposed of in factories.

Detailed monitoring

Fibria checks the quality of the water in its areas using flow towers, which have the most modern equipment available to monitor flows of energy, water and gases and the interaction of the plantations with the environment. Based on this information, it is possible to increase forest productivity using fewer natural resources. The Water Quality Index (WQI), for its part, is a tool that extracts the most significant data that is collected to detect signs that the eucalyptus crop is having a positive or negative effect on water resources. The information comes from over 20 collection points at Fibria's Units and, for each point, a WQI is generated that clarifies the water management results in each region.



Carbon and atmospheric emissions

Climate governance

Climate change is among the major threats to the sustainability of natural resources and, as such, may affect Fibria's business, which produces from renewable forests. Production is based on renewable forests. The adequate management of greenhouse gas emissions generated by our operations and of the absorption of these substances by the eucalyptus plantations and native forest reserves therefore has become essential factors in the company's strategy.

Fibria takes into consideration the physical, regulatory and brand risks related to climate change, although it does not yet quantify the financial implications of these changes in an integrated manner.

The physical risks are associated with climate change and water availability, which could negatively affect the company's activities and, occasionally, its suppliers' and customers'. Fibria's main measures to prevent these risks are:

- 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 the company's water footprint;
- Projects for energy efficiency and improvement of industrial process stability;
- Exploitation of different transportation types;
- Reduction and reuse of waste;
- Preparation of a survey on greenhouse gas (GHG) emissions from company activities, focused on carbon footprint of pulp and CDP Supply Chain.

Through these studies and monitoring activities, Fibria calculated that its commercial plantations provided a positive carbon balance with the growth of the forests and the accumulation of organic materials in the soil. That is, the company's plantations absorb more carbon dioxide than is emitted by its operations.

In the analysis of regulatory risks and also as part of its climate governance practices, Fibria pays attention to the issues related to international agreements, such as the Kyoto Protocol and regulatory measures that are being prepared at the municipal, state and national levels, including the National Climate Change Policy and the State Climate Change Policy (PEMC), in São Paulo. It also monitors what the international agreements establish through the Parties Conferences (COPs), the United Nations conferences that discuss joint actions to prevent climate change. Moreover, it is part of some of the main international initiatives that seek to reduce the risks and impacts of climate change and to control human actions that may lead to climate change at a global level.

Carbon Footprint

Annually, Fibria conducts its greenhouse gas (GHG) inventory, based on the months of January to December of the previous year. The inventories take into account the industrial and forest operations of the Aracruz (ES), Três Lagoas (MS) and Jacaré (SP) Units, as well as their logistical operations for exporting pulp.

Fibria's GHG emissions inventory is carried out according to 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.

In 2013, base-year 2012, the result showed a positive balance in the emissions: 0.8 ton of equivalent CO₂ se-



questered per tonne of pulp produced. There was a 3% reduction in direct emissions and 1% in total emissions. This improvement was impaired by the higher Brazilian GRI emission factor, which in 2012 increased by 248%.

Carbon Efficient Index (ICO2)

Fibra was the first forest company to become a member of the Carbon Efficient Index (ICO2), launched in 2010 by the BM&FBOVESPA and Brazil's National Bank for Economic and Social Development (BNDES). The objective of the ICO2 is to strengthen corporate commitment with management practices aimed at mitigating climate change and to prepare the market for a low carbon economy.

CDP Supply Chain – Fibra responds voluntarily to the questionnaire issued by the Carbon Disclosure Project (CDP), an independent organization that collects information about the performance of companies with regard to climate change and water scarcity, to efficiently manage greenhouse gas emissions and natural resources. Moreover, it is part of the CDP Supply Chain Project, which seeks to foster climate governance among its suppliers and to identify points of improvement in their businesses. Thus, it seeks to transmit to

its partners the same environmental awareness upon which its own actions are based.

The company began to distribute the questionnaire to its suppliers in 2010 and in the first year obtained a 55% response rate. In 2012, the evolution was quite significant: 93% of its suppliers answered the document. Thanks to the project, some companies created sustainability committees, began to use specific software to monitor their emissions and joined climate governance protocols, such as the CDP and the GHG Protocol.

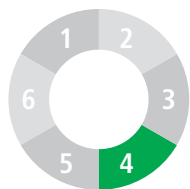
Evolution of the Long-Term Targets



All of these climate governance actions contribute to Fibra's meeting its long-term target to double carbon absorption from the atmosphere by 2025. To reach this goal, the company will continue to improve its measurement techniques and invest in forest planting and restoration initiatives to increase the capacity to sequester GHGs.

Carbon Balance

	2009	2010	2011	2012
Emissions (CO₂ eq)				
Forest operations	298,265	340,611	382,994	341,572
Industrial operations	1,205,170	758,952	767,698	836,115
Logistics	627,147	525,138	570,616	608,943
Total 1	2,130,582	1,624,701	1,721,308	1,786,630
Burning of biomass (CO₂ eq)				
Total 2	9,060,139	11,072,468	11,263,152	11,705,687
Sequestration (CO₂ eq)				
Planted forest	24,985,243	20,261,632	18,043,443	16,424,836
Native forest	1,049,946	1,049,946	1,049,946	1,819,337
Total 3	26,035,189	21,311,578	19,093,389	18,244,173
Balance [total 3 - (total 1 + total 2)]	14,844,468	8,614,409	6,108,928	4,751,856



Emissions

The issues relating to the management of atmospheric emissions are already inherent in Fibria's operations. The company has developed technology to control and reduce these emissions. This guarantees that it operates using the best global practices, with very low levels of odor and particulates. Furthermore, by the very nature of its business, based on commercial forest plantations associated with native vegetation restoration and conservation areas, Fibria presents a positive balance between carbon atmospheric emissions and sequestration.

Regarding the industrial process, as well as seeking to reduce and control sources (equipment and processes) that generate odor, the company has also implemented Odor Perception Networks (OPNs) made up of volunteers from neighboring communities who are trained to identify odors and report to the company any occurrence in the vicinity of the mills.

Another important initiative for management of emissions is the company's sustainable energy matrix, based on renewable resources such as wood and black liquor, a fluid used in the wood cooking procedure to

separate the pulp fiber from other components. All of the energy matrixes of Fibria's Industrial Units have a minimum of 89% of these materials. Thanks to this, these Units operate with low levels of carbon dioxide emissions. In 2012, self-generated power at the Três Lagoas Unit exceeded the facility's required consumption by 46%. At the Aracruz Unit this surplus was 8%. The combined exportation of the surplus energy generated revenues of R\$38,623,527.85.



Waste and effluents

Waste

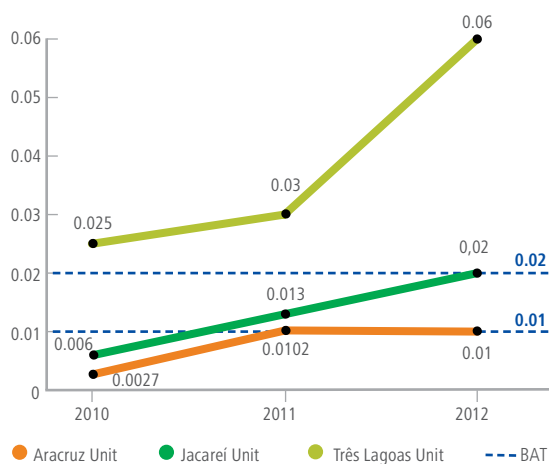


Adequate management of the waste produced by its operations is a priority for Fibria, with a definition of long-term targets: by 2025, the company intends to reduce the quantity of solid industrial waste for disposal in landfills by 91%. This target is to be achieved mainly through two actions: reducing the generation of waste at the source, through process analysis and optimization; and recycling, especially of organic substances.

Eco-efficient vanguard

Fibria has implemented an innovative initiative, transforming waste stemming from the production of pulp into products that can be applied in the forest area. All inorganic waste generated in the mills – dregs, grits, lime mud and boiler ash – is processed and returned to the forest in the form of a soil acidity corrective product, which has been approved by the Ministry of Agriculture in Brazil. As such, no waste is sent to landfill generating savings because limestone (a soil corrective) no longer needs to be purchased from the market. This process, which had already been in place at the Aracruz Unit, will also be implemented at the Três Lagoas Unit in 2013. In 2012, the amount of waste re-utilized in the forest plantations totaled 65,150 tons, generating savings of about R\$9.85 million.

TRS
kg/adt



TRS – total reduced sulphur
adt – air dried ton
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.



Waste (in t)¹

	2010	2011	2012
Total waste generation	981,402.48	961,372.07	1,116,503.77
Hazardous waste	1,022.36	534.38	546.29
Non-hazardous waste	980,380.12	960,837.69	1,115,957.48
Waste reutilized (%)	73.1%	71.6%	75.3%
Disposal of waste in landfills (%)	21.6%	26.8%	23.6%

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 in the chapter Forest Management – Waste.

Effluents

Fibria' management of its effluents extends throughout the company's operations, seeking the least possible impact on the environment. Based upon modern technologies and processes, the effluents are treated to remove the maximum amount of organic materials and pollutants possible. They can then be put back into the environment without harming the Paraíba do

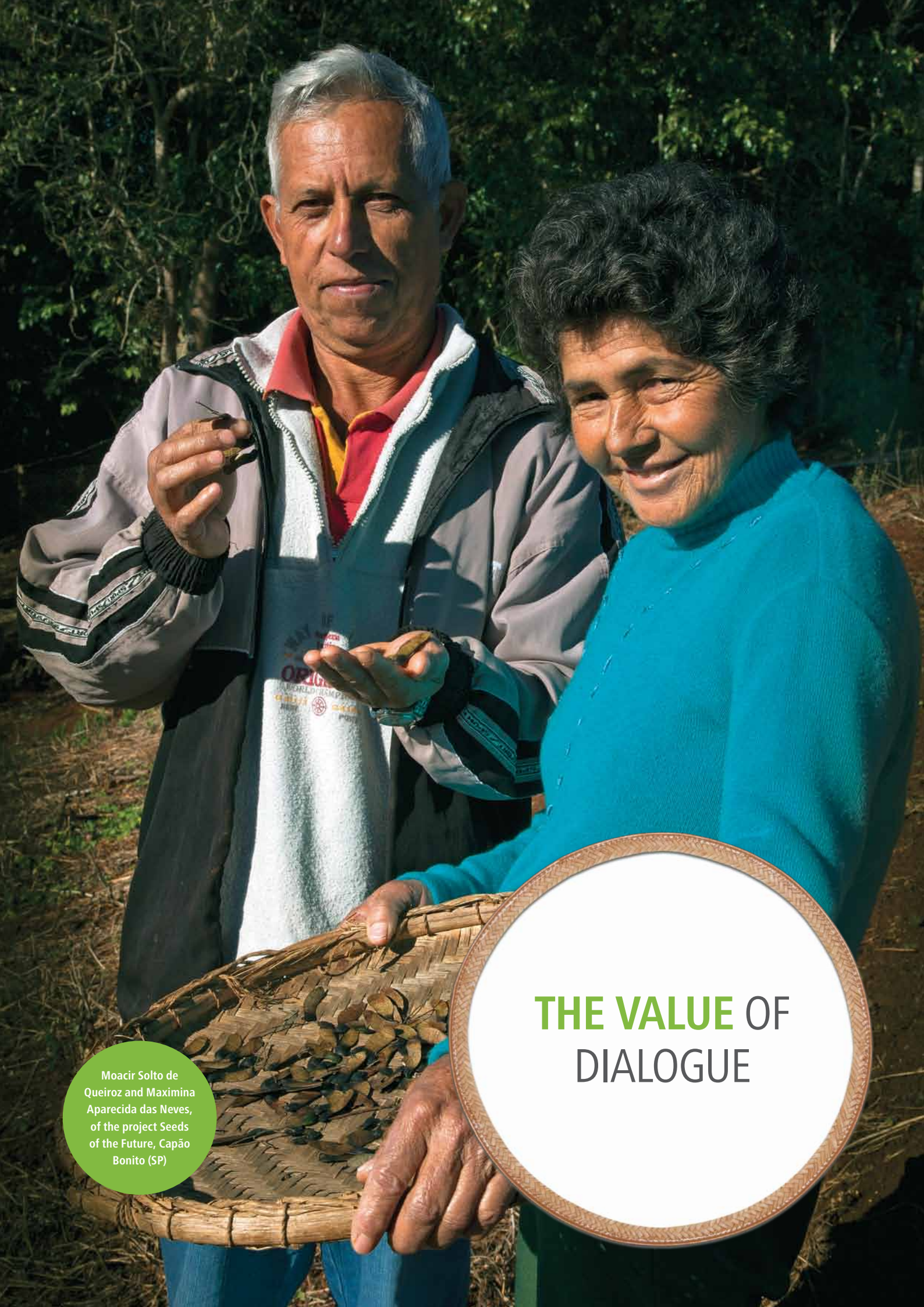
Sul River in the case of the Jacaré Unit; the Paraná River, at Três Lagoas; and the ocean, in the case of Aracruz.

In 2012, the Aracruz Effluent Treatment Station was revamped. After more than 10 years, the Unit's effluent lagoon was cleaned, with removal of mud laid down by sedimentation derived from the effluent treatment process. As a result, operating efficiency was boosted.

Percentage and total volume of water recycled and reused

	Aracruz			Jacaré			Três Lagoas		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Percentage of water recycled and reutilized	76%	77%	77%	84%	79%	77%	80%	81%	83%
Volume of water recycled (m ³)	ND	263,949,399	265,042,771	163,987,200	136,717,534	119,614,572	ND	201,387,444	219,987,248
Total water withdrawal (m ³)	ND	107,325,576	122,419,512	ND	28,591,030	27,535,545	ND	38,589,789	36,844,015





Moacir Solto de
Queiroz and Maximina
Aparecida das Neves,
of the project Seeds
of the Future, Capão
Bonito (SP)

THE VALUE OF DIALOGUE

Social Performance



Local Communities

Relationship with local communities

In 2012, Fibria's socioenvironmental responsibility programs and activities reached out to around 150,000 people, spread across 254 municipalities in seven Brazilian states (Rio Grande do Sul, Sao Paulo, Mato Grosso do Sul, Espírito Santo, Bahia, Rio de Janeiro and Minas Gerais) – regions where the company has mills, plantations, conservation areas or has contracts with sponsored producers.



Two Long-Term Targets for 2025 reveal the importance of local communities to Fibria's strategy for sustainability. The company has made a commitment to contribute to the development of the regions in which it operates, generating healthy profits in tandem with environmental conservation, social inclusion and improved quality of life. Each year, the company makes progress in its efforts and resorts to dialogue to seek joint solutions, as it fine tunes its relations with the local communities and its social investment.

- Attain an 80% approval rating amongst the neighboring communities;
- Strive to help 70% of the income generating projects supported by the company to become self-sustaining.

Local community relationship model

To connect with the communities situated in the vicinity of its operations, Fibria follows a Relationship Model, common to all the company's units, that involves four kinds of approach.

- **Engagement:** ongoing and deeper relationship with communities that are most affected by Fibria's operations, whereby the company assumes the role of partner in local development. In rural communities the relationship is conducted through the Rural Land Development Program (PDRT).
- **Operational Dialogue:** form of relationship whereby local communities, other neighbors, local leaders and local government representatives are informed in advance of any forestry operations scheduled for the area and have the opportunity to discuss their impacts and ways to mitigate them.
- **Constructive Dialogue:** instruments of dialogue aimed at disseminating Fibria's activities and enabling the exchange of information that is of mutual benefit. They are intended for all stakeholders with an interest in the company's activities.
- **Face-to-Face Meetings:** visits by Fibria representatives to communities that are not covered by Engagement and Operational Dialogue, in order to understand the local situation.



Viviane Oliveira,
Community
Association of the
Angelim Nursery,
São Mateus (ES)

The Rural Land Development Program (PDRT) is currently, the primary tool for engagement with rural communities. The aim of the program is to develop legitimate leadership, build social capital and restore a sense of citizenship and self-esteem. The program innovates by constructing a process of dialogue using participatory tools and methodologies. The main focus of the PDRT is on training the community to resolve its own needs and to gain access to public policies. Program initiatives include technical assistance, improvements in production, social organization, certification and differentiated marketing, which yield increased average household per capita income. In 2012, the program had a budget of R\$5.7 million and reached out to 24 communities in 5 municipalities (Aracruz Unit), benefiting 984 families, with more than 1,530 hectares of Fibria's planted forests converted to family farming.

Community Relations and Social Investment Strategy

Phase 1: Survey and mapping of affected communities

Phase 2: Development of a Priority Matrix, defining the key communities for relations, taking into consideration their socio-economic vulnerability, the impact of the company's operations on the community, and the municipality's importance to Fibria.

Phase 3: Dialogues with the priority communities, to assess their needs and demands.

Phase 4: Definition of the forms the relationship will take and monitoring of the community's development.

Investment in local communities¹ (in R\$)

	2010	2011	2012
Fibra ²	10,306,816	16,419,000	18,370,000
Instituto Votorantim via Fibria	3,200,000	4,196,000	2,630,000
Incentivized projects	587,910	1,993,138	1,523,000
Investment from the Votorantim Institute (resources raised through BNDES and own) ³	NA	2,630,000	4,523,000
Total	14,094,726	25,238,138	27,046,000

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

3. R\$2,439,000 from the Votorantim Institute and R\$ 2,084,000 from BNDES.



To help in funding the community projects, Fibria invests in partnership with other institutions, such as customers, suppliers, the Votorantim Institute and the BNDES.

Relationship with specific communities



Although Fibria still has conflicts with certain groups, especially in the poorest regions of northern Espírito Santo and southern Bahia, the roots of these conflicts are not always related to the company and a solution does not depend solely on Fibria. Nevertheless, resolving these issues is a priority for the company and it has been working to this end, holding dialogues with the communities, government, NGOs and other companies that can contribute to a lasting solution.

Relationship with Black communities – Fibria has sought to strengthen its dialogue with these communities, some of which are referred to as quilombolas – descendants of escaped slaves – and are populated by their descendants contributing to their development with projects for income generation and employment. The main form of engagement with this group is the Rural Land Development Program (PDRT). The company has set a target for 2013 initiating dialogue on the issue of the demarcation of land for the quilombola communities. This dialogue should lead to a pilot project for a community in the vicinity of a Fibria area and involve the participation of a variety of protagonists.

Relationship with Indian communities – Fibria seeks to support the indigenous peoples of Aracruz, in Espírito Santo, in their efforts to occupy their original lands, restoring forests and enhancing the family farming systems. To this end, in 2012, it drew up the Sustainability Program for the Tupiniquim and Guarani of Espírito Santo, which aims to enable the Indians to restore the environmental state of the Tupiniquim, Caieiras Velhas II and Comboios Indian lands, so that they can revive their socio-cultural practices,

assert their ethnic identity and sustainable economic activities. Three indigenous lands – covering 18,287 hectares and containing 12 villages – are neighbors of Fibria in Espírito Santo. There are around 760 families there, of which about 130 have joined the program. In Mato Grosso do Sul, the company has a relationship with a community of 30 families of the Ofaíé tribe, who live on a reservation that is well structured, despite unresolved land issues.

Relationship with land reform movements – Fibria has been investing in dialogue to resolve a dispute created by the invasion of company areas in the south of Bahia by members of the MST (Landless Rural Workers Movement). From this understanding, the Dawning Project was born and started to be implemented in 2011. The area occupied by the MST, with 7 camps on 5 Fibria farms covering a total area of 12,000 hectares, was expropriated in 2012 and compensation was paid by INCRA (National Institute for Settlement and Agrarian Reform). Today, 1,127 families, totaling more than 4,000 people, are settled there. Everything produced in the settlements is sold, yielding an income of approximately R\$400,000 in 2012 from the sale of flour, chicken, pepper and charcoal. What is more, at the MST's request, construction began in 2012 on an agroforestry production training center for the region.

Relationship with fishing communities – Fibria has a relationship with traditional fishing communities in the two regions where it operates marine terminals: the Barra do Riacho district of the municipality of Aracruz (ES), where Portocel is located, and Caravelas, in southern Bahia. In these areas, the company seeks to strengthen the relationship through dialogue, social activities and measures to support local fishing. Important advances occurred in 2012, and the company will offer technical assistance to families that make a living from fishing, as well as other benefits to add value to their product. The company also sponsored a course in cooperativism for 16 managers of cooperative associations in the region.



Impact on local communities

Fibria defines the social impact on communities as any harmful or beneficial change that is wholly or partially a result of its forestry or industrial operations. The company considers that communities located within a radius of three kilometers from its property or areas leased for the purpose of cultivating eucalyptus are directly affected by its forestry activities.

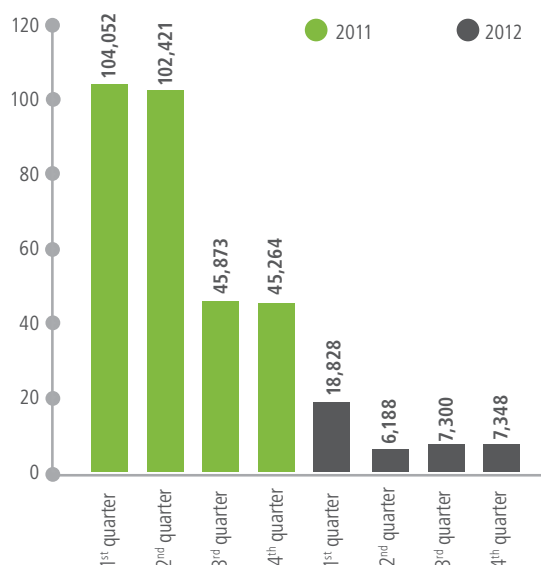
In order to minimize or mitigate any negative impacts, one has to know what they are. That is why Fibria performs a mapping of all significant social impacts and classifies them according to type (adverse or beneficial), detection (occurring or potential) and effect (direct or indirect). The significance is determined using the Social Impact Matrix, which applies a weighting to factors such as severity, frequency, probability and scope. Moreover, Fibria takes into consideration complaints received through its communication channels and/or information obtained through the processes of Engagement, Operational Dialogue and Face-to-Face Meetings. The list of impacts that are considered significant is disseminated to stakeholders.

The significant adverse impacts that have been identified

include items such as alteration of the local landowning structure, reduction of the quality and capacity of the local road network, alteration of water availability and quality, reduced food security, and the generating of odors, noise and smoke. Fibria seeks to reduce these negative impacts, ensuring that control and mitigation are included in the operating procedures contained in the management system and channeling social-environmental investments into the most affected communities and regions.

Volume of stolen wood

(thousands of m³)



Theft of wood

The theft of wood, often in association with arson, has been significantly reduced, but remains a problem for Fibria in northern Espírito Santo and southern Bahia. The volume of wood stolen from Fibria's property in 2012 was approximately 40,000 cubic meters and represented a loss of about R\$1.8 million. This loss, however, was much lower than that of 2011, when about 297,000 cubic meters of wood was stolen from the company, causing a loss of over R\$12 million. In parallel to action taken by the authorities, the company has undertaken several initiatives to approach local communities and promote the generation of employment and income in the region. In Bahia, the construction of the Helvetia Seedling Production Unit has been accelerated and is keeping the local workforce busy. Furthermore, in June 2012, the Atlantic Forest Center and the Bahia Institute of the Environment and Water Resources conducted an operation that resulted in the deactivation of 2,063 illegal charcoal producing ovens.

Logistics risks

Wood handling logistics – The wood that supplies Fibria's industrial units is mostly transported by trucks. The traffic causes environmental and social impacts that Fibria seeks to anticipate through Operational Dialogue with local communities and control measures. Rail transportation is used to carry wood from sponsored areas in Minas Gerais and storage in Espírito Santo to the Aracruz Industrial Unit.

For transportation between the Caravelas maritime terminal, in Bahia, and the barge terminal at Portocel, in Espírito Santo, the company uses sea-going barges. The company has sought to increase the volume transported by this method, which is more economical and safer than trucks, as well as provoking significantly less social and environmental impacts, such as minimal CO₂ emissions. To mitigate the negative impacts of shipping on local communities, Fibria organizes income and employment-generating activities in the port areas of Caravelas (BA) and Barra do Riacho (Aracruz, ES) and supports the project of the Humpback Whale Institute to increase the whale population off the Brazilian coast, which according to a survey conducted in 2011 recorded 11,418 individuals of the species – nearly 20% higher than in 2008. Fibria also supports the local outpost of the Fishery Resources Management and Research Center for the Brazilian East Coast (CEPENE/IBAMA) in projects related to the ecology of the Caravelas coast mangrove and the production of seedlings of native fruit trees that benefit the local population.

Fibria monitors of the estuarine dolphin, which has been carried out by Fibria on the Caravelas river estuary and vicinity since 2002. Results obtained up to 2011 do not show any negative impacts of dredging activities and maritime transportation on the environment.

Pulp handling logistics – Of the 4.74 million ton of pulp produced by Fibria in 2012, 90% was for export to countries in Europe, North America, Asia

and Latin America. To meet this demand, the output of the Tres Lagoas (MS) and Jacareí (SP) units is transported by rail to the port of Santos (SP) and loaded onto vessels headed for various parts of the world. Meanwhile, the pulp from the Aracruz Unit (ES) travels 4.5 kilometers in trucks to the Portocel terminal, from where it is shipped to Asia, Europe and the United States.

One of the major beneficial social impacts of the pulp logistics is job creation throughout the pulp distribution chain. The health and safety of the people working in this chain is closely managed and given constant attention by Fibria. Gas emissions by internal combustion engines represent the main environmental impact. Fibria's supplier management process establishes requirements, such as maximum fleet age and equipment inspection and maintenance, and imposes penalties for non-compliance with minimum service standards, which ensures low emission levels consistent with the most stringent criteria.

In 2012, a contract was signed with the South Korean company STX Pan Ocean for the construction of 20 vessels to be used as a dedicated fleet for the transporting of Fibria pulp abroad. The first vessel, the STX Arborella, went into operation in October 2012, embarking pulp at Portocel destined for the company's terminals overseas.





Consulting the local communities

Fibria has sought to broaden its relationship with communities in the vicinity of its operations, by strengthening the process of dialogue and giving attention to criticism and suggestions from community leaders and residents in São Paulo, Mato Grosso do Sul, Espírito Santo and Bahia. To monitor how Fibria is regarded by the population in these localities, the company has hired consultants – Dr. Adriana Imperador and Dr. Marcos Gimenez – to interview some of these people in different parts of the country. There follows a critical analysis by the consultants of the responses they have received. You can read the interviews at: www.fibria.com.br/rs2012/en.

Critical analysis of the interviews

The eight interviews that comprise the Consulting the Local Communities chapter of Fibria's 2012 Sustainability Report were conducted in January and February 2013. The interviews, four of which were face to face and four by telephone, addressed the ten main topics identified in the Materiality Matrix.

The people chosen are community leaders, presidents of associations as well as other representatives of organized groups and other individuals who shape public opinion in the communities located in the vicinity of Fibria's forests or industrial units in the states of São Paulo, Bahia, Mato Grosso do Sul and Espírito Santo. The interviews were conducted by professors in the fields of Environmental Engineering Sciences, Environmental Law and Collective Rights.

In a comparative analysis against previous years, there is evidence that Fibria has developed closer relations with the neighboring communities. It is clearer to the interviewees the conditions under which the company performs its industrial and forestry activities, thereby reducing the fears of local residents regarding the potential hazards and environmental impacts of such activities in their community.

Certain trends were prominent in the statements of the majority of the interviewees, such as Fibria's Rural

Land Development Program (PDRT), which supports family farming activities and contributes to income generation and community development. Another tendency is related to the availability of water in the communities. It is clear that this resource is scarce in rural areas, for small-scale livestock and family farming, which are encouraged and supported by Fibria. However, the availability of this resource and its accessibility to families is still an obstacle that must be considered more carefully.

Sustainability strategy/commitment – In a comparative analysis against previous years, great expectations have been raised in certain communities regarding the implementation and start-up of activities under Fibria's Rural Land Development Program (PDRT).

With regard to employment generation, it was generally stated that it is still insufficient, with some leaders saying that this is due to a lack of skill development and training of the available manpower. Nevertheless, it is worth pointing out that the migration of labor from the illegal exploitation of charcoal, due to the alternatives offered by the company under the PDRT program, is viewed positively by the interviewees. In the forest scenario, there are several quotes from interviewees about the restoration of areas that are of ecological interest, such as the riparian forests, and the reforestation of Permanent Protection Areas (APPs).

Certification and voluntary commitments – In general terms, the interviewees have little knowledge about the certification of Fibria's forestry and industrial activities. There are isolated statements in São Paulo and Espírito Santo from people who participated in the certification process and, therefore, were aware of a number of the criteria and indicators that have to be met by the company.

Ethics – There was homogeneity in the responses of the interviewees in relation to Fibria's ethical posture, and this factor is viewed very positively. According to the statements, this is due to the company's development of closer relations with the local communities. The cred-



ibility and trust in relation to the forestry and industrial activities is due to the concern over communication and clarification, thus reducing the anxiety that had been present in previous years.

Forestry Partners – Few interviewees were able to offer an opinion regarding forestry partnerships and most were unaware of this program.

Neighboring communities – There were divided opinions among the interviewees regarding this item. It is interesting to note that some statements showed that the company has an excellent relationship with the local communities, particularly in relation to activities by the company, including voluntary efforts. However, there are some in the local communities who are still unaware of the activities carried out by Fibria.

Specific communities – This refers to black, Indigenous, traditional fishing and landless worker communities that are affected, directly or indirectly, by the company's actions in the region. Specifically in Bahia and Espírito Santo, the interviewees stated that in previous years there had been tension in Fibria's relations with specific communities, but that a harmonious and trusting relationship had been established between the parties.

Biodiversity – The interviewees recognize Fibria's efforts in fostering and supporting projects and programs for the restoration of degraded areas, riparian forests and Permanent Preservation Areas (APPs). However, there are reports that wildlife in the region has been significantly reduced, including animals that have provided a traditional food source for local residents.

Water use – With regard to the water used in industrial activities, there was unanimous recognition that Fibria does not have a significant environmental impact and treats the water used before returning it to the environment. But with regard to the water used in the planted forests, there was unanimous criticism in relation to the scarcity of this resource, although some of the interviewees admit that climate conditions have contributed to the severe drought, especially in Bahia and Espírito Santo; others believe however, this is due to the expansion of the area planted with eucalyptus.

Emissions, effluents and waste – Some interviewees stated that they notice the effects of pollution and odors near the industrial areas. Nevertheless, they realize that there has been a significant change in emissions control. With regard to solid waste, the interviewees believe that Fibria treats, handles and disposes of the material in an appropriate manner.

Environmental hazards – The communities living near the company's forests state they feel safe in regard to Fibria's activities, since the company provides frequent visits for technical clarification, particularly during planting, harvesting and the transporting of logs. One interviewee, who lives near an industrial unit, stated that the residents of the neighborhood where he lives feel insecure with regard to Fibria's activities and fear the consequences of accidents in relation to possible problems with the recovery boiler.

Names of respondents in neighboring communities of Fibria's operations:

Ironildes Lopes Martins, president of the São Silvestre Residents Association, Jacareí/SP. **Anagildo Bonalate Tibuiba**, president of the Angelim 1 Community Association, and **Zulmira Tibuiba Solto**, **Benedito de Souza Trindade**, **Maria Aparecida Parenti**, **Dejanira Guimarães Tibuiba**, **Getúlio Guimarães**, members of the Angelim 1 Community Association, Conceição da Barra/ES. **Benedito dos Santos Quintiliano**, president of Rio do Sul Quilombola Association, Nova Viçosa/BA. **Marcio Soares de Assis**, representative of the Sombra da Tarde Community Association, Alcobaça/BA. **Alba Batista do Nascimento**, president of the Barbosa Community Association, and **Charles Batista do Nascimento**, secretary of the Barbosa Community Association, São Mateus/ES. **Cícero Godoy Vasconcelos**, president of the Beekeepers Association and Cooperative of Brasilândia/MS. **Cristiane Aparecida de Paiva Bittencourt**, lawyer, São Luiz do Paraitinga/SP. **Hélio Kull Silva**, Forestry engineer, Capão Bonito/SP.



How we work

Suppliers

To guarantee the efficiency of its chain of production – from the growing of forests through to the delivery of pulp to clients – Fibria counts on a diversified and dispersed supplier base at all of its locations. Currently, Fibria has some 20,000 registered suppliers, with widely differing profiles – from small farmers through medium and large transportation and other companies, both Brazilian and multinational. The management of this chain of supply is carried out with a regional focus and according to the stage of development of the suppliers.

Furthermore, Fibria seeks to engage with its supply chain in order to identify and share the best social and environmental practices and ensure respect for workers' rights. Upon contracting suppliers, they are required to comply with environmental policies and transportation safety criteria as spelled out in Fibria's Safe Road Program Manual. The company also encourages its suppliers to survey and reduce carbon emissions, joining the Carbon Disclosure Project (CDP) Supply Chain, which promotes climate governance in the companies' supply chains. Learn more about the CDP Supply Chain in the Carbon and Atmospheric Emissions chapter.

Accreditation and audits – In the process of accrediting its suppliers, Fibria seeks to identify risks stemming from the supply of materials and services (financial, legal, labor, quality, health, workplace safety, environmental or commercial) 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.

□ Fibria has 634 suppliers in its accreditation process (approved and rejected), of whom 490 underwent a social responsibility assessment. Of these, 365 were approved suppliers, 123 were approved with restrictions and 11 were rejected.

Local suppliers – Fibria gives preference to local suppliers in the purchasing of products or the hiring of services. To help these suppliers improve their businesses, the company is one of the sponsors of the Program for the Development and Accrediting of Suppliers (PROD-FOR) in Espírito Santo state and the Supplier Accreditation Program (PQF) in Mato Grosso do Sul state, which disseminate good quality, environmental, occupational health and safety, financial, tax and labor management practices.

□ R\$2.49 billion (65.98% of the total invested) was spent with local suppliers in 2012

Services Contracting Commission (CCS) – Evaluates the national contracting of key permanent services, designed to minimize risks.





In January 2011, Fibria created a Service Contracting Committee (CCS), for the purpose of establishing guidelines and evaluating the national engagement of key permanent services. These include services performed exclusively for Fibria during a period of two years or more, those whose annual total is more than R\$5 million, services that affect the company's organizational climate and those with an annual total of between R\$1.9 and R\$4.9 million that involve specific risks, as identified through an activity evaluation form. The committee's goal is to minimize risks through a careful selection process for the provision of services in accordance with the company's growth and sustainability strategies.

Forestry partners



In the regions where it has activities, Fibria works through forestry partnerships, a system involving the supply of wood through third parties who are engaged in the company's chain of value. Through the program, Fibria encourages farmers located near its pulp mills to plant eucalyptus and sell it to the company, thereby creating mechanisms for financing resources and inputs. Besides reducing the need for Fibria to purchase land and assuring the supply of alternative wood sources, the forestry partners program is one way of fostering income generation, jobs and agricultural diversity.

This model is implemented through its Forest Savings Program, which is an important inducement toward regional development, because it consolidates partnership with farmers, promotes the planned and orderly occupation of the rural landscape and respects local crops. In 2012, Fibria strengthened its commitment to farmers who participate in the program, acted strongly in the institutions that finance the planting and consolidated technical support for food production in areas of first-year eucalyptus. Another highlight was the startup of

the Forest Savings Program at the Aracruz Unit, thus consolidating a single incentive program for all Fibria Units. This helped safeguard the socio-environmental particularities of each Brazilian region, providing assistance for farmers in planning their crop production while taking into account the possibility for forestry partners to undergo certification in the future. In the audits carried out under the Forest Savings Program to ensure that all the wood received from the project complies with legal requirements, no non-compliances were reported.

- The Forest Savings Program totals 102.3 thousand hectares of planted forests in 3,321 contracts.
- The supply of wood by autonomous producers and partners in 2012 represented 27% of the volume of raw material consumed by Fibria's pulp mills.

TAC for reforestation in Bahia state – In 2011, Fibria signed a Conduct Adjustment Agreement (TAC) to contribute to forest restoration of Legal Reserves, Permanent Preservation Areas and Atlantic Forest remnants on farms owned by wood suppliers. The document provides for funding for the Arboretum Program for the Conservation and Restoration of Environmental Diversity, whose goal is to provide technical support and native seedlings to rural properties owned by suppliers. The executive project the program is based on is in its concluding stage, and work should start at the beginning of 2013.

Personnel management

Fibria concluded three years of activities in September 2012 including its process for merging professionals from the two companies that originated in the corporation – VCP and Aracruz Celulose. Today, nearly 17,000 workers – including own employees and outsourced workers – carry out their duties under a single organizational culture, applying the company's beliefs and values during the conduct of their day-to-day functions.



Workforce

Direct employment	2010	2011	2012
Employees	5,037	4,006	3,827
Outsourced workers	11,919	14,523	13,343
Total	16,956	18,529	17,170

In 2012, a project focused on strengthening and reinforcing Management Beliefs, which is a concept directly in line with Fibria's business strategy that permeates the Training and Development programs, the Hiring and Selection of professionals and the Performance Management Cycle. The Beliefs consist of a set of principles that translate the institution's Values and serve as guidelines for behavior, roles, interactions, decisions, key processes and results.

Also in 2012, there was a new edition of the Organizational Climate Survey, designed to learn about the perception of employees regarding the company and the workplace environment, which had 3,245 respondents, an 85% participation rate. The average of the results at the Units generated a 68% global favorability rating (satisfaction level of the employees interviewed) – nine points higher than obtained during the 2010 survey and compatible with best practices in the market. Based on the results, plans will be drawn up detailing actions to deal with the improvement opportunities identified.

- **Currently, 3,780 employees (98.77% of the total) are covered by trade union agreements (in 2011 this accounted for 98.95% of the workforce). The only employees not covered by these agreements are those based in Fibria's international offices where local labor laws are followed.**
- **Additionally, 1,845 employees (48.3%) are unionized (i.e. with union fees discounted monthly from their wages).**

Summary – Diversity groups

	2010	2011	2012
Women	14.41%	12.73%	13.14%
Mixed race and black	24.00%	29.71%	29.89%
Employees over 50 years-old	11.67%	12.93%	13.59%
Handicapped	4.13%	4.04%	4.21%

Performance management – In 2012, Fibria expanded its Performance Management Cycle to all the leadership. A total of 425 directors, general managers, managers, coordinators, consultants, specialists and equivalent were assessed. The process provided feedback for those involved and resulted in the preparation of Individual Development Plans (PDIs), whose goal is to guide and prioritize professional development initiatives. In 2013, the cycle will be extended to administrative and operational levels.

Training programs – Fibria's training programs were intensified in 2012, and the expectation is that they will be expanded in 2013, receiving additional investments of about R\$2 million. The following items are related to the training programs where work continued or was introduced in 2012.

- **Program for technicians' and supervisors' development** – trains supervisors and technicians for the forestry area. A total of 13 modules were conducted in 2012 and 47 supervisors and 74 technicians were trained in São Paulo and Três Lagoas. In the summer, the program was extended to the Aracruz Forest Unit.
- **Partnerships** – Program for the Preparation of Forestry Managers, in partnership with the Forestry Research and Studies Institute (IPEF), to train recently graduated students to better perform in forestry companies. In 2012, 20 young people participated in the program and one was hired by the Mato Grosso do Sul Unit.
- **Development programs** – offer study grants and language courses for employees. In 2012, some 185 study and language scholarships were granted and 36 employees graduated from post graduate pulp and paper technology courses, in partnership with the Federal University of Viçosa.

- **People recruitment** – conducts the Apprentice Program, offering young people 14 to 24 years old the opportunity to obtain basic professional qualifications, and the Internship Program, aimed at training students at a vocational or college level, preparing them for the labor market.

■ In 2012, Fibria offered 184,652 hours of training.

Health and safety – Fibria's Workplace Health and Safety Management System seeks out the best practices and benchmarks in the Brazilian and international markets regarding efficient management of the safety and health of its employees. Despite all care taken regarding this fundamental aspect of its operations, in 2012 the company registered two serious accidents, one at the Aracruz Unit in Espírito Santo, and the other – fatal – involving a dock worker in the handling and storage of a pulp bale at Portocel, in Barra do Riacho (ES). Due to these regrettable occurrences, the safety policy is being reviewed and strengthened in all operating areas.

After a period of significant reduction in the company's accident and incident rates, in 2012 there was a slight increase in the injury rate (Target = injury rate < or less 0.20, with 2009 = 0.89; 2010 = 0.47; 2011 = 0.23 e 2012 = 0.27).

In the field of occupational health, there are activities that can offer ergometric, chemical and biological

risks. Nevertheless, the company's rate of occupational diseases has remained low due to the continuity and strengthening of preventive actions and awareness programs. In 2012, no occupational diseases were reported at any Fibria Unit.

Another important aspect to the company where it is active, are the collaborative efforts with public health services to prevent and mitigate endemic diseases, such as yellow fever, dengue, leishmaniasis and spotted fever. In 2012, agreements were resumed with the Municipal Secretariat of Health of Aracruz (ES) to provide assistance for multi-vaccination campaigns.

Health and Safety

	2010	2011	2012
Injury rate (IR)	0.47	0.23	0.27
Occupational diseases rate (ODR)	0.034	0.004	0
Number of fatalities	3	1	0

Quality of life – One of the biggest current dilemmas facing companies is how to balance pressures to achieve operational excellence while preserving the quality of life of their professionals. This is a very important issue at Fibria, as the +Vida (Life Plus) initiatives show; a program encompassing preventive health actions and encouragement of physical activity and healthy eating habits, including assistance to pregnant women and psychological, social, legal and financial counseling for all employees and their legal dependents. The company also runs programs to support employees with AIDS or who are chemically dependent.



Emelly de Souza Costa, maintenance planner at the Jacaré Unit (SP)



THE VALUE OF RELATIONSHIPS

Workers in the
Eucalyptus seedlings
nursery at the Aracruz
Unit (ES/BA/MG)



6

Financial-economic performance

Market situation

2012 was marked by excellent operating results, particularly the record production and sales volumes, stable cash cost, free cash flow generation and the reduction of net debt to its lowest level since the company was founded. Market fundamentals remained stable, with the main growth driver coming from higher pulp demand in emerging markets, especially with new tissue

machinery in China that helped keep inventory levels at equilibrium. These factors contributed to a recovery in hardwood pulp prices, which rose from US\$652 per ton at the beginning of the year to US\$776 per ton at its close (PIX/FOEX¹ BHKP Europe index), an increase of 19%. The dollar's average 17% rise during the year also helped to boost our revenue, primarily derived from exports.

1. FOEX Indexes Ltd. is a private company based in Helsinki, Finland, which issues a weekly report of prices traded for the principal types of pulp and paper.

Main indicators

	Unit	2012	2011	2012 vs. 2011
Pulp production	Thousands t	5,299	5,184	2%
Pulp sales	Thousands t	5,357	5,141	4%
Paper production	Thousands t	—	93	—
Paper Sales	Thousands t	—	100	—
Net revenue	Million R\$	6,174	5,854	5%
Adjusted EBITDA ¹²	Million R\$	2,253	1,964	15%
EBITDA margin ²	%	36%	34%	2 p.p.
Financial results ³	Million R\$	(1,696)	(1,869)	-9%
Net income (loss)	Million R\$	(698)	(868)	-20%
Operating cash flow ⁴	Million R\$	836	(333)	—
Gross debt	Million R\$	10,768	11,324	-5%
Cash position ⁵	Million R\$	3,023	1,846	64%
Net debt	Million R\$	7,745	9,478	-18%
Net debt / EBITDA Last 12 months	x	3.4	4.8	-1.4
Net debt / EBITDA (US\$) ⁶	x	3.3	4.2	-0.9

1. Adjusted by non-recurring and non-cash items.

2. 2011 adjusted EBITDA does not include CONPACEL's results of R\$17 million.

3. Includes results from financial investments, monetary and exchange variation, mark-to-market of hedging and interest.

4. Does not include the sale of assets and the equity acquisition of Ensyn.

5. Includes the hedge fair value.

6. For covenants purposes.



Performance analysis

Fibria's¹ pulp production amounted to 5.3 million tons in 2012, an increase of 2% from 2011 due to greater operating efficiency and the maturity of various projects. This efficiency allowed us to reach record production levels at the operating units. The increase in net operating revenues by 5% in 2012, over 2011, is explained by a higher volume of pulp sold (4%) and the higher net price of pulp in reais (7%).

Cost of goods sold (COGS) amounted to R\$5.2 billion, a 2% increase over 2011. This result was due mainly to: (i) the 4% increase in pulp sales; and (ii) the dollar's 17% appreciation against the real. Administrative expenses came to R\$286 million, down 8% compared to 2011, due to expenses with indemnities and charges incurred throughout 2011 as part of the organizational restructuring process, in addition to reduced third-party services and travel expenses in 2012. Sales expenses totaled R\$298 million, relatively stable (+1%) against 2011.

Adjusted EBITDA was R\$2.3 billion in 2012, with a margin of 36%, an increase of 15% and 2 p.p., respectively, over the previous year. This result was due to the 4% increase in pulp sales and the higher pulp price in reais (7%).

Fibria recorded a loss of R\$698 million for 2012, primarily driven by the negative financial result of R\$1.7 billion. However, in comparison with 2011, this loss was lower by 20%, (improved operating result from better sales and higher pulp prices) and a lower financial loss in 2012.

Strategy – We established a partnership in 2012 with Ensyn Corporation, a U.S. company that owns the technology used to produce renewable liquid fuel. Bio-business is complementary to pulp production and part of our strategy to optimize Fibria's know-how and experience in developing, establishing and managing high performance forests.

Synergy – After more than a year of quantified synergies arising from the merger of Aracruz and Votorantim Celulose e Papel (VCP), we have exceeded a Net Present Value (NPV) of R\$5 billion. Even those synergies requiring more time to mature, such as in the operational and research areas, have demonstrated that the adoption of best practices brought significant gains to Fibria. The organization has incorporated this best practice exchange into its culture, enabling it to exceed its targets each year, as reflected in the record production volume in 2012 and the below-inflation increase in the cash cost of production year after year.

Capital investments

Fibria made capital investments totaling R\$1.1 billion in 2012. Management plans to invest R\$1.2 billion in 2013, a 15% increase over 2012, to account for inflation, foreign exchange and the non-recurring effect of increased forest renewal at the Aracruz Unit.

Debt management

Debt management and efforts to optimize the capital structure continue to be a priority for Fibria. In April 2012, we issued a public primary stock offering totaling R\$1.4 billion, using the proceeds for early settlement of R\$1 billion of part of its debt bonds maturing in 2020. This transaction will save the company approximately US\$40 million a year in financial expenses. The company also completed the sale of forest and land assets in southern Bahia and Rio Grande do Sul (Losango Project) states. In 2012, Fibria generated liquidity events totaling R\$2.9 billion.

In June 2012, the company renegotiated the covenants applicable to part of our debt with creditor financial institutions, to both increase maximum leverage limits and also amend the method of calculating net debt/EBITDA. The new calculation considers all debt, cash and EBITDA in U.S. dollars, rather than reais, with a higher limit of 4.5x. The ratio in dollars at the end of 2012 was 3.3x.

Thus, Fibria was able to minimize the volatility of this indicator.

These initiatives allowed Fibria to close 2012 in a strong financial position. Cash totaled R\$3 billion, representing 2.6x short-term debt. Net debt stood at R\$7.7 billion, down 18% from 2011, to its lowest level since the company's foundation. At the end of 2012, Fibria had a net debt/EBITDA ratio of 3.4x, compared to 4.8x in 2011.

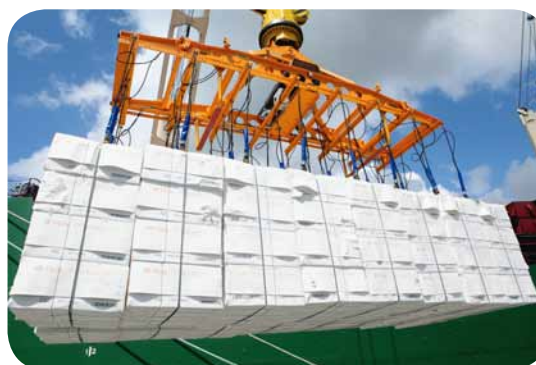
The company's bylaws require a minimum annual dividend of 25% of net income, adjusted by allocations to capital reserves, as provided by Brazilian Corporate Law. No dividends were proposed for the year ended December 31, 2012, considering the loss suffered for the period.

Product

Of the 5.2 million tons of pulp produced by Fibria¹ in 2012, 4.7 million (or 90% of the total) were earmarked for export to countries in Europe (43%), North America (23%), Asia (23%) and Latin America (11%). To service these companies in different locations around the world, Fibria maintains offices in strategic points so it can always be close to its end clients.

The pulp produced at Fibria's Industrial Units complies with the international standards for use in the manufacturing of a variety of food packaging, according to the official opinion issued by the German institute of certification, Isega, and meets the standards of the Food and Drug Administration (FDA) – the U.S. agency that is responsible for the regulation and supervision of food, medicine, cosmetic and other products safety. Furthermore, it is a stable product in normal conditions of use and storage and does not present customers with any risk to health or safety.

Any problem with the pulp that causes complications in use, damage to the customers' product or whose specification is not in compliance with that established with the client (technical aspects, logistics, packaging etc.), is



formally registered in the System of Complaints that is applicable to each Unit.

Customer satisfaction – In view of this scenario, the sales area was structured with account managers to service customers at all points of the purchase process, including development of specific products for special cases. Therefore, there is a very close relationship with customers, and feedback is constant and response time immediate.

In order to adapt the client satisfaction evaluation to this reality, a new satisfaction evaluation process was proposed, which began development in 2012 and will be fully implemented in 2013. After closing of this cycle, an analysis of the process will be carried out so that improvements can be planned for 2014. The new evaluation will be fed by information that has been gathered from interaction with customers through their interfacing with Fibria. The data gathered will be used in an internal evaluation forum, at which a plan of action for taking advantage of the main opportunities for improvement will be set out.

It is also expected that, in 2013, an open channel will be set up for customer feedback regarding the services provided by the offices that serve them. This will be yet another source of information to make the satisfaction evaluation fuller, by introducing a new way for the client to participate in the evaluation process.

1. Includes 50% of Veracel.

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 (PEFC): The Brazilian Forest Certification Programme (Cerflor) was conceived by the Brazilian Society for Silviculture (SBS), with collaboration of several associations, entities, research institutes and NGOs, 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 ton of CO₂. These CERs can be traded and sold, and used by industrialized countries to a 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 of heredity characteristics.

Genetic material: the material found in cells that contains the genetic information of living organisms.

Global Reporting Initiative (GRI): a network-based organization that pioneered the world's most widely used sustainability reporting framework.

Hectare (ha): a unit of measurement of area, corresponding to 10,000 m², 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.

tCO₂eq: measurement for converting and standardizing greenhouse gases in terms of carbon dioxide (CO₂), 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.

tCO₂eq/t pulp: Tons of carbon dioxide equivalent per tonne of pulp.

TRS (Total Reduced Sulphur): 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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