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Michelin Performance and Responsibility



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6.1. 2012 EMPLOYEE, SOCIETAL AND ENVIRONMENTAL INFORMATION PUBLISHED IN COMPLIANCE WITH ARTICLE 225 OF FRANCE'S GRENELLE II ACT

AN APPROACH THAT HAS UNITED MICHELIN TEAMS FOR MANY YEARS

Michelin Performance and Responsibility is the emblematic expression of the Group's sustainable development and corporate responsibility strategy. Committed to helping enhance mobility responsibly, the Group leverages its technological leadership to enable Michelin teams worldwide to meet new mobility challenges. By innovating and developing new skills and new structures, Michelin is staying true to the traditional values presented in the *Michelin Performance and Responsibility Charter*, published in 2002.

The Group has always endeavored to secure sustainable growth while maintaining a responsible balance among business performance, environmental protection and a constant commitment to forging positive relationships with employees and other stakeholders, both inside and outside the Company.

Following on from the *Michelin Performance and Responsibility Charter*, a new document was distributed to employees in 2012 to reaffirm the Group's commitments. *Michelin Performance and Responsibility, A Better Way Forward* describes how Michelin intends to continue delivering a solid performance in the future and how each

employee can contribute to the quest for sustainable road mobility on a day-to-day basis. Adhering to the values and practices of the Michelin Performance and Responsibility approach constitutes the common foundation of Michelin's development around the world. A new Michelin Performance and Responsibility governance system was established in 2012 to deepen the integration of sustainable development criteria in all Group operations. A board chaired by the Chief Executive Officer is responsible for defining new targets for the Michelin Performance and Responsibility approach.

The employee, societal and environmental information presented respectively in sections 6.2, 6.3 and 6.4 below complies with Article L. 225-102-1 of the French Commercial Code – as completed by Article 225 of the Grenelle II Act of July 2010 and amended by the Warsmann IV Act of March 2012 – and with the application decree of April 24, 2012, which require all listed companies in France to publish information on the social and environmental impact of their activities and to set forth their commitment to sustainable development.

6.2. EMPLOYEE INFORMATION

HUMAN RESOURCES POLICIES THAT FOSTER THE SUSTAINABLE DEVELOPMENT OF BOTH EMPLOYEES AND THE COMPANY

Michelin bases its relations with employees on the Group's values, particularly respect for people, and on a firm belief in every employee's potential. As a result, the Group's human resources orientations have evolved over the years with two convictions in mind – that despite people's uniqueness and diversity, everyone should be treated with respect, and that all employees should be given the opportunity to realize their full potential. Convinced that a company's success and growth go hand in hand with its employees' fulfillment and personal development, Michelin has always endeavored to bring out the best in people. With its long-held values of respect for people, customers, shareholders, the environment and facts, it was only natural that Michelin would adopt a responsible approach to its role as an employer. In 2010, Michelin's determination to ensure positive relationships between the Company and its employees was formalized in a document entitled *Moving Forward Together: The Trademark of Mutual Commitment*. The reciprocal commitments described in this document in a clear, practical manner have been shared with all employees.

In 2012, Personnel Department teams defined the 50 strategic principles underpinning the Group's human resources practices. Backed by a determination to combine business performance with employee development and well-being, the Group's personnel policy aims to: (i) offer employment conditions in every host country that make Michelin an attractive place to work; (ii) ensure an outstanding level of commitment from employees worldwide; drive continuous progress in compliance with the corporate values and in the Group's quest for workforce diversity and (iii) to sustainably enable the company to deploy the necessary talent at the right time in the right place.

In all host countries, local Personnel Departments are responsible for expressing the Group's values in terms of the local culture and ensuring their application. Drawing on Group documents and guidelines, such as *Moving Forward Together*, guiding principles and Group objectives, the countries must develop policies that embody Michelin's approach to human resources while taking into account the local context.

Michelin is a signatory to the United Nations Global Compact, pledging to uphold its ten principles ⁽¹⁾, and also adheres to the OECD Guidelines on Multinational Enterprises, which it endeavors to promote in all its host countries. It recognizes the Universal Declaration of Human Rights and the conventions of the International Labour Organization ⁽²⁾. These principles and guidelines have provided inspiration for the Group's internal reference documents, particularly the *Michelin Performance and Responsibility Charter*, the *Michelin Code of Ethics*, *Moving Forward Together*, the *Manager's Guide* and the new *Michelin Purchasing Principles*. Widely promoted and distributed among employees worldwide, all of these documents have been translated into the Group's main business languages and are permanently available for consultation on the country organization intranets.

Six key personnel policy topics are addressed in the employee information section:

1. **Responsible employment practices**
2. **Life at work**
3. **100% Health and Safety**
4. **Managing, developing and empowering employees at every level**
5. **Enhancing dialogue**
6. **Driving innovation through diversity**

Note on the methodology used for employee indicators

When the Grenelle II Act came into effect, Michelin revamped its employee reporting methods, optimizing reporting tools, simplifying job categories and extending the reporting scope.

■ Data collection tools and reporting scope

PeopleSoft/Oracle human resources management software, in 13 different languages, has been used since 2000 to manage employees in the Group's consolidated companies. Most of the employee information for 2012 was extracted from the Chorus database associated with this software.

The information provided in compliance with the Grenelle II Act – employee numbers, working hours, payroll and occupational accident data – relates to all Group entities. The other employee and societal information was collected directly from companies with more than 300 employees on the payroll, covering 99.5% of the workforce.

Employees at Euromaster and TCI, the main European and North American dealership networks, have been included in some of the data presented below for the sake of completeness. In addition to the consolidated Group data, information has also been provided specifically for Manufacture Française des Pneumatiques Michelin (MFPM), which coordinates most of the manufacturing, sales and research operations based in France.

Sustainable development reporting is based on external references such as the guidelines published by the Global Reporting Initiative, which aims to provide a reporting framework that is standardized, reliable and credible. ISO 26000 has spurred the development of new corporate social responsibility policies, including the new Group health policy and the new Michelin Purchasing Principles.

■ Method for consolidating indicators

Data were supplied by the countries and companies in accordance with a guidance document issued by the Group. This guidance describes the process for compiling the social and societal indicators required by the Grenelle II Act for all Michelin host countries and companies as defined by law. It defines application procedures (implementation and external verification) to ensure that the process is managed efficiently and in a consistent manner across the Group. It also provides a list of reference documents in which the indicators are defined, or gives definitions directly. Each country is responsible for the fairness and accuracy of the data it provides. As part of a continuous improvement process, Group management audits the data monthly to ensure overall accuracy and consistency.

■ Sincere, verifiable data

For the seventh consecutive year, PricewaterhouseCoopers Audit was commissioned to review the procedures used to prepare the indicators presented in this document. Ten indicators were verified during the review and have been marked with two asterisks in the analyses and tables below. PricewaterhouseCoopers Audit looked at the divisions and departments involved in sustainable development reporting and reporting related to Article 225 of the Grenelle II Act, as well as at the distribution of responsibilities. The review opinion may be found in section 6.5.

(1) 1. *Businesses should support and respect the protection of internationally proclaimed human rights; and*
 2. *make sure that they are not complicit in human rights abuses.*
 3. *Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;*
 4. *the elimination of all forms of forced and compulsory labour;*
 5. *the effective abolition of child labour; and*
 6. *the elimination of discrimination in respect of employment and occupation.*
 7. *Businesses should support a precautionary approach to environmental challenges;*
 8. *undertake initiatives to promote greater environmental responsibility; and*
 9. *encourage the development and diffusion of environmentally friendly technologies.*
 10. *Businesses should work against corruption in all its forms, including extortion and bribery.*
 (2) *Freedom of association and the effective recognition of the right to collective bargaining, see section 6.2.5; elimination of discrimination in respect of employment and occupation, see section 6.2.6.a; elimination of all forms of forced and compulsory labour; effective abolition of child labour; see section 6.3.4 and the position paper prepared in January 2007.*

6.2.1. RESPONSIBLE EMPLOYMENT PRACTICES

6.2.1.a) Number of employees, breakdown by gender and geographic zone ⁽¹⁾

■ Number of employees at December 31, 2012

(employees on payroll, regardless of work contract)

	Europe	North America	South America	Asia (excluding India)	Africa, India, Middle East	Group Total
Number of employees**	67,785	22,209	6,037	15,307	2,105	113,443

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

<i>MFPM France</i>						<i>20,805</i>
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■ Full-time equivalent employees at December 31, 2012

(regardless of work contract)

	Europe	North America	South America	Asia (excluding India)	Africa, India, Middle East	Group Total
Number of full-time equivalent employees**	63,033	21,432	5,458	15,291	2,088	107,302

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

<i>MFPM France</i>						<i>19,435</i>
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■ Women as a percentage of employees on payroll at December 31, 2012**

(employees on payroll, all types of work contracts, excluding temporary)

	Europe	North America	South America	Asia (excluding India)	Africa, India, Middle East	Group Total
Production operators	8.4%	13.7%	8.7%	7.2%	2.7%	9.3%
Administrative and technical staff	28.7%	28.0%	27.1%	29.1%	19.7%	28.2%
Managers	18.6%	17.4%	20.8%	20.5%	11.9%	18.4%
TOTAL						15.6%

Scope: Group excluding dealership networks (85.7% total workforce).

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

	MFPM
Production operators	4.6%
Administrative and technical staff	28.1%
Managers	18.6%
TOTAL	15%

Excluding Euromaster and TCI, women accounted for 15.6% of total employees on payroll, a steady increase from 15.2% in 2011, 14.4% in 2010 and 14.0% in 2009. In the more male-dominated European and North American dealership networks, 11.3% of total employees on payroll were women. Michelin is committed to increasing the percentage of women employees to 20% by 2020, primarily by maintaining its recruitment targets of 15% women

for production operators and 30% women for administrative and technical staff and managers. The Group has also undertaken to increase the percentage of women senior executives to 10% by 2015, by accelerating career advancement, hiring experienced women and continuing to deploy programs that support high potential female employees.

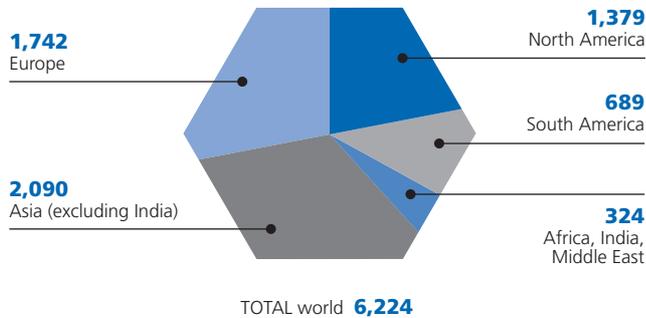
(1) Data by age and seniority are presented in table 6.2.7.

6.2.1.b) Employee movements

■ New hires in 2012 (work contracts with no set end date)

CONSOLIDATED GROUP

(excluding dealership networks)



Many of the new hires in 2012 related to the new plants and their need for additional talent. Combined with sales growth in its local markets, this resulted in Asia recording the greatest number of new hires. In Europe, where the market contracted for several product lines, plant recruitment was limited to critical needs and new hires only partially offset departures. As a result, Europe returned to 2010 workforce levels, after a year shaped by strong demand in 2011.

Michelin stepped up efforts to enhance its appeal to young people in 2012, in particular by creating a new global recruitment website and by increasing its presence on social networks.

MFPM played an important role and was recognized in early 2013 with a Randstad Award France in the automotive category, based on an extensive online survey to identify the most attractive employers.

MFPM

	Europe
New hires	934

The method for reporting new hires was redefined in 2012 and now refers exclusively to new hires on work contracts with no set end date. The adjusted total for 2011 is 9,611.

■ Employee terminations by type (work contracts with no set end date)

GROUP

	Resignations	Dismissals and terminations by mutual agreement	Retirements	Death	Total
Consolidated Group (excluding dealership networks)	2,218	2,197	1,853	125	6,393
<i>MFPM</i>	114	197	757	32	1,100

ATTRITION RATE (INCLUDING RETIREMENTS)

	2012	2011	2010
Group	6.8%	6.6%	7.8%
<i>MFPM</i>	5.5%	5.7%	8.6%

Globally, terminations are fairly evenly distributed between three main types – retirements, resignations and dismissals. However, the percentages vary according to the region, with Europe accounting for most of the retirements followed by North America, and resignations occurring primarily in Asia.

In Europe, a significant decline in demand in several product lines forced plants to resort to short-time working hours and reduce the number of temporary workers. However, layoffs were avoided in all countries.

In France, **MFPM** also avoided layoffs and successfully maintained its apprenticeship program. Retirement was once again the primary cause of termination and the attrition rate including dismissals and resignations but excluding retirements fell below 2%. Including retirements, the rate was 5.5%.

■ Fixed-term contracts

In 2012, fixed-term contracts accounted for 1.54% of total Group payroll.

6.2.1.c) Compensation and employee benefits

	Total employee benefits expense in 2012 (in € millions)	Production operators	Administrative and technical staff	Managers	Fixed-term contracts	Provisions and provision reversals for pension obligations	Taxes, provisions and advances
Group	5,377	2,053	2,366	480	83	4	391
<i>MFPM</i>	1,325	460	631	82	29	-4	127

“Taxes, provisions and advances” includes taxes, provisions for pension obligations, advances on bonuses, stock-option advances and other long-term advances.

■ Compensation, payroll taxes and other employee benefits

Employee benefits expense amounted to €5,377 million or 25% of net sales in 2012, of which €1,109 million in employer payroll taxes.

The total may be analyzed as follows:

(in € millions)	
Wages and salaries - Group	3,927
<i>MFPM</i>	880
Employer payroll taxes	1,109
<i>MFPM</i>	351
Benefit contributions, pensions, severance and retraining costs	334
<i>MFPM</i>	94
Share-based payments	7
<i>MFPM</i>	0
TOTAL	5,377
<i>MFPM</i>	1,325

The Group’s policy is to offer everyone tailored, fair and competitive compensation that reflects each person’s performance and level of responsibility.

The Group’s policy is to offer tailored compensation that reflects each employee’s performance and level of responsibility and represents a fair and competitive offer in the local job market. Compensation policies are designed with a long-term approach, taking into account career development, evolving market conditions and local practices.

A range of profit-sharing and bonus systems have been introduced, which vary by country and employee category, and the individual bonus system is gradually being extended to all employees. These incentives encourage employees to deliver the results expected by the Company and to help Michelin achieve its objectives.

Employees above a certain level of responsibility may also receive a bonus based on the Group’s results.

Discretionary and non-discretionary profit-sharing systems are also deployed, in accordance with each country’s practices and regulations. For the sake of consistency, these systems are all governed by similar rules and procedures, using tools and calendars managed by the Group, and adapted in each host country to align them with local job markets and legislation. The profit-shares are also adapted so that Michelin remains competitive in the local market.

Because pay scales are pegged to criteria specific to each country, in particular to reflect local conditions (such as inflation ranging from a negative 0.9% in Japan to a positive 15.7% in Venezuela), the average pay rise for the year would not be a meaningful indicator and is therefore not calculated by the Group.

MFPM: In France, where inflation stood at 1.80%, pay increases in 2012 were as follows:

Production operators	2.5%
Administrative and technical staff	2.5%
Managers	3.5%

Data for France.

The Group’s social responsibility commitment is reflected in its employee benefit policies, which primarily concern health care and insurance coverage and post-retirement benefits. Michelin’s policy in this area is to supplement national systems to ensure that employees enjoy a similar level of benefits in all host countries.

Health care and insurance coverage

Michelin’s policy is to ensure that all employees, as well as their spouses and children, are protected from the potentially significant financial consequences of an illness or an accident. This means setting up health care plans to cover medical expenses and providing employees with insurance coverage for short and long-term disability and death.

The Group is also committed to conducting proactive workplace health and safety initiatives (see section 6.2.3) and actively relaying public health campaigns on such topics as nutrition and vaccinations.

Post-retirement benefits

With life expectancy on the rise, a growing number of countries have national pension systems that may not be sufficient to meet employees’ expectations. Michelin therefore believes it has a responsibility to implement systems that provide employees with additional post-retirement income, in accordance with the length of time they have spent with the Group.

At Michelin, these systems are generally funded pension plans that allow employees to contribute a percentage of their pay, in addition to the funds paid in by the employer. Certain host countries also have post-retirement benefit obligations relating to previous pension plans. At December 31, 2012, these obligations amounted to €2,390 million, of which €283.95 million for MFPM.

Wherever the legislation allows, Michelin also offers retirement savings plans with matching employer contributions.

In both cases, the funds are managed by a fund manager or insurance company that has been carefully selected for its solidity and financial performance.

In 2012, a retirement savings plan was set up for all Group employees in China. A relatively new concept in the Chinese job market, the plan attracted 95% of the workforce.

As part of the project to upgrade the supplementary pension system, the PERCO retirement savings plan agreement, which covers all of the French companies, was revised and the matching employer contribution was increased to 100% of the employee investment. Another agreement introduced a new supplementary pension plan to be co-financed by the Company (in an amount equal to 1% of gross salary) and the employee (0.2%). Deployment of the plan will begin at Manufacture Française des Pneumatiques Michelin, Compagnie Générale des Établissements Michelin and Pneumatiques Kleber, with the possibility of other French companies joining in the future.

Other employee benefits

The other employee benefits on offer are strongly influenced by job market customs and practices in each country. The aim is to enhance employees' quality of life by taking into account their local context and specific needs (see section 6.2.2).

Discretionary and non-discretionary profit-sharing, employee savings plans and employee share issues

In addition to salary and performance-based bonuses (for meeting either personal or corporate targets), overtime pay and compensation directly related to the nature of work performed, employees are

also offered supplementary compensation in forms that vary widely depending on local legislation. These include discretionary profit-shares, non-discretionary profit-shares, contributions to supplementary health insurance, retirement savings plans and employee savings plans with matching employer contributions of up to 50%. Seventeen country organizations provide such programs, benefiting nearly 72,000 employees. The amounts awarded under these supplementary programs vary considerably from one country to another and can account for up to 30% of an individual's compensation.

At Manufacture Française des Pneumatiques Michelin, the new 2011-2013 discretionary profit-sharing agreement signed with the trade unions uses multiple indicators to calculate profit-shares, as follows: the number and success rate of Progress Ideas, the reduction in energy used, the frequency of occupational accidents and the achievement of production targets. The amount of the discretionary profit-share, which is paid in the first quarter of the following year, can account for up to 5% of salary.

In 2012, the amount paid to MFPM employees in respect of 2011 profit-shares came to €59 million, representing around 4% of total payroll and an average of one month's salary per employee.

In France, an agreement on non-discretionary profit-shares was signed in 2012 that improves on the existing agreement by allowing up to 15% of operating income to be paid out to employees of the companies concerned (Manufacture Française des Pneumatiques Michelin, Michelin Air Services, Société du Caoutchouc Synthétique Michelin, Pneumatiques Kleber, Michelin Travel Partner).

6.2.2. LIFE AT WORK

Michelin is committed to providing working conditions that favor all four key aspects of personal well-being – physical health, psychological balance, social fulfillment and a sense of personal achievement. It does this by undertaking projects to enhance the work environment and the organization of work schedules, by improving communication methods, by exploring solutions for a better work-life balance, and by promoting a high quality of life for everyone.

Country and site organizations are responsible for making progress on local priorities, in accordance with the needs expressed by employees. To support these initiatives, a cross-functional working group was set up in 2012 to define Group targets and recommendations, bringing together Personnel Department managers and experts in risk management, health and sustainable development.

6.2.2.a) Working hours

Working hours in the manufacturing plants and the research, logistics, sales and administrative facilities are strictly organized according to the applicable labor laws of the country concerned. For full-time non-shift employees, the annual work time varies from 211 days in Hungary to 278 days in Colombia, and 213 days in France to 260 days in the US and Mexico.

Working in shifts enables a plant to operate up to seven days a week and 360 days a year, thereby optimizing capacity utilization. If demand declines, adjusted working hours and temporary schedules can be implemented after consulting employee representatives. In 2012, an agreement was signed with trade unions at MFPM's Montceau-les-Mines plant to adjust working hours on a permanent basis. (For more details, see section 6.2.5 on social dialogue.) These adjustments enable the Group to respond to fluctuations in business activity, while enhancing its appeal as an employer.

Group-wide, most people work in shifts, primarily in three 8-hour shifts, but also in four 8-hour shifts, five 8-hour shifts, two 12-hour shifts and week-end shifts, reflecting different manufacturing requirements, prevailing legislation and local practices.

In non-production positions, working hours are usually flexible within defined limits.

Following on from a union agreement signed on May 12, 2009, regular telecommuting is now gradually being introduced at Manufacture Française des Pneumatiques Michelin. A review of the situation after nearly four years shows that the system can

effectively enhance work-life balance but is still relatively unused. Just over a hundred employees currently work regularly from home. They include both men and women and more administrative and technical staff than managers. Among those attracted by the system are women in the early months of pregnancy and disabled employees. The benefits enjoyed by telecommuters include a reduction in the fatigue caused by travel and lower transportation costs. At facilities where employees have long commute times, such as dealerships or head offices in certain capital cities, telecommuting feasibility studies are being conducted.

6.2.2.b) Part-time work

Part-time contracts, which are common in many host countries, concerned 2.8% of the total workforce in 2012, across all job categories. Employees choose to work part-time to more effectively balance their personal and professional commitments.

PART-TIME EMPLOYEES BY GENDER AND JOB CATEGORY AS A PERCENTAGE OF TOTAL EMPLOYEES AT DECEMBER 31, 2012

Group	Women	Men	Total
MFPM			
Production operators	6.4%	2.3%	2.7%
<i>MPFM</i>	<i>10.4%</i>	<i>2.4%</i>	<i>2.8%</i>
Administrative and technical staff	8.2%	1.2%	3.2%
<i>MPFM</i>	<i>15.6%</i>	<i>3.9%</i>	<i>7.2%</i>
Managers	8.3%	0.3%	1.8%
<i>MPFM</i>	<i>16.5%</i>	<i>0.6%</i>	<i>3.6%</i>
TOTAL	7.6%	1.9%	2.8%
<i>MPFM</i>	<i>15%</i>	<i>2.7%</i>	<i>4.5%</i>

Scope: Consolidated Group excluding dealership networks.

6.2.2.c) Benefits that improve employees' quality of life

To improve the work environment and make employees' lives easier, Michelin contributes financially to a wide range of activities, services and other benefits for employees and their families, in every host country. Some of these benefits are mandated and defined by local legislation, while others are provided on a voluntary basis.

In addition to foodservices and transportation, Group companies are developing a growing number of cultural activities, exercise programs and health campaigns through works councils and similar local organizations. Michelin contributes several tens of millions of euros to financing these benefits every year. Some countries, such as Sweden, Hungary and the United Kingdom, are setting up flexible benefit plans that allow employees to choose the activities and services that best suit their specific needs.

Others have adopted an integrated approach, offering comprehensive programs to improve employee health and well-being. Examples include *Choose Well-Live Well* in the United States, *Balance* in Germany, *De Bem com a Vida* in Brazil and *Oxygène* in France, as well as the *Worklife Balance* project developed in Italy in 2012. These programs usually include a food and nutrition component, access to exercise equipment, and the opportunity to benefit from various additional services, such as daycare centers, employee assistance programs, tickets for cultural and sports events, and corporate concierge services.

Work-life balance is also targeted in host countries by numerous stress management initiatives, such as telecommuting, access to daycare, and financial assistance for childcare and education costs. Management practices and operating methods are also changing, with host countries undertaking a variety of measures that reflect local customs and concerns. An example is the implementation of guidelines on the use of open spaces.

6.2.3. 100% HEALTH AND SAFETY

Michelin has always taken an extremely diligent approach to protecting the health and safety of its employees and suppliers. The visibility of the Group's objectives in this area was enhanced in February 2011 via the 100% Health and Safety approach and then in 2012 with the creation of a policy on worklife quality. Developed jointly by the Group's main stakeholders, this policy has two primary objectives – to manage risks that could have a negative impact on employees' health, safety or ability to work, and to provide the working conditions and resources necessary for employee fulfillment. In addition to targeting health and safety, the policy therefore includes a wellbeing component, designed to encourage initiatives that improve working conditions. These initiatives are presented in section 6.2.2.

The definition of the 100% Health and Safety policy has been restructured and enhanced. In February 2011, the Managing Partners issued the Michelin Health and Safety Statement identifying the responsibilities, deliverables and resources associated with each level of management in the production facilities. The statement has now been posted in meeting rooms, cafeterias and other common areas throughout the Group.

Michelin Health and Safety Statement

Each person is unique. Health and safety are fundamental. Above all else, our wish is to ensure safe and healthy conditions for everyone working in our Company. That is why we implement in our facilities, right from the start, the best organizational standards and appropriate means to ensure everyone's health and safety while complying with the law. In the same manner, we establish appropriate directives for business travel. However, this alone is not enough. We require each individual to apply three essential principles every day for their own health and safety as well as that of others. First, good behavior begins with respect for the rules and active participation. Second, each person is responsible for their own health and safety and that of others. Third, individual commitment drives continuous progress. Through respect for people, each of us continuously supports the *Michelin Performance and Responsibility Charter* and "*Moving Forward Together*".

A policy backed by a solid framework

Michelin's Environment and Risk Prevention Management System is based on OHSAS 18001 specifications, meets certification standards, and complies with the recommendations issued by the relevant international bodies, such as the World Health Organization, the United Nations Global Compact and the International Labour Organization (ILO).

Formally defined in the *Michelin Performance and Responsibility Charter*, the Michelin Manufacturing Way Best Practices, *Moving Forward Together* and the *Michelin Code of Ethics*, the principles underpinning Michelin's social responsibility commitment determine the Group's health and safety targets and objectives, which have been reaffirmed in the new 100% Health and Safety declaration.

The foundations for a Group-wide health policy were established in 2012, after a survey of health practices and policies within the Group, an analysis of best practices outside the Group, and a review of both the recommendations issued by key international organizations,

such as the UN, the ILO and the OECD, and the relevant standards, laws and regulations, including ISO 26000 and Grenelle II. The aim is to identify the strategic avenues for safeguarding health and to update and harmonize existing practices within the Group. The policy covers workplace health, quality of life, stress management, harassment and violence, as well as health-related corporate social responsibility commitments. Deployment across all Group companies is scheduled to start in 2013.

A network for the health and safety of employees and suppliers

The number of employees needed to implement health and safety measures and the skills required for the task are defined by an internal standard (REF 019 EP) that is often more demanding than the legislation applicable in many of the Group's host countries. Expertise in environmental protection, occupational health and hygiene, ergonomics and safety is available at every site, in accordance with its size and type.

These risk prevention and health experts are organized into Group and zone/country networks, which are overseen by network coordinators. Their job is to effectively manage action plans, share best practices across the networks and leverage the experience acquired. In addition to enhancing the quality of the reporting process, this setup enables the system's performance to be measured at every level and facilitates continuous improvement.

6.2.3.a) Health

■ Workplace health services

Michelin redefined the duties and objectives of its workplace health services in 2012 and updated the job descriptions of its healthcare workers, who include occupational physicians, nurses and nursing assistants. The lines of communication among medical personnel were also clarified to achieve greater consistency in health and safety practices and to optimize the success of personal and collective preventive measures. A survey of medical surveillance and health care organization practices was carried out in 2012, in preparation for the development of a Group-wide health policy and new health standards.

Employee health is monitored via check-ups conducted either by Michelin medical teams, which represent 45% of cases, or by outside health care providers coordinated by a Group physician. Systematic check-ups are conducted for 60% of the total workforce and for 90% of employees in positions associated with specific risks, such as exposure to noise or chemicals, physical strain or night-time work.

Host countries use diverse methods for keeping medical records, making it difficult to monitor employee health at Group level. A pre-feasibility study was conducted in 2012 to test the idea of setting up a health data management system, which would enable the Group to generate employee health statistics and to identify priority areas. A feasibility study is scheduled for 2013.

■ A medical advisory committee

To effectively monitor health issues, Michelin leverages the expertise of a medical advisory committee, set up in 2010. Bringing together nine outside medical experts, the committee provides independent guidance that helps Group management identify and address the

health risks specific to tire manufacturing. In 2012, the committee focused on noise exposure, addictions, strenuous working conditions and endocrine disruptors.

■ Occupational illnesses

Initiatives are regularly conducted to prevent and detect occupational illnesses, particularly those related to noise exposure, repetitive movements, physical exertion and chemical risks. The elimination of carcinogenic, mutagenic and reprotoxic (CMR) substances continued during 2012, primarily *via* the removal of asbestos. Chemical risks are assessed prior to implementing any new testing or production techniques, with the help of industrial health experts, toxicologists, Technology Center materials experts and occupational physicians. A program to improve workstation ergonomics is also being deployed, to reduce the risk of occupational illnesses associated with physical activity. To supplement these collective measures, employees wear personal protective equipment, such as hearing protectors, wherever necessary.

Data on occupational illnesses is currently available for France, Germany, Hungary, Italy, Poland, Romania, Spain and the United Kingdom. The objective for end-2013 is to align the Group's system for monitoring occupational illnesses with how they are recognized by the legislation applicable in each country.

Among the illnesses reported by these countries in recent years were musculoskeletal disorders, respiratory diseases, noise-related hearing problems.

Initiatives to manage workstation ergonomic risks or industrial hygiene risks are presented in section 6.2.3.b).

■ Stress

Two major initiatives have been undertaken by the Group to prevent and reduce workplace stress – the development of a program to improve worklife quality (section 6.2.2) and the formal definition of procedures for detecting and preventing stress. A variety of individual and collective measures are deployed in the host countries, in accordance with the local culture and the resources available. Examples include:

- multidisciplinary risk assessment and corrective measures in Italy, France (adoption of a common method for all sites), Spain (20% of risk situations assessed *via* Psychomap questionnaire), Hungary (risk analyses conducted in compliance with local legislation) and the United States (Insight health risk assessment offered to all employees);
- training initiatives and awareness campaigns for employees and managers in France, Poland, Hungary and Brazil;
- coaching programs in Germany and group support sessions at Family Health Centers in the United States, as part of the Michelin Resiliency Program;
- relaxation initiatives in Germany, Brazil and the United States;
- individual consultations with onsite medical teams in France, Spain, Germany and Hungary; the Employee Assistance Program in the United States, which gives 15,000 employees access to mental health specialists from Optum Behavioral Health; and the offer of consultations with a psychologist for employees who express the need, in India and Poland.

■ Relaying public health campaigns

In every host country around the world, public health campaigns aligned with local needs and practices are conducted for Michelin employees and their families. Initiatives deployed as part of these campaigns include (i) training in lifting heavy loads, preventing back and joint pain, and avoiding the risks associated with a sedentary lifestyle; (ii) advice on healthy eating and wellness; (iii) anti-smoking and anti-alcoholism courses; and (iv) exercise programs.

In the United States, Michelin's third Family Health Center was inaugurated in 2012, following the opening of one in Greenville, SC, in 2010 and one at the Donaldson Center Industrial Air Park in 2011. The centers offer employees and their families high-quality, affordable and convenient check-ups, medical exams, analyses and treatment follow-up services.

At corporate headquarters in Clermont-Ferrand, France, the *Oxygène* program offers employees the opportunity to practice a variety of physical activities in the workplace (see section 6.2.2). Conferences on nutrition and health are also organized several times a year, with a dietician from the local ASM sports club.

In Poland, where a public health program is offered to personnel each year, 270 employees benefited from breast cancer and prostate screening and abdominal ultrasounds in 2011-2012.

■ Preventing HIV/AIDS

HIV/AIDS prevention programs continued to be deployed in 2012, with a focus on the worst hit countries. In addition, a large number of awareness campaigns are conducted for employees and host communities in areas where such awareness is lacking or denied.

■ Liaising with local public health care facilities

Whenever the quality of local public health care facilities is deemed inadequate, particularly at isolated locations in emerging countries, Michelin takes the necessary steps to improve them.

In China, for example, the Group is working with hospitals in Shanghai and Shenyang to organize better care for local employees and expatriates, with a particular emphasis on preventing health care-associated infections. In 2012, a contract was signed with an English-speaking medical service to eliminate comprehension issues for expatriates.

In Poland, a program has been implemented to provide employees with fast, convenient access to specialists in the private health care sector.

Michelin also has an agreement with International SOS to ensure that expatriates and employees traveling abroad have access to health care services wherever they are.

6.2.3.b) Risk assessment and prevention

Risk assessments are conducted for all workstations in accordance with common, standardized methods. These include ARM for equipment risks, EVANE for ergonomic risks, CR for chemical risks and ASAR for asbestos risks. The assessment results are used to identify priority areas for annual and multi-year action plans and to monitor the impact of preventive measures. In France, the results are consolidated into a single document covering all risks. An information system is currently being developed to enable Michelin to consolidate environmental, health and safety risks at Group level and to monitor individual employee exposure. Baptized SEREP, the system is expected to be fully operational in 2015.

■ **Enhancing workplace safety**

To achieve “100% Health and Safety”, Michelin takes preventive measures that target human, technical and organizational factors.

Employee participation in the safety process

Internal communication plays a critical role in deploying workplace safety policies. Several campaigns were undertaken on every site in 2012, with an emphasis on the Group Safety Programs, preventing the four main causes of fire, and the cross-fertilization of best practices. More than 70% of all employees were involved in workplace safety programs in 2012.

A “100% Health and Safety” e-learning module has been deployed in all Group plants, describing the three avenues for action and defining the responsibilities of everyone involved. The training campaign will be followed up in 2013 with communication initiatives reiterating the key messages. The effectiveness of safety initiatives is heightened by the synergies among internal communication systems, which include on-site CCTV networks, bulletin boards, team meeting presentations, the managerial intranet and dedicated support documents.

Presented each year to outstanding teams and departments, the Michelin Safety Award encourages employees to achieve 100% Health and Safety, by showcasing the winners’ best practices in articles, video reports and other internal communication media. Five plants and two logistics warehouses submitted initiatives for a Michelin Safety Award in 2012.

Employee involvement in the safety process is highlighted by the Progress Ideas system (see 6.2.4.f). Of the 20,834 Progress Ideas implemented by the Group in 2012, 32% related to safety and 26% to working conditions, reflecting a strong sense of ownership of these issues at all levels of the organization.

A major project to provide detailed, standardized accident prevention instructions for all workstations has been finalized for manufacturing positions and will be extended to maintenance positions in 2013 and then to offices in 2014. In every plant, shopfloor managers are trained to prevent accidents at their team’s workstations.

To reduce occurrences of the most serious accidents, prevention programs have been implemented for six specific risks: in-plant traffic, working at heights, power distribution, lockout procedures during maintenance work, entanglement hazards and rollers used in manufacturing and laboratory processes.

TRACKING OCCUPATIONAL ACCIDENTS

		2012	2011
Group (including dealership networks)	LTIFR**	2.80	2.40*
	LTISR**	0.19	0.17*
MFPM	LTIFR**	6.19	3.1
	LTISR**	0.31	0.22

* 2011 data have been recalculated to reflect inclusion of the dealership networks.
** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

The lost-time incident frequency rate (LTIFR) corresponds to the number of incidents resulting in more than one day’s lost time per million hours worked. The lost-time incident severity rate (LTISR) corresponds to the number of working days lost to accidents resulting in at least one day’s lost time per thousand hours worked.

A Group-wide safety performance survey conducted in 2002 revealed an unsatisfactory situation on the whole, with significant discrepancies between sites and an overall LTIFR of 18.65.

As a result of the many and varied measures undertaken since then, 24 sites had no lost-time incidents in 2012, compared with only 8 sites in 2005. Operations in North America went for two months without any accidents, in October and November, for a total of 22,545 employees on payroll. In Europe, LTIFR improved noticeably in Germany, Italy, Spain, Romania and the United Kingdom, and was stable or just slightly lower in other countries.

Safety performance improved in the sales and marketing operations, with an LTIFR close to 1, in part due to a dedicated occupational road safety program and the work carried out by technicians assigned to trucking companies.

The situation in France requires further explanation. Country management realized that the method of accounting for lost-time incidents varied depending on the facility. Clarifying these variances provided an opportunity to point out that, regardless of the indicator, the primary objective is obviously to ensure the overall safety of everyone in the workplace.

The resulting arithmetic increase in the lost-time incident frequency rate (LTIFR n°1) was solely due to the harmonization of the calculation method and does not in any way reflect a deterioration in employee safety in France (and at MFPM in particular). This is demonstrated by the stability of the total recordable incident frequency rate (LTIFR n°2), which stood at 20.6 at year-end 2012 versus 20.2 a year earlier, at constant MFPM scope of reporting.

In response to the shortcomings mentioned above and in an effort to achieve 100% Health and Safety, a new indicator will be introduced in all countries starting in 2013. Covering accidents, illnesses and temporary incapacity, the total case incident rate (TCIR) will provide a more holistic view of how the workplace affects employee health so that prevention programs can be prioritized accordingly. Michelin North America teams have been using this indicator for several years.

The improvement in the LTISR over the past ten years is equivalent to a workforce of more than 600 people. While accidents – even tragic ones – still occasionally occur, the progress made in this area and the results achieved across the Group are a source of great pride for all.

Three employees died in 2012, a worker at the Karlsruhe plant in Germany, a member of the sales team in Russia. A fatality was also reported by the TCI dealership network in North America and another by a subcontractor participating in the construction of the Chennai plant in India, bringing the total number of fatalities during the year to four. Investigations are underway to analyze the causes of these accidents and protective measures have been taken to improve safety.

Fire incidents were reduced by half between 2006 and 2012, thanks to the deployment of the High Protection Risk Michelin concept in the units most at risk.

Tracking production operator absenteeism

In 2004, Michelin developed and implemented a system for tracking foreseeable and unforeseeable absences among production operators, the Group's largest job category. Guidelines were prepared in 2003 and a monthly reporting process was introduced at site level. The system enables unscheduled absences to be divided into several categories so that targeted actions plans can be prepared. In 2012, absenteeism was stable overall compared to the previous year but varied significantly among geographic zones, with the United States and Asia reporting very low levels of 3.84% and 2.36% respectively and South America a high 13.43%. In Europe, the rate was lower than in similar industries, at 6.83%.

The denominator used to calculate absenteeism – scheduled hours worked – was harmonized in late 2011 by excluding annual leave and scheduled days off. For MFPM, this led to an automatic increase of more than 1%, to 7.26% in 2012 from 7.02% in 2011. Using the same calculation method, absenteeism remained stable from the previous year. The high level of absenteeism at MFPM is due to the significant percentage of long-term leave.

Sick leave and other short-term absences	Lost time due to occupational injury	Long-term leave	Group total (including dealership networks)
2.63%	0.19%	1.69%	4.51%
Sick leave and other short-term absences	Lost time due to occupational injury	Long-term leave	Group total (excluding dealership networks)**
2.63%	0.18%	1.77%	4.58%

** Data related to this indicator have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

Improving occupational road safety

Michelin has long been involved in initiatives to support road safety (see section 6.2.11), with a particular interest in meeting the challenges of work-related road safety.

Occupational road safety was a core issue discussed at the roundtables organized by the Global Road Safety Project during the 2010 Michelin Challenge Bibendum in Rio de Janeiro. These discussions led to the publication of the "White Paper for Safe Roads in 2050: Achieving Zero Work-Related Road Deaths", which was part of the Group's contribution to the United Nations Decade of Action for Road Safety 2011-2020.

Partner Jean-Dominique Senard publicly announced the Group's commitment to the Decade of Action for Road Safety at the Michelin Challenge Bibendum in Berlin in 2011.

The risk of accidents while commuting or in work-related driving is addressed via internal awareness-building campaigns to encourage safer driving practices and more efficient travel management.

On the training side, all new marketing and sales employees attend a half-day road safety course as part of their orientation program.

Information tools include a road safety awareness kit developed for plant employees worldwide, contests, safe driving campaigns, and reports on national road-safety campaigns in the *Forward* weekly news program before the summer vacation period and in early winter.

Michelin also offers eco-driving courses to employees in several countries. Combining several hours of classroom training and behind-the-wheel practice, they help to reduce the risk of an accident by encouraging drivers to think ahead and anticipate obstacles, while also enabling them to save fuel by using their cars more efficiently. In the United States, a program has been implemented to promote calm, responsible driving.

All of these initiatives embody the long-term commitments made by Michelin, both to the Decade of Action for Road Safety and in the Road Safety Charters signed with national and European bodies.

In 2013, an action plan will be prepared to bring Michelin into line with the ISO 39001 standard on road traffic safety management systems.

Monitoring the safety performance of temporary employment agencies

Safety data relating to subcontractors are being centralized with the help of a dedicated database known as GAIA and a best practices guide will be made available at all Group sites in 2013. Michelin is committed to aligning the LTIFR and LTISR of temporary employment agencies with its own performance, in particular by pursuing the workplace health and safety programs initiated with these agencies over the years. An action plan is being deployed based on:

- a workplace safety charter signed by Michelin and each temporary employment agency;
- self-assessments and action plans carried out in partnership with the local agencies on every site;
- best practices identified during on-site safety audits conducted in partnership with the local agencies;
- annual meetings between the Michelin manager and the managing directors of the temporary employment agencies, to track and supervise the process.

Results have been encouraging, with the lost-time incident frequency rate for temporary workers declining by two-thirds over the past four years.

■ Improving workstation ergonomics

Comprising one expert for every 2,000 production operators, the ergonomics expert network has demonstrated its capacity to improve production line working conditions, by reducing or eliminating physical stressors and environmental hazards such as poor lighting and excessive noise at production workstations.

Ergonomics is taken into account starting in the design phase. On-site, ergonomists work with local teams to identify and lead the deployment of measures to improve existing workstations. The Group ergonomics network enables the sharing of feedback and best practices across the organization.

Michelin's commitment to ergonomics has led to a number of cross-unit projects to resolve stressful working conditions, which led to significant improvements for more than 800 employees in 2012. These projects have resulted in the development of ergonomic production prototypes, such as extrusion lines and tire mold maintenance stations. A dedicated budget has been allocated for the deployment of these prototypes and the development of new solutions. The medium-term objective is to eliminate the most physically demanding workstations, to minimize the impact on employee health and make manufacturing positions accessible to a wider range of people.

■ Managing occupational health and hygiene risks

Supported by the network of Group Health Correspondents, Technology Center materials experts, toxicologists and occupational physicians, the corporate occupational health and hygiene department

leads a program to manage risks in two main areas, workstation chemical risks and asbestos-related risks. It also prepares guidelines for analyzing risks and monitoring employee exposure.

To safeguard the health of its employees, Michelin deploys a chemical risk management process at all its units involved in manufacturing or research and development. Only chemicals that meet internal acceptance criteria and local HSE regulations are authorized within the Group. Employee exposure is analyzed and the risk levels are strictly defined, with unacceptable risks eliminated by using alternative, less hazardous chemicals or by taking personal or collective protection measures. Michelin invests in risk reduction initiatives every year. Almost all of the risk/exposure analyses were finalized in 2012, which means that the definition of priority avenues for effectively reducing these risks can begin in 2013.

Michelin tires have never contained asbestos and the Group does not use asbestos at any of its units worldwide. The program to remove asbestos containing materials has been completed for friable asbestos and is continuing for bonded materials. In order to control the risk to people and the environment, all asbestos-removal operations are supervised by a manager at corporate headquarters.

The centralized occupational health and hygiene expert information system continued to be rolled out in 2012. Based on Group best practices, the system enables the generation of standardized safety documents for all the semi-finished and finished products used worldwide. These documents, which comply with both local legislation and Group standards, include safety data sheets and instructions for the safe use of products at the workstation.

6.2.4. MANAGING, DEVELOPING AND EMPOWERING EMPLOYEES AT EVERY LEVEL

6.2.4.a) A dynamic and comprehensive approach to training

Around the world, Michelin continuously invests in training programs to enhance the skills of its teams. Every day, 4,200 employees receive training to enable the Group to meet the challenges of international growth, which demands the ability to deliver ever-greater technical performance and superior quality of service.

In 2012, the percentage of training hours per total hours worked ⁽¹⁾ stood at 4.4% for the Group as a whole, unchanged from the previous year, and at 3.05% for MFPM. Indicative of the ongoing efforts made in this area, these rates reflect Michelin's balanced, dynamic approach to training and development. The aim is to give all employees the opportunity to realize their full potential, while also meeting the Company's skills requirements.

In China, for example, where construction work on the new plant in Shenyang forged ahead during the year, capital expenditure projects were accompanied by training initiatives, with the percentage of training hours per total hours worked rising to 7.3% in 2012 from 6.3% the previous year. For the past three years, teams from the plants in China, India and South America have attended training

programs conducted by several departments and facilities in Europe and North America, covering such areas as production, sales and customer service, administrative skills, support services and employee training. In total, 1,200 employees from Brazil, China and India have been trained by their colleagues in other regions.

New training centers have also been established in countries where the Group's development is more recent. A good example is Thailand, where a center covering more than 9,000 square meters has been opened to provide training for technicians, engineers and other professionals in such areas as production, maintenance, management marketing and sales.

Excluding Euromaster and TCI, total training hours amounted to 7.28 million in 2012, for an average of 69 hours per employee on payroll and 78 hours per trainee, compared to 67 and 79 hours respectively in 2011. As a result, Michelin once again ranked above average among the world's 500 largest companies. The number of hours of training at MFPM exceeds one million. Training outlays amounted to 4.9% of payroll in 2012 (5.5% in 2011), for an average training expenditure per trainee of €2,520 (€2,650 in 2011). The Euromaster dealership network in Europe provides 40,000 hours of technical, administrative and sales training to its employees each year.

(1) Data related to this indicator have been reviewed by PricewaterhouseCoopers Audit (see section 6.5). These figures do not include the dealership networks.

TRAINING HOURS BY EMPLOYEE CATEGORY

Group	Production operators	Administrative and technical staff	Managers	Total
Number of training hours	5,107,095	1,839,599	332,161	7,278,854
Percentage	70%	25%	5%	100%

Job-specific courses accounted for 90% of the training program in 2012, in line with the Group's commitment to helping to develop people's skills and employability. Management courses accounted for another 6% of the program, compared to 4% the previous year. The significant increase reflects the initiatives undertaken by the Personnel Department to enhance the quality of management, as part of the "Moving Forward Together" approach. The remaining 4% were general training courses.

Environment and Prevention training represented 3% of the overall program.

6.2.4.b) A structured skills management process

A structured process has been implemented to manage skills within the Group. In each profession (marketing, finance or logistics, for example), a Competencies Director is responsible for deploying a Referential of metier competencies and skills assessment tools, with the help of employee experts in the profession and human resources personnel.

Reference jobs have been defined for each metier, totaling more than 700 across the Group. Considerable effort has been made since 2011 to harmonize the associated job descriptions. As a result, 90% of all administrative, technical and management reference job descriptions had been reviewed and updated by end-2012. Available via a shared database, the job descriptions identify the expected achievements, main tasks and skill requirements associated with each job. To ensure global consistency of the job map, the reference jobs are placed on a common matrix using the same, Hay Group method worldwide.

All positions are linked systematically to a reference job, giving employees a clear understanding of what is expected of them. A standard training plan covering individual and collective skills development activities is prepared for all jobs. In addition to describing the training required on taking up the position, it also sets out initiatives for maintaining and developing the skills required for the job.

All employees benefit from an annual process involving a performance appraisal, the definition of objectives for the year and a development action plan. They are also offered a more in-depth periodic development review every three years to discuss their development beyond their current position. In 2012, 50% of administrative and technical staff and managers had benefited from a development review within the previous three years, compared to 46% in 2011.

A strategic human resources planning process is gradually being deployed at Group level. The process will be led jointly by operations and personnel staff, with input from the professions and country organizations. The aim is to identify and analyze potential gaps between actual employee numbers and skills and strategic human resources needs, so that these gaps can be addressed.

6.2.4.c) A system for recognizing competency

Since 2011, all Group professions have been involved in implementing a global process for recognizing skills development and job competency. The process has been divided into two stages:

- validation, which means that the employee has completed the training required on taking up a new position;
- qualification, which means that the employee has demonstrated the ability to do their job independently.

The competency recognition process is primarily applied on two particular occasions:

- When employees take up a new position, they are given a job description and an individualized training plan based on the standard training plan for the reference job. Their competency for the position is validated once they have completed their training plan, and then certified by their manager once they have acquired the necessary level of independence.
- Managers are asked to conduct a periodic development review every three years to identify additional skills that the employee should develop, either for their current position or in preparation for a future position.

6.2.4.d) A new employee induction program

The Personnel Department has developed a comprehensive and customizable program to help new hires become familiar with Michelin and to guide them through their first days with the Group. Launched in 2011, the new induction program is designed for all employees and is gradually being deployed in all host countries.

Every new employee is welcomed by their manager and a member of the Personnel Department, who walk them through their individual induction program and support them as they get started at Michelin. As part of this individual program, new employees move into their position, take part in an onsite introductory course and participate in an induction seminar during their first year with the Company. The seminar may take one of several forms:

- The induction seminar for operators is held over a three-day period, two days when they join the Company and an additional day once they have been on the job for a year.
- Administrative and technical staff attend a three-day "A Better Way to Start" seminar held in their host country.
- For employees above a certain level of responsibility, a four-week program called "The Session" is organized three times a year in Clermont-Ferrand. A total of 300 engineers and managers from around the world participated in the program in 2012.

Once their induction has been completed, employees review the period with their induction monitor or career manager.

6.2.4.e) Career management for everyone

Michelin has always put great emphasis on internal promotion, which is why 80% of the Group's 600 main managers today have been promoted from within. This means that all employees are hired to pursue a career over the long term, not just for a specific position. The integration and continuous skills development initiatives mentioned earlier enable all employees to realize their full potential. After their induction period, employees are supported through the various stages of their career by a network of nearly 400 career managers.

Present worldwide and independent from the hierarchy, career managers are responsible for a particular site or country, or for managing international careers. They leverage a broad, long-term vision to enable employees to build a personalized career path and to seize new job opportunities, in accordance with their individual career aspirations and the needs of the Company.

Alongside career managers and the employees themselves, managers also play a key role in the career management process, helping employees to improve their performance and supporting their professional development. Managers are also tasked with determining their team members' capacity for advancement. Between 2010 and 2012, 2,500 managers – representing 40% of the total – were trained to identify employees with the potential to progress fast and/or far up the corporate ladder.

In 2012, 15% of all administrative and technical staff and managers, and 24% of those aged 20 to 30, were promoted during the year. Also in 2012, Michelin decided to help all of its plants worldwide ensure the dynamic management of production operators' careers, by preparing guidelines and Group recommendations on this topic. Indicators for tracking progress in this area will be introduced in 2013.

6.2.4.f) Harnessing employee ideas to drive performance and progress

Michelin was one of the first companies in the world to tap into employees' imaginations when it introduced Progress Ideas back in 1927. The aim is to offer all employees – regardless of their position – the opportunity to play an active role in the Company's management and growth by suggesting ideas for resolving problems or improving working methods. In addition to encouraging their team members to submit ideas, managers are asked to help process the ideas submitted and to ensure appropriate recognition is given to employees whose ideas have been implemented.

The number of employees participating in the process increases each year, with 20,520 employees worldwide submitting at least one idea in 2012, for a participation rate of 34.5%. The improvement was well above average in some countries. In Russia, for example, the number of employees who submitted ideas increased from 47 in 2011 to 622 in 2012, with a total of more than 900 Progress Ideas submitted throughout the year.

Worldwide, a total of 49,255 ideas were submitted in 2012 and 20,834 of them – 15% more than in 2011 – were implemented. These ideas drove progress in a wide variety of areas, including safety, quality and working conditions, and generated an annual net saving for the Group of an estimated €13.5 million.

At MFPM in France, the participation rate was slightly higher in 2012, at 43%. Close to 20,000 ideas were submitted during the year, of which more than 9,000 were implemented. Some were particularly effective, generating savings of more than €500,000.

At the 2012 Progress Idea awards ceremony held in June in Clermont-Ferrand, France, the Group Executive Committee presented awards for 33 Progress Ideas. The event brought together 200 employees, representing 48 different sites and 11 host countries.

6.2.4.g) "Moving Forward Together" by empowering organizations

One of the main objectives of the "Moving Forward Together" initiative is to ensure that all employees – regardless of their level or role in the Company – have the opportunity to exercise their full range of skills and capabilities so that they find fulfillment in their jobs. Initially deployed across the production base as part of the Michelin Manufacturing Way, the "Empowering Organizations" approach is designed to achieve that objective, with positive impacts on performance, personal development and employee wellbeing.

Two steps to empowerment have been defined so far and are being deployed in all host countries. By step 2, the business team must be multi-skilled, handle everyday issues and manage its own time sheets.

Deployment has been picking up speed since 2011, with all countries and sites appointing project leaders and organizing training and team building sessions to facilitate deployment. In 2012, a total of 300,000 hours of training and team building were devoted to empowering production team members. The return on investment was clear; by end-2012, more than 70 of the 146 manufacturing operations had been validated at step 2. These initiatives aim to empower employees at all levels of the manufacturing process – business unit, shop and plant.

The "empowering organizations" approach has delivered considerable benefits, in terms of job satisfaction, team spirit and performance. As a result, the Group now wishes to further its quest for independence and empowerment. A project to invent the empowering organizations of the future was therefore launched in late 2012, involving around 40 production teams and stations. The test project will be conducted throughout 2013, to determine all of the processes that can be managed by the teams and to offer solutions that have been proven effective.

6.2.5. ENHANCING DIALOGUE

6.2.5.a) A new era in social dialogue

Ongoing dialogue with employee representatives was stepped up in 2012. A total of 1,724 meetings were held with union representatives and 61 collective agreements were signed, covering the entire Group, including the dealership networks. Required health and safety training programs are presented in section 6.2.3.

In France, for example, discussions between MFPM and employee and union representatives led to the signature on January 8, 2013, of an agreement on enhancing the employee relations process, which will gradually come into effect during the year. The many agreements signed and implemented in recent years have related to supporting changes in the Company or meeting employee expectations. In this agreement, the parties have undertaken to enhance the employee relations process, by adapting and simplifying practices and procedures and by agreeing on operating principles, working methods, the career management of employee-elected representatives, and the operating methods and procedures used by employee representative bodies.

In Europe, discussions are underway with the European Works Council to prepare a framework agreement on the Company's corporate social responsibility commitment.

In China, the Michelin plants in Shanghai were awarded the "AAA Harmonious Enterprise" label from the local authorities, based on an assessment carried out by independent consultancy Horizon Consultation Group. Of the 27,000 eligible companies, 70% participated but only 60 were successful. Michelin has spent many years working to improve employee relations and corporate social responsibility in China and was the only foreign company to obtain the label.

In addition to signing several agreements to support competitiveness and employment during the year, Michelin also launched a process to give new impetus to its employee relations, based on the United Nations Global Compact's ten universal principles, and more particularly on freedom of association and the right to collective bargaining. The new approach involves the international expansion of employee representative bodies and a vast project that gives employees the power to participate in managing the Group's performance. Details of this project are presented in section 6.2.4.g.

6.2.5.b) A wide variety of information and consultation processes

Michelin is deeply committed to fostering effective communication with employees and their representatives. To share and exchange information with employees, Group facilities have deployed a broad array of processes.

Today, around 30 distinct communication channels and a dozen different consultation processes are in general use across the Group. On average, each country uses 20 of these media, including the Intranet; site, country and unit publications; daily, weekly and monthly team meetings; the Group's *Forward* TV news program; the print *Bibnews* magazine sent to all employees in several countries; the Letter to Shareholders; meetings with employee representatives; surveys and polls; roundtables; forums; bulletin boards; and Family Day events.

A special document translated in around ten languages explains Michelin's "New Phase of Dynamic Growth" strategy for 2011-2015. All 113,000 employees also have access to a set of corporate reference documents that includes: the *Michelin Performance and Responsibility Charter*, which is the foundation of our sustainable development process; *Michelin Performance and Responsibility, A Better Way Forward; Moving Forward Together: The Trademark of Mutual Commitment*, which expresses our commitments as an employer; the *Manager's Guide*; the *Michelin Corporate Governance Manual*; the *Michelin Code of Ethics*; the *Security Charter*; the *Social Networks* and the new *Michelin Purchasing Principles*.

To mark the tenth anniversary of the Michelin Performance and Responsibility approach, an internal communication campaign called "What about you? What's your best way forward?" was launched worldwide in 2012. Employees reacted enthusiastically, with nearly 20,000 ideas submitted at team meetings, 2,000 selected and 435 posted on a dedicated intranet. These ideas have been quoted on the country intranets and on the Group intranet, as well as in "Our Better Way Forward", the 10-year review of the Michelin Performance and Responsibility approach, which has been widely distributed across the Group.

6.2.5.c) Measuring employee engagement

The Personnel Department conducted its first major employee engagement survey in 2011, covering 80% of the workforce over a two-year period and involving nearly every country where the Group has manufacturing and/or marketing operations. The survey proved a useful tool for listening to employees and the Group decided in 2012 to review the methodology used and adopt a more systematic approach. Starting in 2013, an "Moving Forward Together survey" will be conducted among all employees on an annual basis and deployed at the same time of year in all countries. This will give Michelin a better idea of how employees view the human resources policies implemented within the Group. Action plans will be prepared and implemented at different levels of the organization.

To enhance the overall survey process, Michelin is turning to a new service provider. Kenexa conducts five million surveys a year and has a strong presence worldwide. The data it provides will enable Michelin to compare its performance with other manufacturers, both locally and globally.

The Group's target employee engagement levels for 2012 were achieved: 73% for production operators and 85% for administrative and technical staff and managers. For the sake of comparison, overall employee satisfaction was 78% in 2010 and 79.3% in 2011, for differing survey scopes. Michelin's objective for 2020 is to achieve and maintain a global employee engagement level of 85%, with above-average engagement in at least 20 host countries.

6.2.6. DRIVING INNOVATION THROUGH DIVERSITY

At Michelin, diversity is considered a competitive strength that fuels and enhances the Group's capacity for innovation. Michelin's diversity policy is therefore designed to ensure equal opportunity for all employees and to promote workforce diversity and cross-cultural interaction as innovation drivers. The policy focuses on four priority areas – gender, physical abilities, age, and ethnic origin and nationality. It is inspired by one of the Group's five core values, respect for people, which acknowledges that every individual is unique.

The diversity process is led by a Group level manager and a steering committee comprising the geographic zone directors and the Group's Director of Personnel, who is also a member of the Group Executive Committee. The steering committee defines the Group's diversity objectives and sets specific targets for each zone. The diversity policy is also supported by a worldwide network of 600 correspondents and liaison officers based at every facility and in every business. Regularly measured by indicators at both Group and country level, progress in the four priority areas is being driven by action plans in every host country.

6.2.6.a) Preventing discrimination

Sensitivity campaigns and special training programs have been introduced to promote equal opportunity and competency-based hiring and promotion practices, with the goal of instilling an effective diversity culture throughout the organization and at every level of management. Between 2005 and 2012, diversity training courses were attended by executive committee members, managers, human resources teams and production operators.

All managers have an important role to play in the diversity process. A set of strategic principles underpinning the Group's personnel management practices was published in 2012, clarifying what is expected of career managers ("actively promote diversity") and all other managers ("recognize and develop diversity").

An action plan is underway to provide diversity training to the 25,000 employees in France by 2015. Combining theory, practice, individual assignments and role-playing, the courses are organized around small groups of ten to fifteen people. They help employees to recognize discriminatory situations and behavior, avoid stereotyping, become familiar with laws and regulations, and anticipate situations at risk. They are also designed to encourage participants to undertake meaningful initiatives to promote diversity in their units. In the United States, research on various diversity-related topics is regularly presented to the senior management team, as part of an awareness program that has been underway for over five years.

In addition to training and awareness initiatives to improve attitudes and practices, audits are also conducted on a regular basis to ensure that human resources processes are non-discriminatory. Four internal audits have been carried out in France and in the United States since 2007, ensuring action plans have been effectively implemented to address the risks identified. A final internal audit was conducted in 2011 to bring to light any remaining risk of discrimination during hiring and personnel management processes.

6.2.6.b) Fostering gender equality

Michelin wants to make manufacturing more appealing to women. Plant managers are encouraged to increase the percentage of women in their teams at all levels, including among production operators. To help them meet the defined targets, new resources were introduced in 2010, including a map of jobs more suitable for women, new organizational arrangements and adjustments to workstation ergonomics. In every plant, workstations have been inspected in detail. The medium-term objective is to eliminate the most physically demanding workstations, to minimize the impact on employee health and make manufacturing positions accessible to a wider range of people, including women. A program is also being deployed to help increase the number of women sales managers. Lastly, mentoring, as practiced in the United States, Germany and France, provides newly hired women with effective support.

While women still accounted for just 9.3% of production operators in 2012, they were more represented among administrative and technical staff (28.2%) and, to a lesser extent, in management (18.4%). The steady increase in the percentage of women employees reflects the Personnel Department's proactive approach, which starts during the recruitment stage. In 2012, women accounted for one-third of all administrative and technical staff and managers hired worldwide. At several facilities, personnel managers receive bonuses based on the percentage of women hired. In every country, newly hired managers receive diversity training through a new module included in their induction program since 2011.

■ Ensuring pay equality worldwide

Michelin applies a policy of non-discrimination and equal pay. This means that men and women with equivalent profiles and positions receive equivalent compensation. In 2012, the Group introduced a new calculation method for pay equality data that is both verifiable and more comprehensive, since it includes men and women in all job categories. The analysis conducted in 2012 covered 20% of the total workforce, excluding temporary employees and the dealership networks. The aim is to identify the reasons behind any existing pay gaps, so that corrective measures can be taken to close them. In 2012, the geographic zones were examined one by one and a detailed analysis was undertaken for each profession.

Progress has already been made. The global average pay gap between men and women in middle management was narrower in 2012 than in 2011 and a plan has been adopted to ensure more balanced compensation for female employees in Thailand.

In 2013, the Group Personnel Department will step up initiatives aimed at reducing any remaining gender pay gaps in every region.

	2012	2011	2010
Percentage of women managers**	18.4%	17.6%	16.7%
<i>MFPM</i>	18.6%	<i>N/A</i>	<i>N/A</i>
Percentage of women among top managers ^{(1)**}	13.8%	12.6%	11.6%
<i>MFPM</i>	12.6%	<i>N/A</i>	<i>N/A</i>
Percentage of women among senior managers ^{(2)**}	8.2%	7.1%	7.0%
<i>MFPM</i>	7.1%	<i>N/A</i>	<i>N/A</i>
Percentage of non-French people among top managers ^{(1)**}	46.2%	46.3%	46.1%
<i>MFPM</i>	14.1%	<i>N/A</i>	<i>N/A</i>
Percentage of non-French people among senior managers ^{(2)**}	36.3%	35.3%	36.7%
<i>MFPM</i>	12.3%	<i>N/A</i>	<i>N/A</i>

Scope: Group excluding dealership networks (85.7% total workforce).

(1) A to I managers, according to the Hay method used by the Group.

(2) A to G managers, according to the Hay method used by the Group.

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see paragraph 6.5).

6.2.6.c) Hiring and retaining the disabled

Defined in 2006, Group policies governing the employment of disabled people are designed to eliminate all forms of discrimination in hiring and to help retain people with disabilities throughout their career. In addition, Michelin is committed to meeting or exceeding legally mandated quotas wherever they exist. In every country, programs are underway to fight stereotyping and promote the hiring of disabled people.

In France, a guide for supporting disabled employees has been published and a committee has been set up within MFPM to explore avenues for retaining disabled employees, with input from career managers and occupational medicine teams. A contact person with training in disability management is also available at each plant to process requests from employees. Michelin's approach to disabled employment in France is based on six clearly defined avenues: (i) organizing training with recognized outside experts (AGEFIPH & MEDEF); (ii) selecting priority objectives, such as retaining disabled employees and strengthening ties with the protected employment sector; (iii) supporting cultural change through training and communication initiatives; (iv) participating in events organized by outside partners with expertise in this area (Capemploi, Sameth); (v) regularly gauging progress *via* scorecards (with four key performance indicators – percentage of disabled employees in the workforce, units subcontracted, fines paid, and subsidies received); (vi) designating specific employees as contact people for disability issues.

From a legal standpoint, hiring the disabled is governed by standards that vary widely by country. Some countries, like Canada, Russia, Serbia, the United Kingdom and the United States (where it is against the law to disclose information about a disability), do not require companies to hire a certain percentage of disabled people, while others, like Colombia and the Netherlands, have only incentive-based policies. Still others have imposed quotas, ranging from 0.5% of total employees in Thailand to 7% in Italy. These legal and cultural differences mean that almost every situation is unique and make it difficult to consolidate worldwide data on the employment of the disabled. In 2012, Michelin exceeded disabled employee quotas in two countries – in France, where disabled employees accounted for 9.1% of the workforce, and in Brazil, where the imposed quota is 5%.

6.2.6.d) Ethnic origins and nationalities

Diversity issues related to ethnic origins are amply addressed by programs underway in North America and in Europe, particularly as part of the hiring and induction process. In the United States, the distribution of performance appraisal results is established by ethnic origin to ensure equal opportunity for all. Anomalies are systematically analyzed and appropriate corrective measures are taken when necessary. However, Michelin's goal is not to practice affirmative action, but to hire and promote people on the basis of their capabilities. Wherever possible, Michelin is committed to encouraging the emergence of a highly skilled corps of local managers, while respecting local cultures. As a result, in 2012, nearly half (46.2%) of senior managers were non-French nationals. Around the world, local managers are contributing their cultural capital and understanding of regional issues. Michelin is actively integrating cultural and national differences, which are seen as a competitive strength and an advantage in attracting the best job applicants.

6.2.6.e) Combating age discrimination

In Western Europe, the average age of employees is trending upwards as the age pyramid shifts and people gradually have to work longer until retirement. Michelin is committed to pro-actively addressing this issue by improving workstation ergonomics, capitalizing on the experience acquired by older employees, and offering new job opportunities or temporary assignments in line with each person's situation. At the other end of the age pyramid, the Group supports the mentoring of new hires by more experienced employees, both to enable the transfer of skills and expertise and to facilitate intergenerational integration.

Since 2012, production facilities have access to a tool that can help them determine the distribution of workers by age, identify the risks associated with workstation ergonomics, gauge any loss of motivation among employees, and organize the transfer of knowledge and expertise. The tool will also be used to implement corrective and preventive measures.

Work-study contracts are part of the Group's youth employment policy and serve as a recruitment tool to help Michelin meet its future human resources needs. In 2012, work-study participants accounted for 6% of the workforce at MFPM, compared to the 4% required by French law. They included 275 apprentices working toward a professional diploma or degree.

6.2.7. SUMMARY TABLE OF 2012 EMPLOYEE DATA ⁽¹⁾

	2012	2011	2010	GRI
Employees on payroll at December 31** (including dealership networks, all types of work contracts, excluding temporary)	113,443	115,000	111,090	LA1
Europe	67,785	69,580	68,057	
<i>MFPM</i>	<i>20,805</i>	<i>20,731</i>	<i>19,411</i>	LA1
North America	22,209	22,545	21,778	LA1
South America	6,037	5,957	5,673	LA1
Asia (excluding India)	15,307	15,332	14,502	LA1
Africa, India, Middle East	2,105	1,586	1,080	LA1
Employees on payroll by gender** (excluding dealership networks)				
Men	84.4%	84.8%	85.6%	
<i>MFPM</i>	<i>85.0%</i>	<i>84.7%</i>	<i>85.0%</i>	LA13
Women	15.6%	15.2%	14.4%	
<i>MFPM</i>	<i>15.0%</i>	<i>15.3%</i>	<i>15.0%</i>	LA13
Employees on payroll by category (in %) (excluding dealership networks)				
Production operators	63.1%	63.9%	64.7%	
<i>MFPM</i>	<i>51.0%</i>	<i>51.0%</i>	<i>51.5%</i>	LA1
Administrative and technical staff	30.1%	29.7%	29.2%	
<i>MFPM</i>	<i>23.4%</i>	<i>24.0%</i>	<i>24.8%</i>	LA1
Managers	6.8%	6.4%	6.1%	
<i>MFPM (as defined in the collective bargaining agreement)</i>	<i>25.8%</i>	<i>25.0%</i>	<i>23.7%</i>	LA1
Employees on payroll by age (in %) (excluding dealership networks)				
24 and under	6.1%	6.7%	6.1%	
<i>MFPM</i>	<i>5.6%</i>	<i>6.2%</i>	<i>4.9%</i>	
25-34	27.3%	27.5%	26.7%	
<i>MFPM</i>	<i>21.0%</i>	<i>5.6%</i>	<i>5.6%</i>	
35-44	26.8%	26.1%	25.9%	
<i>MFPM</i>	<i>21.6%</i>	<i>20.5%</i>	<i>19.5%</i>	
45-54	23.4%	23.8%	25.4%	
<i>MFPM</i>	<i>26.6%</i>	<i>28.4%</i>	<i>32.8%</i>	
55-64	16.2%	15.7%	15.7%	
<i>MFPM</i>	<i>25.1%</i>	<i>23.9%</i>	<i>24.1%</i>	
Over 65	0.2%	0.3%	0.2%	
<i>MFPM</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	
Employees on payroll by length of service (in %) (excluding dealership networks)				
Less than two years	21.9%	20.5%	17.9%	
<i>MFPM</i>	<i>17.4%</i>	<i>11.3%</i>	<i>6.8%</i>	
2-5 years	10.3%	12.2%	13.1%	
<i>MFPM</i>	<i>6.5%</i>	<i>9.2%</i>	<i>8.7%</i>	
5-10 years	15.8%	16.5%	16.8%	
<i>MFPM</i>	<i>13.0%</i>	<i>14.0%</i>	<i>15.9%</i>	
10-15 years	14.9%	12.8%	13.0%	
<i>MFPM</i>	<i>11.9%</i>	<i>9.7%</i>	<i>11.6%</i>	
15-20 years	6.8%	6.3%	5.9%	
<i>MFPM</i>	<i>5.0%</i>	<i>4.1%</i>	<i>4.4%</i>	
More than 20 years	30.3%	31.6%	33.3%	
<i>MFPM</i>	<i>46.3%</i>	<i>51.7%</i>	<i>52.7%</i>	

(1) Several figures of 2010 and 2011 have been recalculated in order to include the dealership networks.

	2012	2011	2010	GRI
Employee movements (work contracts with no set end date, excluding dealership networks)				
New hires	6,224	9,611	7,613	
<i>MFPM</i>	934	1,394	743	LA2
Resignations	2,218	2,013	1,950	
<i>MFPM</i>	114	159	149	LA2
Dismissals and terminations by mutual agreement	2,197	2,260	2,590	
<i>MFPM</i>	197	262	339	LA2
Retirement	1,853	1,769	2,325	
<i>MFPM</i>	757	661	1,081	LA2
Death	125	141	127	
<i>MFPM</i>	32	37	44	LA2
Attrition rate (including retirements)	6.8%	6.6%	7.8%	
<i>MFPM</i>	5.5%	5.7%	8.6%	LA2
Part-time contracts (in %) (including dealership networks)	2.8%	2.5%	2.2%	
<i>MFPM</i>	4.5%	N/A	N/A	
Training (excluding dealership networks)				
Percentage of training hours per total hours worked**	4.4%	4.4%	4.2%	
<i>MFPM</i>	3%	N/A	N/A	LA10
Percentage of employees who received training	88%	85%	83%	
Number of training hours per employee per year	69	67	64	LA10
Training expenditure as a percentage of payroll	4.9%	5.5%	4.9%	
<i>MFPM</i>	5.1%	7.4%	5.1%	
Average training expenditure per person trained	€2,520	€2,650	€2,450	
<i>MFPM</i>	€1,850	N/A	N/A	
Training hours (Group excluding leadership networks)	7,278,854	7,231,466	6,559,534	
<i>MFPM</i>	1,096,736	nd	nd	
Type of training				
Job-specific training	90%	92%	91%	LA11
Management training	6%	4%	4%	
General training	4%	4%	5%	
	100%	100%	100%	
Environment and Prevention training (for all employees, excluding E&P personnel)	3%	3%	3%	
Language training	2%	2%	3%	
Absenteeism (production operators)** (not including dealership networks)	4.6%	4.3%	3.8%	
<i>MFPM</i>	7.3%	7%	N/A	LA7
Sick leave and other unforeseeable short-term absences	2.6%	2.1%	2.0%	
<i>MFPM</i>	4.2%			
Injury leave	0.2%	0.1%	0.1%	
<i>MFPM</i>	0.4%			
Long-term leave	1.8%	1.9%	1.7%	
<i>MFPM</i>	2.6%			
Occupational accidents (including dealership networks)				
Number of lost-time incidents, Group-wide	529	456	470	
Lost-time incident frequency rate**	2.80	2.40	2.53	LA7
Lost-time incident severity rate**	0.19	0.17	0.20	LA7
Number of plants with zero recordable incidents	24	26	24	

	2012	2011	2010	GRI
Diversity				
Percentage of women managers	18.4%	17.6%	16.7%	LA13
<i>MFPM</i>	18.6%	<i>N/A</i>	<i>N/A</i>	
Percentage of women among top managers ^{(1)**}	13.8%	12.6%	11.6%	LA13
<i>MFPM</i>	12.6%	<i>N/A</i>	<i>N/A</i>	
Percentage of women among senior managers ^{(2)**}	8.2%	7.1%	7.0%	LA13
<i>MFPM</i>	7.1%	<i>N/A</i>	<i>N/A</i>	
Percentage of non-French people among top managers ^{(1)**}	46.2%	46.3%	46.1%	LA13
<i>MFPM</i>	14.1%	<i>N/A</i>	<i>N/A</i>	
Percentage of non-French people among senior managers ^{(2)**}	36.3%	35.3%	36.7%	LA13
<i>MFPM</i>	12.3%	<i>N/A</i>	<i>N/A</i>	

(1) A to I managers, according to the Hay method used by the Group.

(2) A to G managers, according to the Hay method used by the Group.

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see paragraph 6.5).

Scope: Group excluding dealership networks (85.7% total workforce).

6.3. SOCIETAL INFORMATION

6.3.1. THE TERRITORIAL, ECONOMIC AND SOCIAL IMPACT OF THE JOB CREATION AND REGIONAL DEVELOPMENT ACTIVITIES OF MICHELIN DEVELOPMENT IN EUROPE AND NORTH AMERICA

Michelin Development supports economic growth in host communities and helps to deploy our worldwide corporate social responsibility commitment. The only organization of its kind, Michelin Development takes a highly flexible approach in assigning Group specialists, on a case by case basis and for as long as necessary, to provide local project champions with expertise and highly qualified technical support in a wide variety of areas, such as information systems, workplace safety, energy efficiency, quality management, marketing, finance, hiring, tourism or international expansion. This advice and expertise can be backed by financial support in the form of five-year, low-interest, collateral-free loans, designed to create leverage with individual or institutional investors, thereby kick-starting a dynamic process of local job creation. The start-ups supported in 2012 covered a very diverse array of business segments, including: (i) a new compressed air recovery system in Italy; (ii) a micro-silo storage process in Spain; (iii) women cyclist apparel and the world's first digital bicycle rear-view mirror in the United States; and (iv) walkers for sick children in the United Kingdom. In more than twenty years, Michelin Development has helped to create over 26,500 jobs in France and eight other European countries, and 2,000 in Canada and the United States. It has also initiated 1,400 technical assistance programs designed to support the emergence of local businesses. Michelin Development also plays a particularly active role in the event of industrial reorganizations.

In France, Michelin Development has helped to create more than 17,000 jobs, amply exceeding compliance with French legislation requiring companies to support communities in revitalizing the local employment catchment area. In recent years, agreements have been signed with the French State and local authorities concerning the facilities in Bourges, Montceau, Seclin, Toul and Tours.

Since 2002, similar organizations have been set up in Germany, Hungary, Italy, Poland, Romania, Russia, Spain and the United Kingdom, involving a total of 36 Michelin facilities. These organizations often serve as catalysts for local initiatives. In Italy, for example, Michelin helped to found a *Réseau Entreprendre* chapter in the Piedmont region, which today comprises fifty volunteer CEOs who personally mentor new entrepreneurs who are setting up or acquiring businesses capable of creating new jobs.

Since 2006, Michelin North America has invested more than \$7 million in a very wide variety of small local businesses as part of the Michelin Development Program. Deployed in Ontario, Alabama and South Carolina, the program is dedicated to creating sustainable, high-quality jobs, while effectively contributing to the economic prosperity of our host communities. It has already granted low-interest loans to 69 companies and helped to create 1,873 potential jobs.

6.3.2. RELATIONSHIPS WITH LOCAL COMMUNITIES, SCHOOLS AND ASSOCIATIONS

Wherever it operates, Michelin is committed to participating harmoniously in the life of our host communities, while fostering their sustainability. By nurturing close contacts with public authorities, schools, associations and other local organizations, we also participate in their activities, sharing our expertise or providing financial support, when appropriate. This interaction tends to focus on four areas: the mobility of people and goods, education, cultural and sports activities, and charitable initiatives.

To increase the effectiveness of this community outreach, in 2012, we pursued our collaboration with the London Benchmarking Group, an association of more than 300 multinational companies that has developed a methodology for measuring the value and impact of community investments.

During the year, employees were allowed to devote 17,649 days to community outreach activities, of which 46% concerned educational initiatives for young people and 15% mobility-related programs. In addition, the year saw Michelin plants publish, for the first time, a report structured according to London Benchmarking Group categories.

Of the Group's philanthropic investments, 78% are financial in nature. The total budget amounts to €18,880,079, of which 24% is allocated to charitable donations, 73% to community investments and 3% to community-related business initiatives.

In each region, annual philanthropic investment budgets are generally proportional to the number of local employees.

Community service programs are an extremely varied form of outreach. While this diversity makes an exhaustive overview very difficult, significant examples are given below. In addition, a special section describes our outreach programs in India.

■ North America

In the United States, all of our main facilities each sponsor a nearby public primary school as part of a program launched in 2009 called the Michelin Challenge Education. By forming a deep partnership, the facilities can meet the adopted school's needs through the active involvement of Michelin employees as volunteer tutors in reading, math and science for students encountering difficulty in these subjects. In 2012, the program was introduced in Canada. Other outreach projects contribute to local food banks, such as Meals on Wheels of Greenville, in South Carolina. Michelin North America provides financial and in-kind support for fire departments, volunteer organizations working to help the sick, advanced medical research, programs to help the disabled, elderly or needy, sports clubs and museums. In 2012, 900 children in Canada participated in the Michelin Junior Bike road safety event. In South Carolina, the 23rd Michelin Charity Golf Tournament held on October 1, 2012 raised \$330,000 thanks to the 93 participating teams of Michelin suppliers, employees and retirees.

■ South America

As part of the Rio+20 Conference, Michelin Brazil partnered with CEBDS (the local WBCSD affiliate) to participate in an eco-friendly reurbanization project for Babilonia and Chapeu Mangueira, two disadvantaged Rio de Janeiro *favelas*. During the year, the *Ação Educativa* multi-faceted teaching initiative continued to be deployed to improve the prospects for educational achievement of young people living near Michelin plants in Campo Grande and Itatiaia in Rio de Janeiro State. Developed in partnership with National Industry Training Services (SENAI), the program offers remedial courses for teenagers and classes for adults, some of which are taught by Michelin volunteers, in such widely varying areas as mechanics, logistics and information technology. Other initiatives in Brazil include a program to support family farming in Bahia; funding for biodiversity research in Bahia that includes the upkeep of a 3,000-hectare primary forest reserve; tire donations to communities in northern Rio de Janeiro State; and funding for the educational *Na Pista do Melhor Caminho* road safety game in partnership with the Rio de Janeiro Urban Traffic Department (DETRAN) for use in vocational schools run by the National Industry Training Services throughout the State. In Cali and Bogota, Colombia, Michelin sponsors the *Fundación Dividendo por Colombia*, which organizes a fast-track remedial program designed to get needy children and teenagers back in school, and supports children through *Preventorio Infantil de Sibate*.

■ Europe

Michelin is leading a myriad of initiatives in Europe in a highly diverse array of areas, including sustainable mobility, training for young people to prepare them to enter the workforce, and the quality of economic and cultural development in our host regions. This involvement in local communities includes a variety of charitable donations, such as grants to local Red Cross organizations to support the homeless; blood drives; funding for offices for local non-profit organizations; the renovation of homes for the disabled; financial partnerships with institutions for the disabled; furniture donations to a children's hospital; tire donations to emergency and charity services; funding for medical equipment such as defibrillators and hospital vehicles; donations to non-profit sports programs for the disabled; job-search training for the unemployed; funding for Michelin choir concerts for charities; donations of computers and projectors; and donations of bicycles and helmets to improve road safety.

Sustainable mobility is supported with many other outreach programs, including road safety classes for schoolchildren; organization of road safety events with primary schools, such as *Vado a piedi e uso la testa* (Go on Foot and Use Your Head) in Italy; support for the *Pedibus* walking school bus program for Italian schoolchildren; sponsorship of road safety campaigns in cooperation with local automobile clubs; support for *Ta Route... Ta Sécurité* road safety day; anti-drunk driving campaigns; the *Securiz'mois* safety awareness month, a partnership to promote electric vehicles; and donations to the *Ligue Contre la Violence Routière* organization against road rage (details in section 6.3.3.c).

A multitude of initiatives are underway to encourage and support education and to attract young people to technical jobs. Examples include a week-long internship for French secondary school students; renovation of the playing field and playgrounds of a school; student career awareness outreach initiatives; support for schools by teaching classes, serving on examination boards and monitoring struggling students; participation in a Girls' Day campaign to encourage young women to pursue technical careers; partnerships with several European universities and schools to promote science courses; events with leading engineering and business schools to present Michelin's professions; and funding for local library books.

Many programs encourage personal growth through sports, such as support for sports clubs; financing for matches; the organization of sporting events; and renovation of the playing field and playgrounds of a school. In Clermont-Ferrand, Michelin supports the *Association Sportive Montferrandaise* (ASM) multi-sports club, both through funding and volunteers. ASM offers its 3,000 members access to three practice facilities and 15 sports programs led by 400 coaches and organizers, with a special emphasis on training young people while they continue their studies and on monitoring athlete health.

■ Asia-Pacific

In China, road safety classes were organized for 6-to-8 year olds, an especially vulnerable population, whose parents have migrated from disadvantaged regions.

In Thailand, Michelin provided funds to match employee donations to victims of the catastrophic 2012 floods, while in remote areas, we helped to renovate 16 flood-damaged schools.

In India, a vocational training center opened in 2011 offers residents of 31 villages around the Thervoy-Kandigai industrial park, where the Michelin plant is being built, classes in English, mechanics, plumbing, carpentry and cellphone repair and baking. The goal is to spur the creation of local jobs by facilitating the start-up of small businesses in surrounding communities, where many people live in extreme poverty. With the AID India association, the center also conducts after-school classes attended by hundreds of children from the neighboring villages. In August 2011, Michelin opened a French school for the children of expatriate employees and local families in Chennai, in partnership with an Indian school and the French Lycée in Pondicherry. In the area of health care, mobile clinics have been organized to provide a range of medical treatments, notably in general medicine, gynecology and eye care. Some 2,800 people have been examined, more than 970 have been fitted with glasses and 158 have been successfully operated for cataracts. On the environmental side, a natural resource management program helped to renovate wells, retention basins and 34 kilometers of crop irrigation canals, representing 4,000 person-days in all. Designed with NGP SKG Sanga, the Biogas program is driving the development of renewable energy sources, with 100 households equipped in 2012. The Care Earth association has been asked to revitalize interest in 77 traditional medicinal plants neglected by local residents. With increased mobility comes a greater risk of road accidents and in

response, an action plan was prepared in association with State Highways Department to improve road safety with training and new highway equipment. Because many villagers are too poor to defend their rights, paralegal facilitation units have been set up with FORRAD, an Indian NGO, to help the needy receive social benefits to which they are entitled. To date, the units have already assisted 310 people. Conducted with 13 Indian NGOs, all of these initiatives are proceeding in constant liaison with the villagers, representatives of local communities and the 23 governing local, regional and national administrative authorities. Separately, there has been an ongoing dispute since 2007 between a small group of residents from Thervoy, one of the 31 villages concerned by the creation of the industrial park, and the public corporation that is developing the park. Rejected by the Indian Supreme Court, the project opponents, the two French associations that are assisting them and France's CGT trade union notified the OECD National Contact Point for France in July 2012 of a "specific instance" accusing Michelin of violating the OECD's Guidelines for Multinational Enterprises. The notification is currently being reviewed.

Relations with environmental protection associations

Whenever appropriate, Michelin fosters close ties with environmental protection associations or organizations working to safeguard the environment.

In France, every year since 2008, the CEPA nature conservancy has conducted a census of species living in the continental salt meadow located on the grounds of our Ladoux Testing and Research Center near Clermont-Ferrand. The partnership has been officially structured by an agreement.

In North America, Michelin's commitment to environmental stewardship has been recognized by the US Environmental Protection Agency, which selected ten plants to take part in the National Environmental Performance Track public-private partnership from 2005 until the program ended in 2009. To be eligible, a plant had to demonstrate that it had (i) adopted and implemented an environmental management system (EMS); (ii) demonstrated specific past environmental achievements; (iii) recorded sustained compliance with environmental requirements; (iv) committed to continued environmental improvement; and (v) committed to public outreach and performance reporting.

Michelin North America is also continuing to work in partnership with a wide range of associations and public authorities, particularly those active in the area of energy savings (such as the Alliance to Save Energy) and the reduction of transportation-related emissions (such as the EPA's SmartWay Transport Partnership).

With respect to implementation of the renewable energy policy in Europe and the United States, Michelin has been a member since 2007 of the Green Power Market Development Group, led by the World Resources Institute (WRI), a non-governmental organization.

6.3.3. FAIR, HONEST BUSINESS PRACTICES

6.3.3.a) Encouraging, ethical behavior

In 2010, the *Performance and Responsibility Charter* and the Group's guidelines and policies were extended with the publication of a *Code of Ethics*, which expresses our commitment to the values of respect and responsibility. It defines standards of behavior to help employees make the right decisions when confronted with an ethical issue in 15 different areas: Compliance with Laws and Regulations; Conflicts of Interest; Gifts and Entertainment; Government Relations and Anti-Corruption; Confidentiality; Competition and Fair Dealing; Insider Trading; Protection of the Group's Assets; Fraud; Relations with Suppliers; Trade and Export Issues; Fairness in Financial Reporting; Health and Safety; Discrimination and Harassment; Protection of Employees' Privacy. Available in 13 languages, the Code has been sent to everyone in the Company *via* the intranet and directly in hard copy to managers.

To manage and monitor deployment of the Code in our host countries, Ethics and Compliance Committees have been formed at the corporate level and in each of the regions, ensuring that the Code's general ethical principles are properly adapted to local conditions. These Committees include representatives from the Audit, Finance, Legal Affairs, Personnel, Safety and Sustainable Development Departments, as well as regional managers.

At the same time, in 2011 and 2012, two other initiatives were undertaken. First, information and training sessions were organized on-site and/or online, depending on the country, to instill the *Code of Ethics' Principles* in every employee's mindset. In North America, for example, the Legal Affairs department held 85 training sessions concerning compliance with anti-corruption guidelines. Second, whistleblowing procedures are in place to enable employees to anonymously and securely alert their direct managers, local legal departments, career managers, occupational physicians or the ethics hotline concerning any potential violations of the *Code of Ethics* or any possible failure to apply the *Michelin Performance and Responsibility Charter*.

When failures to observe ethical guidelines are reported, they are analyzed and corrective measures or disciplinary action are taken as necessary. Between June 2011 and May 2012, 142 incidents of non-compliance were reported Group-wide, either directly through the notification system or employee surveys, or indirectly *via* the ethics hotline. Surveys conducted by the Personnel Department led to disciplinary action against 36 employees, some of whom were dismissed for gross misconduct. This was the first year that compliance data was centralized for each region.

Annual ethics objectives have been set for the legal affairs network, which is primarily responsible for supervising deployment of the *Code of Ethics*. The degree to which these objectives are met is a factor in determining the bonuses of the employees involved in the process.

In addition, internal control procedures are being gradually extended to the rules of conduct for each of the Code's issues or general principles, thereby further ensuring strict compliance with each one. Every year, internal audits are performed in some of these areas

Compliance with robust ethical standards helps to build and nurture trust in the Michelin Group and enhance its appeal. The application of demanding ethical standards goes hand in hand with a commitment to performance. Ethical behavior is everyone's business. It is one of the pathways to improvement for everyone, as noted by Jean-Dominique Senard in a message posted on the corporate intranet in September 2012.

6.3.3.b) Preventing corruption

The principle underpinning Michelin's anti-corruption process was defined in 2002 in the *Michelin Performance and Responsibility Charter* as follows: "Wherever we operate, throughout the world, we are firmly against any and all forms of corruption, irrespective of the organizations and bodies concerned, whether public or private. We refuse any and all remuneration to third parties if such remuneration does not correspond to an actual service, for a justified amount, duly posted in our accounts."

The anti-corruption process covers a variety of initiatives, including information, training, prevention, inspection and discipline as necessary. Every employee around the world is informed of this process and provided with the appropriate training. Examples include:

- Employees in the North American Sales Department and others in charge of import-export contracts and government procurement bids have been trained in anti-corruption practices.
- Recommendations for sales representatives have been prepared concerning the approval and compensation of agents or intermediaries in Africa, Asia, Europe and the Middle East.
- Prior to initiating the approval process, the Company may be audited to ensure that it engages in fair business practices.
- Governed by strict guidelines, compensation for agents or intermediaries must be reasonable and may be paid only under certain specific conditions.
- Anti-corruption clauses inspired by OECD principles are included in the standard contracts signed with agents or intermediaries.
- Due diligence may be performed for certain companies as necessary or at Michelin's option before investing in a joint venture or forming a partnership. This process focuses in particular on the Company's reputation.
- Contracts are negotiated with the legal departments and may include appropriate anti-corruption clauses.

The Purchasing Department is regularly audited as part of the internal control process (for more details see section 6.3.4 below).

Specific measures have been undertaken by the Purchasing Department:

- Ethical and anti-corruption guidelines are posted on the Purchasing Department website and sent to all of the Department's employees and contacts.
- In case of a dispute with Michelin, suppliers may report it *via* a mediator or request information on the Michelin Purchasing Code's principles or implementation using the email form on the Purchasing Department's website. In Thailand, for example, suppliers can also call the same ethics hotline used by Michelin employees to report possible compliance issues.

- A system has been deployed to report and centralize violations of anti-corruption guidelines, so as to identify suppliers with whom Michelin should terminate the business relationship.
- A process is in place to assess supplier performance, based on social responsibility audits performed by EcoVadis, an independent company. The findings are then consolidated in an application that combines such criteria as the environment, fair business practices, job principles and practices and supplier management. Following the audit, certain suppliers may be asked to deploy a Michelin-approved improvement plan.
- In 2012, a dedicated database was set up to enable Michelin to collect, store and track all of this supplier information.

To support this anti-corruption commitment, in early 2013, the Internal Control process was extended to compliance with anti-corruption guidelines. Over the year, the Group Audit and Risks Department will publish an ethical risks map for all of the operating regions.

6.3.3.c) Protecting consumer health and safety

■ Quality commitment

Expressed in the *Michelin Performance and Responsibility Charter*, our quality commitment is demonstrated in every aspect of our business through a customer-centric organization and a quality management system designed to drive continuous improvement in product and service quality and the way we do things.

To satisfy our customers and improve business performance, the Michelin Quality Process has defined a number of basic practices, which are integrated into employee training so that they are understood and diligently applied by everyone in his or her area of responsibility. Each product or service is defined in specifications that include information concerning, at the least, all of the countries where marketed, all of the conditions of use, all of the applicable standards and regulations, and all of the customer requirements.

Every manager is expected to promote and implement the Michelin Quality Process. They are responsible for their unit's quality performance and have to guarantee that customers receive high-quality products and services that are safe, suitable for the intended use and compliant with applicable regulations.

■ Mandatory labeling of consumer and environmental information

Since November 2012, all new car, van and truck tires sold in the European Union must display a consumer label, whose information favors tires offering the highest performance in the environment (with ratings for energy efficiency and noise) and in user safety (with ratings for wet grip). The European labeling system is the third in the world, after Japan in 2010 and South Korea in 2011, where voluntary tiremaker labels grade each tire on its fuel efficiency and wet grip (which is directly related to user safety).

The European label informs buyers of the tire's grade in three areas: its impact on fuel efficiency as measured by its rolling resistance (graded A to G), its braking on wet pavement (graded A to G) and its outside rolling noise (measured in decibels). This regulation sets minimum performance standards in each category and phases in a ban on the sale of any tire that fails to meet all three. In this way, the new labeling system is designed both to offer consumers objective tire performance information and to drive steady improvement in tire performance as a whole.

In the United States, the same type of legislation has been passed by Congress and signed by the President. Scheduled to come into effect in 2014, it grades tires according to three criteria: rolling resistance, wet grip and treadlife.

Other countries considering the passage of similar legislation include Australia, Brazil, China, Russia and Thailand.

Michelin strongly supports the introduction of these regulations that keep users better informed and help them to understand how their choice of tires impacts their personal safety and environmental footprint. In the United States, the independent International Council on Clean Transportation (ICCT) has estimated that choosing lower rolling resistance tires could avoid the release of some 100 million tonnes of CO₂ per year and that selecting the highest performance tires would reduce the world's fuel bill by €40 billion a year.

In France, Michelin is actively participating in the introduction of energy-savings certificates, one of the measures mandated by the Grenelle Environmental Summit, with the goal of helping to reduce carbon emissions by improving consumer information. The Group also distributes "Action Recommendations" concerning both tire use and such related services as outsourced tire management, which when applied have a double impact. First, they enable consumers, as well as trucking companies and other fleet operators, to save fuel by using more energy efficient tires and their related maintenance services. And second, they deliver significant environmental benefits by making it possible to reduce a vehicle's fuel consumption by 6% to 8%.

■ Helping to improve road safety

In line with the commitment pledged when it signed the European Road Safety Charter in 2004, Michelin is helping to improve road safety by communicating directly with road users. In 2011, awareness-building and educational campaigns were undertaken in sixteen European countries – Austria, Belgium, Finland, France, Germany, Hungary, Italy, Luxembourg, the Netherlands, Poland, Portugal, Serbia, Spain, Sweden, Switzerland and the United Kingdom – as well as in certain parts of Africa, the Americas and Asia. Road safety initiatives are conducted both in cooperation with global organizations and independently.

In the European Union, we initiated the Road Safety for Young People in Europe (ROSYPE) project to reach young road users. Launched in 2009, the three-year project was supported by a grant from the European Commission's Directorate-General for Mobility and Transport, as well by Michelin's more than €4.5 million investment and deep commitment to making it a success. In collaboration with local partners like ADAC in Germany, the FESVIAL Foundation in Spain and the *Prévention Routière* association in France, more than 1,130,000 young Europeans, aged 6 to 25, were educated about the importance of road safety through around fifty hands-on activities in 15 countries, including Belgium, Finland, France, Germany, Poland, Romania, Spain and the United Kingdom. Each program was tailored to needs of a given age group, with "Discovering Mobility" for 6 to 12 year olds, "Learning Road Safety Rules" for 13 to 16 year olds, and "Responsible Driving" for young drivers aged 17 to 25. Teaching methods focused on diversity, originality, interactivity and the use of new technologies, including two state-of-the-art driving simulators. The project enabled Michelin to help protect young people, the leading victims of road accidents, while exercising a sustainable influence on future road safety by pro-actively raising awareness among the drivers of tomorrow.

Michelin is a founding member and supports the activities of the non-governmental organization Youth for Road Safety (YOURS), created with the help of the World Health Organization in 2009. Based on a network of nearly 400 young people from 100 countries, YOURS organizes local road safety initiatives with the help of public and private partners.

The "Fill Up With Air" awareness campaign continued in several countries, encouraging motorists to check tire pressure regularly by providing free tire inflation stations. In addition to reducing fuel consumption and thereby saving motorists money, maintaining the correct tire pressure also improves grip, which makes driving safer.

In 2012, we partnered France's *Sécurité Routière* association during the month-long *Securiz'mois* campaign, which got local and national road safety stakeholders involved in the issue in June, ahead of the peak vacation traffic season.

The Group also contributed to local projects in host countries where road safety is of particular concern, including Brazil, China, Hungary, Kuwait, Poland, Romania, South Africa, Thailand and Vietnam. In Brazil, we participated in prevention initiatives in the state of Rio de Janeiro, with playing cards and video games enabling a large number of young participants to have fun learning about road safety.

In addition, Michelin is the official partner to the International Automobile Federation's "FIA Action for Road Safety" program, for which we created the international "Golden Rules" campaign. The campaign uses 10 visuals showing motorists in typical driving situations to demonstrate that responsible driving can also be fun, thereby illustrating the basic safety rules that everyone should know.

Lastly, Michelin supports and chairs the Global Road Safety Partnership (GRSP) and participates in educational and prevention programs in China, India and a number of countries in North Africa and the Middle East, as well as Qatar and the United Arab Emirates. Represented by its Managing General Partner Michel Rollier, Michelin participated in the first global ministerial conference on road safety, which was held in Moscow in November 2009. Following on directly from the conference, the Group actively contributed to the preparation of a "New Decade of Action for Road Safety" during 2010 and 2011. At the 2010 Challenge Bibendum, an international event organized by Michelin to promote clean, safe, connected mobility that was held in Rio de Janeiro that year, several roundtables on road safety issues helped to open new thought avenues, particularly on how to make work-related travel safer. As a result of these discussions, the Road Safety Task Force published two white papers, the *White Paper for Safe Roads in 2050* in July 2010 and the *White Paper for Road Safety Investment* in July 2011, which reviewed all the initiatives to be undertaken by the public and private sectors in this area. Widely distributed by international institutions and country organizations, the *White Paper for Safe Roads in 2050* inspired the World Health Organization's action plan for 2011-2020.

In 2012, Michelin received the "Prince Michael International Road Safety Award" in recognition for its outstanding global commitment to road safety.

6.3.4. SUBCONTRACTOR AND SUPPLIER RELATIONSHIPS

Michelin believes that it has a responsibility to demonstrate its sustainable development principles in dealings with suppliers, particularly in light of its extensive purchases, which represent 64% of revenue.

The Purchasing Quality Unit, in charge of deploying the Michelin Performance and Responsibility (PRM) approach across the Group Purchasing Department, has prepared a sustainable purchasing roadmap designed to make Michelin an industry benchmark by 2015. It is organized around five initiatives:

A sustainable purchasing governance system

Program deployment is led and supported by the Purchasing Quality Director, who is a member of the Michelin Performance and Responsibility Operating Committee.

Supported by the Purchasing management team and a global network, he ensures that the objectives set by the PRM Council (of which the Chief Purchasing Officer is a member) are met.

Team training

To enable the purchasing community to take the full measure of the social responsibility and sustainable development issues involved in their activities, a sustainable purchasing training module is offered as part of the training dedicated to the Purchasing process. The module is now mandatory for all buyers, technical specifiers and key internal customers. Since 2011, 195 buyers have taken the module and nine country correspondents have been trained to deploy it in their units.

Supplier social responsibility and environmental assessment

In 2012, the Purchasing Department issued *Michelin Purchasing Principles*, a set of global guidelines built around our core values and such fundamental international commitments as the conventions of the International Labour Organisation. They provide a foundation for establishing the crucial relationships of trust that must exist between the Group, its purchasing teams and its suppliers worldwide. As a core component of the contract between the Company and its suppliers, the Principles clearly state:

- ethical guidelines for Purchasing teams and the rules of professional conduct in supplier relations;
- the supplier approval process;
- the Group's quality standards;
- the environmental, social and ethical performance expected of Michelin suppliers.

At the same time, every supplier's compliance with our social responsibility standards is now assessed using a segmenting application based on the following criteria:

- the impact of the product or service on the end-customer;
- revenue;
- business criticality;
- supplier dependence;
- the supplier relationship;
- the supplier's CSR environment (operations, size and country).

The 700 key suppliers were segmented along these lines in 2012, prompting us to commission a desktop review of 66 of them by EcoVadis, an independent CSR expert. The findings led to the deployment of 26 corrective action plans and 27 improvement plans, as well as the termination of a supplier whose CSR performance fell short of our standards.

Any new supplier's CSR performance is now segmented and, depending on the score, audited by EcoVadis before signing any contracts with the Group. This same process is applied for contract renewals.

Supporting the risk management process, 71% of raw-material supplier facilities representing more than 80% of purchasing volume have been certified to ISO 14001 standards, or 6% more than in 2011.

Integrating sustainable development criteria into tenders

To help meet the Group's environmental, ethical and social responsibility objectives, the Purchasing Department has mapped out opportunities for sustainable procurement. Prior to any purchase decision, total cost of ownership studies are conducted based on a variety of sustainable criteria, including energy savings, a reduction in greenhouse gas emissions, a reduction in waste and improvements in working conditions. These same criteria are integrated into specifications and later into tenders submitted to suppliers. The resulting gains are divided into two categories: creation of financial value and creation of CSR value.

In 2012, for example, these preliminary TCO studies enabled Michelin to:

- combine manufacturing performance and energy performance:
 - rooftop solar power panels installed at the Puy-en-Velay plant in France, gas cogeneration facilities at the Fossano, Cuneo, Turin and Alessandria plants in Italy and a gas-fired boiler at the Itatiaia plant in Brazil,
 - production processes improved, for example, by (i) redefining a drain wire that uses 25% less material and enables less frequent cleaning of the calender machines and (ii) insulating valves in 14 countries to avoid heat loss;
- more generally shrink its environmental footprint. In Europe and North America, for example, transportation procurement is focusing on providers committed to reducing their carbon emissions. In another area, equipment has been purchased to optimize printing and to store data on servers;
- to improve ergonomics and general working conditions:
 - all employees have been provided, on an as-needed basis, with molded earplugs and ergonomic masks. Specific safety clauses have been included in contracts governing the construction of our new production plants;
- promote diversity in our tenders in North America and encourage it in our organization, with, for example, forklift truck training for women in India and the transfer of buyers from one region to another;
- introduce new vegetable-based plasticizers and monomers (e.g. isoprene).

Communication

In accordance with the *Michelin Purchasing Principles*, the results of the supplier CSR audits and other outcomes of the sustainable procurement policy will be released to the public. Since 2012, the Purchasing Quality Director may be contracted *via* the Purchasing website:

- if someone wishes to report any alleged or observed violation of the guidelines in the *Michelin Purchasing Principles*;
- if a supplier wishes to request mediation with the Purchasing teams after having failed to resolve an issue with their usual contacts.

6.4. ENVIRONMENTAL INFORMATION

6.4.1. ENVIRONMENTAL STRATEGY

Respect for the environment is one of Michelin's five core values. To assess the environmental impact of our operations, independent organizations are regularly commissioned to perform detailed impact studies, whose findings help to shape our environmental stewardship. In this regard, life-cycle assessments have shown that most of a tire's environmental impact occurs during use, with the manufacturing and end-of-life recovery phases having a much weaker impact. Impact studies conducted in 2001 for the Passenger car and light truck tire business and in 2003 for the Truck tire business, which also included health-related indicators, were updated in 2009 and 2010 respectively by Pré Consultants (see the 2010 Annual and Sustainable Development Report, p. 80). Paths to improvement have been defined in two directions, the products themselves and the production plants. This section presents the outcomes of the environmental strategy deployed in Compagnie Générale des Établissements Michelin (hereinafter "the Group") in compliance with French Decree 2012-557 of April 24, 2012 specifying the disclosure obligations concerning a company's social and environmental information. The scope of reporting is limited to Manufacture Française des Pneumatiques Michelin (hereinafter "MFPM"). The Group's other legal entities, which do not have any manufacturing operations and have an estimated limited impact on the environment (less than 1%) on the main indicators (water consumption, energy consumption, CO₂ and waste emission), are not covered in the section below.

Controlling the impact of Michelin products

Life cycle assessments have shown that, based on a standard 40,000 kilometers traveled, more than 92% of a car tire's health and environmental impact occurs during use, primarily as a result of its rolling resistance. This proportion rises to 95% for a truck tire, based on a standard functional unit of 600,000 kilometers. In normal conditions of use, tires account for a significant proportion of a vehicle's fuel consumption, which is currently estimated at 20% for passenger cars and more than 30% for trucks. Michelin's primary objective is to increase the energy efficiency of tires while simultaneously improving the product's other performance factors, especially safety, rolling noise and durability. Reducing a tire's rolling resistance also improves a vehicle's fuel efficiency, which in turn reduces both harmful exhaust emissions, such as NO_x and VOCs, and CO₂ emissions during use. In addition, extending tread-life enables more intensive use of process raw materials and amortizes the energy used during the manufacturing process over a larger number of kilometers travelled.

Invented in 1992 and now on their fourth generation, Michelin's highly energy-efficient Energy™ Saver car tires are delivering further progress in the reduction of rolling resistance. Compared to the preceding generation, for example, they improve fuel consumption in an average European car by 0.2 liter/100 km, for an average 4 g/km reduction in carbon emissions. Thanks to this performance, which has been widely recognized by the market, the Energy™ Saver tires have been certified as original equipment on more than 210 vehicles.

In truck tires, the technological innovations collectively known as Michelin Durable Technologies offer a wide range of benefits, including a sustained improvement in fuel efficiency and therefore carbon emissions. These technologies also increases the weight carrying capacity and the lifespan of the tire which has roughly doubled concerning truck tires since 1980. The millionth MICHELIN X One tire was sold in the United States in 2010. Since 2000, fleets equipped with X Ones have reported up to a 10% improvement in fuel efficiency. For 1,000 heavy trucks, this represents a potential saving of 17,000 tonnes of CO₂, which is equivalent to the average emissions generated by 3,400 American cars in a year.

The MICHELIN X® LINE™ Energy™ range is fully in line with the expectations of long-haul truckers as it allows them to reduce their fuel consumption while also providing them with superior longevity. To design the new offer, the truck product line leveraged the expertise acquired directly from trucking companies. In 2011, Group field experts carried out 320,000 visits to transport companies in more than 20 European countries, in order to identify and accurately define customer needs. With the MICHELIN X® LINE™ Energy™, truckers can save up to 515 liters of fuel over a distance of 130,000 km. This reduces their operating budget by €644 while lowering their CO₂ emissions by 1,371 kg.

All told, by the end of 2012, the Michelin fuel-efficient tires sold since 1992 had saved nearly 16 billion liters of fuel and avoided the emission of almost 40 million tonnes of CO₂. Calculated using a UTAC-certified method, these figures are displayed in real-time in the "Green Meters" on our corporate website.

Michelin researchers are still deeply committed to reducing tire rolling resistance, while maintaining or enhancing other performance factors, like safety, grip and noise. Progress on this objective can be assessed by the Tyre Advisor, which compares the rolling resistance, tread-life and grip performance of Michelin tires with the average results of competing tires.

The following table presents an example of a Tyre Advisor comparison, based on data from independent organizations.*

	Size	Michelin tire	Tread life	Rolling resistance	Grip
Mid-Range	195/65 R 15 H	ENERGY SAVER +	23.5%	17.5%	5.2%
Light trucks	235/65 R 16 C	AGILIS +	40.1%	21.2%	4.8%
High performance winter	245/40 R 18 V	MICHELIN Pilot Alpin	22.3%	6.7%	7.0%

For each segment studied in 2012, Michelin's most recent tire was compared with a representative sample of European competitors comprising five to eight recent tires from different brands. The size selected was one of the best-selling sizes in each segment. The tests were conducted by independent organizations, such as TÜV Sud Automotive in Germany and the Czech Republic and DEKRA in France. The overall score for the competitor tires was based on an arithmetic mean. For tire life, the results of tests on MICHELIN tires were compared directly with that mean. Energy efficiency was measured on the basis of rolling resistance.

For example: if the MICHELIN tire's rolling resistance was 8 kg/t and the competing tires had a mean score of 10 kg/t, the energy efficiency of the MICHELIN tire was 25% greater $[(10-8)/8 = .25]$.

* Positive numbers indicate Michelin's outperformance compared with the market average.

Lastly, Michelin is very actively involved in deploying and operating effective end-of-life tire recovery solutions, primarily based on either recovering material for reuse in such areas as synthetic surfaces, draining sub-layers, molded objects and backfill, or else energy recovering by burning scrap tires as fuel in cement plants or steel mills.

Organization of the Company to address environmental issues and, if applicable, steps taken to carry our environmental audits or earn certification

■ Ensuring compliance through certification processes and audits

The robustness of Michelin's strategy for managing the environmental footprint of its manufacturing facilities is underpinned by (i) the Michelin Environmental Management System (MEMS), which is designed to enable each plant to manage both its day-to-day and long-term environmental impact, and (ii) the Group Environmental Standards (EEG), which define the performance levels that a Michelin facility is expected to achieve, which must at least comply with local regulatory requirements. The MEMS serves as the basis for deploying the Environmental and Risk Prevention Management System (SMEP), which is designed to address the full range of health, safety and security issues in addition to the environment.

In particular, the MEMS comprises a process to verify compliance with legislation and Michelin standards, as well as an obligation to define and meet, every year, improvement targets aligned with local challenges. It also specifies procedures to prevent accidental pollution.

Further progress towards the goal of environmental excellence on every site is also being driven in two ways: (i) by applying Group Environmental Standards to all new and upgraded installations and (ii) by auditing existing production plant and Technology Center installations for shortfalls against these Standards in order to define and implement remedial actions.

Another key aspect of the Michelin continuous improvement process is earning ISO 14001 certification, to provide outside validation of our ability to effectively address environmental issues.

Michelin is committed to having the MEMS deployed in every facility acquired more than five years ago, and as of 2012, it was up and running in 98.6% of the production facilities, Technology Centers and offices.

As of year-end 2012, 99.8% of MICHELIN-brand tires were made in ISO 14001 certified plants**.

The certification process is now being introduced in the logistics centers.

■ Environmental governance and internal organization

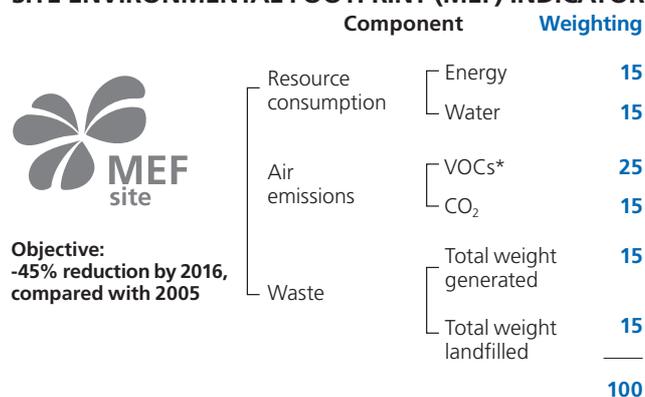
Tasked with addressing a full range of environmental, industrial hygiene, workplace safety and industrial risk prevention issues, the Environment and Prevention (EP) network helps to keep the risk analysis process robust and ensures that the resulting solutions are effective.

The network comprises some one hundred specialists based in the different country organizations and product lines, as well as a dedicated team on each site. It has its own budget and the manager reports directly to the Group Executive Council.

To drive continuous improvement, the environmental performance of Group facilities has to be measured as a whole. That's why in 2005, the Michelin site Environmental Footprint (MEF) indicator was defined to measure the six environmental performance criteria deemed to be the most important for meeting the Group's medium-term challenges. Each site inputs its information quarterly into the networked GAIA application, which enables the data to be validated at each local level, in each region and on a consolidated basis. In addition to the MEF criteria, GAIA also supports tracking of lost-time accident frequency and severity rates and other indicators, as well as analyses by business segment or geography once the data have been verified and validated.

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

The MEF measures water and energy consumption, carbon dioxide (CO₂) and volatile organic compound (VOC) emissions, total weight of waste generated and total weight of waste landfilled. Each component is weighted according to its impact (see diagram below) and calculated per tonne of tire produced.

COMPONENTS AND WEIGHTING OF THE MICHELIN SITE ENVIRONMENTAL FOOTPRINT (MEF) INDICATOR


* VOC: Volatile organic compounds.

Every year, the Annual Plan defines a target for improvement in the MEF indicator, which has been steadily and systematically deployed across the various production operations since 2005. Its effectiveness has been amply demonstrated by the results obtained over the years.

The following table shows the performance of the six MEF components since 2005.

PERFORMANCE OF THE MICHELIN SITE ENVIRONMENTAL FOOTPRINT (MEF) INDICATOR FOR THE GROUP, 2005 TO 2012

	2016 objective compared with 2005	2005	2006	2007	2008	2009	2010	2011	2012	Change 2005-2012
MEF**	-45%	100	92.9	83.6	78.6	78.1	70.0	67.2	67.4	-32.6%

Group	2012 ratio	Unit	Change 2005-2012	2012 Absolute value	Unit	Change 2005/2012
Energy consumption**	13.8	GJ/t TP	-21%	43,259	x10 ³ GJ	-10,924
Water consumption**	11.9	cu.m/t TP	-21%	37,184	x10 ³ cu.m	-9,525
VOC emissions**	2.67	kg/t TP	-38%	8,344	t	-4,953
CO ₂ emissions**	1.20	t/t TP	-21%	3,763	x10 ³ t	-1,001
Waste generated**	110.9	kg/t TP	-21%	346,698	t	-89,254
Waste landfilled**	9.29	kg/t TP	-72%	29,052	t	-73,708
GROUP MEF**	67.4		-33%			

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

After the initial target of a 20% reduction by 2011 compared with 2016 was met in 2008, a new target of a 45% reduction by 2015, still compared with 2005, was defined in 2012. In a commitment to continuously improving our environmental performance and as part of the 10th anniversary of the Michelin Performance and Responsibility approach, these targets are currently being thoroughly revised for a 2020 timeframe. The new targets will be formally defined and announced in 2013.

In 2012, the MEF was unchanged from 2011, despite a more than 7% contraction in output over the year. However, there was sustained improvement in the components least related to production volumes, such as VOC emissions and landfilled waste.

Moreover, compared with 2010, when output was virtually the same as in 2012, the MEF has been reduced by 4% in two years, led by improvements in almost every component. Energy use declined by 4%, carbon dioxide emissions by 6%, VOC emissions by 8% and landfilled waste by 9%. Only waste generated, which is highly correlated to production output, showed a limited decline of more than 1%.

On an absolute value basis as well, all of the environmental impacts have declined from 2010 levels. In 2012, the gain helped to save 2,323 terajoules of energy and 138,000 cubic meters of water. It also helped to avoid the emission of 810 tonnes of VOCs and 304,835 tonnes of CO₂, as well as the generation of 1,763 tonnes of waste and the landfilling of 3,509 tonnes.

Performance by MEF component – GROUP	UNIT	2005	2006	2007	2008	2009	2010	2011	2012
Energy consumption**	GJ/t TP	17.4	17.2	15.6	15.3	16.1	14.4	13.6	13.8
Water consumption**	cu.m/t TP	15.0	14.9	13.3	12.8	13.3	11.8	11.6	11.9
VOC emissions**	kg/t TP	4.27	3.97	3.48	3.13	3.04	2.89	2.73	2.67
CO ₂ emissions**	t/t TP	1.53	1.48	1.37	1.35	1.43	1.28	1.21	1.20
Waste generated**	kg/t TP	140	130	128	127.5	121.2	109.5	109.1	110.9
Waste landfilled**	kg/t TP	33	26	20	16.2	13.3	10.2	9.38	9.29

PERFORMANCE OF THE MEF INDICATOR FOR MANUFACTURE FRANÇAISE DES PNEUMATIQUES MICHELIN

MFPM	2016 Group objective compared with 2005	2005	2006	2007	2008	2009	2010	2011	2012	Change 2005/2012
MEF**	-45%	94.1	84.6	71.3	70.5	67.1	65.1	58.7	60.5	-35.6%

Performance by MEF component – MFPM	Unit	2012	Change 2005/2012
Energy consumption**	GJ/t TP	18.3	-21%
Water consumption**	cu.m/t TP	9.8	+7%
VOC emissions**	kg/t TP	2.33	-41%
CO ₂ emissions**	t/t TP	0.81	-21%
Waste generated**	kg/t TP	125	-22%
Waste landfilled**	kg/t TP	0	-100%
MFPM MEF**		60.5	-35.6%

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

SUMMARY TABLE OF ENVIRONMENTAL DATA FOR THE GROUP AND MFPM

group MFPM	2012	2011	2012/2011	2010	2009	2008	2007	2006	2005	GRI Indicator
Water consumption** (cu.m/t)	11.9	11.6	+3%	11.8	13.3	12.8	13.3	14.9	15.0	
<i>MFPM</i>	9.8	8.4	+17%	9.1	9.9	8.1	8	9	9.2	EN8
Energy consumption** (GJ/t)	13.8	13.6	+2%	14.4	16.1	15.3	15.6	17.2	17.4	
<i>MFPM</i>	18.3	17.3	+6%	19.6	21.3	18.9	21.1	22.6	23.1	EN3-EN4
Michelin stationary installations	7.6	7.1	+7%	8.0	9.0	8.5	9.0	10.5	10.6	
<i>MFPM</i>	9.1	8.2	+11%	11.3	12.3	11.3	13.2	14.5	15	EN3
Steam purchased	1.0	1.4	-29%	1.2	1.2	1.3	1.2	1.1	1.0	
<i>MFPM</i>	1.7	0.9	+88%	0.1	0.2	0.1	0.1	0.3	0.3	EN4
Electricity purchased	5.2	5.2	0%	5.2	5.9	5.5	5.4	5.6	5.7	
<i>MFPM</i>	7.5	8.2	-8.5%	8.2	8.8	7.5	7.8	7.8	7.8	EN4
Greenhouse gas emissions** (t/t)	1.20	1.21	-1%	1.28	1.43	1.35	1.37	1.48	1.53	
<i>MFPM</i>	0.81	0.66	+23%	0.83	0.91	0.84	0.94	1.03	1.04	EN16
of which:										
Direct emissions from Michelin stationary installations	0.55	0.51	+10%	0.58	0.64	0.60	0.64	0.73	0.75	
<i>MFPM</i>	0.52	0.82	+13%	0.63	0.71	0.63	0.75	0.82	0.85	EN16
Indirect emissions, steam generation	0.10	0.14	-29%	0.12	0.13	0.15	0.13	0.12	0.11	
<i>MFPM</i>	0.01	0.01	0%	0.02	0.02	0.01	0.01	0.03	0.03	EN16
Indirect emissions, electricity generation	0.55	0.55	0%	0.58	0.66	0.60	0.59	0.63	0.66	
<i>MFPM</i>	0.28	0.19	+47%	0.18	0.18	0.20	0.19	0.18	0.16	EN16
Total Michelin direct and indirect emissions avoided (in tonnes of CO ₂)	31,200	36,630	-15%	24,000	23,300	31,200	12,400			EN18
Sulfur dioxide emissions** (kg/t)	0.97	0.84	+16%	0.96	1.17	1.08	1.27	1.22	1.65	
<i>MFPM</i>	0.04	0.02	+100%	0.04	0.05	0.04	0.01	0.07	0.13	EN20
Nitrogen dioxide emissions** (kg/t)	0.72	0.74	-3%	0.83	0.82	0.82	0.89	0.85	1.01	
<i>MFPM</i>	0.52	0.48	+8%	0.57	0.64	0.59	0.66	0.79	0.75	EN20
Volatile Organic Compound Emissions** (kg/t)	2.67	2.73	-2%	2.89	3.04	3.13	3.48	3.97	4.27	
<i>MFPM</i>	2.33	2.42	-4%	2.48	2.64	2.65	3.08	3.69	3.98	EN20
Total weight of waste produced** (kg/t)	110.9	109.1	+2%	109.5	121.1	127.5	128	130	140	
<i>MFPM</i>	125	137	-9%	144	153	144	144	149	161	EN22
Total weight of waste landfilled** (kg/t)	9.3	9.4	-1%	10	13	16	20	26	33	
<i>MFPM</i>	0	1	-100%	2	3	3	5	19	31	EN22
Environmental management (% of finished products manufactured in ISO 14001 certified facilities)**	99.8%	98.9%		99.1%	99.5%	99.5%	99.5%	99.4%	94.8%	
<i>MFPM</i>	100%	100%		100%	100%	100%	100%	100%	100%	

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

Employee environmental protection training and information

Dedicated training courses to support MEMS deployment have raised environmental awareness among the more than 100,000 employees working on certified sites. The courses, which are tailored to each workstation, focus on the main impacts from the facility's operations. In accordance with system requirements, employees are kept informed of environmental issues and encouraged to attend regular refresher courses.

Expenditure allocated to preventing environmental risks and pollution

As analyzed in the table below, nearly €16 million was committed in 2012 to projects to enhance the environmental performance of the production facilities. In the case of Manufacture Française des Pneumatiques Michelin, these outlays totaled €5.4 million for the year.

This amount was calculated based on the definition recommended by the French accounting board (CNC recommendation 2003-R02 of October 21, 2003), which covers only outlays that are “supplementary” (i.e. excluding routine maintenance, operating, waste management and similar expenses) and “exclusively environmental” (i.e. excluding the environmental aspects of capital expenditure projects).

Group (in € thousands)	Total expenditure		
	2012	2011	2010
Air pollution prevention	6,372	4,760	4,888
Surface water pollution prevention	2,153	3,803	1,696
Soil and subsurface water pollution prevention	4,071	3,883	2,514
Other	3,814	9,660	11,691
TOTAL	16,411	22,106	20,790

MFPM (in € thousands)	Total expenditure		
	2012	2011	2010
Air pollution prevention	547	312	601
Surface water pollution prevention	367	108	120
Soil and subsurface water pollution prevention	2,733	206	742
Other	1,785	3,107	955
TOTAL	5,432	3,733	2,418

Provisions and guarantees for environmental risks, provided such information would not be seriously prejudicial to the Company in pending litigation

As of December 31, 2012, aggregate provisions for environmental risk amounted to €16.6 million for the Group and zero for Manufacture Française des Pneumatiques Michelin.

6.4.2. POLLUTION AND WASTE MANAGEMENT

Measures to prevent, abate or remediate air, water and soil releases having a serious impact on the environment

■ Greenhouse gas emissions

Group

Total CO₂ emissions for the Group amounted to 1.20 tonne per tonne of finished product in 2012, a decrease of 21% compared to 2005.

Direct emissions from Group boilers stood at 0.55 tonne per tonne of finished product, down 27% versus 2005.

In European Union countries, these carbon emissions are subject to allowances issued under the EU's Emissions Trading System. As in previous years, carbon emissions from Michelin's facilities in Europe were below allocated allowances.

Indirect CO₂ emissions through the purchase of electricity and steam are estimated at 0.65 tonne per tonne of finished product, unchanged from 2010.

Optimized operations management and deployment of the Group's best manufacturing practices drove a reduction in the use of electricity, which declined by close to 4% in gigajoules per tonne of tire produced compared with 2010, when tire output was more or less the same as in 2012.

MFPM

A review of greenhouse gas emissions as of end-2012 demonstrated that the production plants accounted for almost all of MFPM's CO₂ emissions.

DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS BY MFPM UNIT

Tire production facilities	Logistics facilities, research and headquarter centre	Vehicles and all mobile sources belonging to the MFPM
90.60%	7.30%	2.10%

The review also showed that direct emissions from fuel use represented 80% of total MFPM greenhouse gas emissions, with indirect emissions from the purchase of electricity accounting for the rest.

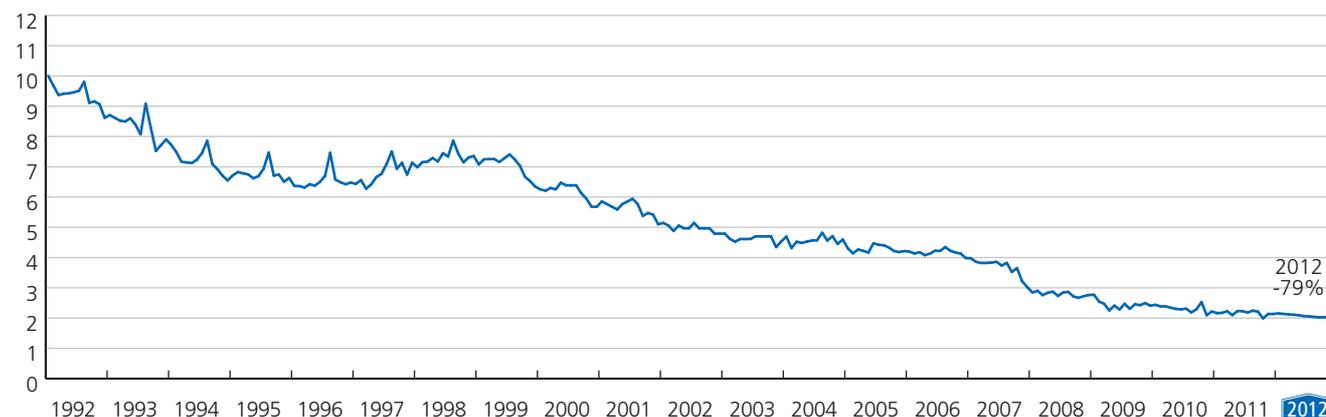
Other air emissions⁽¹⁾
Volatile organic compounds (VOCs)

Despite the slowdown in business, VOC emissions declined by 2% to 2.67 kg per tonne of finished product in 2012, which saw sustained deployment of innovative new production processes and the publication of a guide to best practices, which both helped to reduce the use of solvents and therefore VOC emissions.

The following chart illustrates the major 79% decrease in solvent use by the European Passenger Car and Light Truck tire manufacturing operations since the reduction project was implemented in 1992.

SOLVENT USE IN EUROPEAN PASSENGER CAR AND LIGHT TRUCK TIRE MANUFACTURING OPERATIONS

(in g/kg)


MFPM

In 2012, three plants performed gap analyses compared with the guide to best practices, thereby helping to identify pathways to progress in reducing VOC emissions. Despite the slowdown in business, MFPM's VOC emissions declined by 4% to 2.33 kg per tonne of finished product in 2012, representing a total 55% reduction in VOC emissions per tonne of finished product over the past ten years.

Nitrogen oxides (NO_x)**

Specific NO_x emissions from Group boilers stood at 0.72 kg per tonne of finished product in 2012, compared with 0.74 kg per tonne in 2011 and 0.83 kg per tonne in 2010.

These data vary widely from year to year, because they are calculated based on the periodic (often quarterly) measurement of emission concentrations. In addition, given that purchased steam is not included in the calculation, the mix between produced and purchased steam can have a major impact on the final figure.

Sulfur oxides (SO_x)**

SO_x emissions rose to 0.97 kg per tonne of finished product from 0.84 kg per tonne in 2011 and 0.96 kg per tonne in 2010.

These data vary widely from year to year, because they are calculated based on the periodic (often quarterly) measurement of emission concentrations. In addition, given that purchased steam is not included in the calculation, the mix between produced and purchased steam can have a major impact on the final figure.

Discharges to water

The main substances likely to be released in process water discharged by the tire plants are total suspended solids (TSS) and residual hydrocarbons, which are inherent in most industrial processes and not specific to Michelin. In the case of water used in processes to treat metal cords and produce synthetic elastomers, which may contain respectively metals (copper, zinc) and residual hydrocarbons, each plant is equipped with appropriate treatment facilities. After proper treatment, this water is discharged either to the environment or to local wastewater treatment plants.

(1) Corresponding to substances contributing to acidification or photochemical pollution as defined by French ministerial order of April 30, 2002.

** Data related to these indicators have been reviewed by PricewaterhouseCoopers Audit (see section 6.5).

■ Ground water discharge

Michelin's operations do not result in any continuous discharge into ground or subsurface waters.

The Michelin Environmental Management System (MEMS) includes a dedicated process to prevent the risk of accidental spills. It comprises both physical systems, for soil protection and leak prevention, and standard operating procedures for activities at risk and in the event of an accident.

The Group Environmental Standards require that all new plant and equipment comply with the highest levels of soil protection, in line with the strictest regulatory standards in particular the European ones and often exceeding local legislation.

Waste prevention, recycling and elimination

Programs to reduce the total amount of generated and landfilled waste were pursued in 2012, so that the gross weight of waste generated per tonne of tire produced rose by less than 1% over the year, to 110.9 kg, even as the weight of landfilled waste declined to around 9.3 kg per tonne of tire. In all, since 2005, the weight of waste generated per tonne of tire produced has been reduced by around 20% to around 110 kg from 140 kg and the weight of landfilled waste has fallen by nearly 72% to 9.3 kg from 33 kg.

Over the 2005-2015 period, Michelin is still committed to reducing the weight of generated waste by 30% and of landfilled waste by 95%.

6.4.3. SUSTAINABLE USE OF RESOURCES

Water consumption and supply depending on local conditions

■ Water consumption

Michelin plants mainly use water to cool installations and transfer heat.

In 2012, water consumption stood at 11.9 cubic meters per tonne of finished product, a 21% decrease on 2005. This primarily reflected the assertive programs deployed by the three facilities that use the most water, which have driven a more than 30% reduction in their use since 2005.

Production facilities are supplied with water in compliance with local legislation. When requested by authorities, the plants scale back their withdrawal to guarantee fair use of water resources. To proactively address water resource issues, a vulnerability study of sources currently in use will be initiated in 2013. Its findings will help to direct efforts in this area either towards reducing consumption or towards using less vulnerable sources.

MFPM

In 2012, MFPM reduced the weight of waste generated per tonne of tire produced by 9% over the year. None of the waste was landfilled, so that MFPM has already met the 2015 target of recycling or reusing all of its generated waste.

Managing noise and other forms of pollution specific to the business

■ Odors and noise

Although entirely innocuous, odors are a concern for our plants, in as much as they are located in urban areas. These odors are generated by the process used to produce certain types of natural rubber components indispensable for tire manufacturing.

A standard solution, based on the thermal oxidation of effluents, is now being applied in six European plants and is being steadily deployed across the Group. Research is continuing into new, even more environmentally friendly techniques.

More generally, on-site teams, supported by corporate experts, are implementing a variety of solutions to abate odors, noise and other nuisances that manufacturing operations may cause local residents.

Raw materials consumption and measures taken to make more efficient use of them

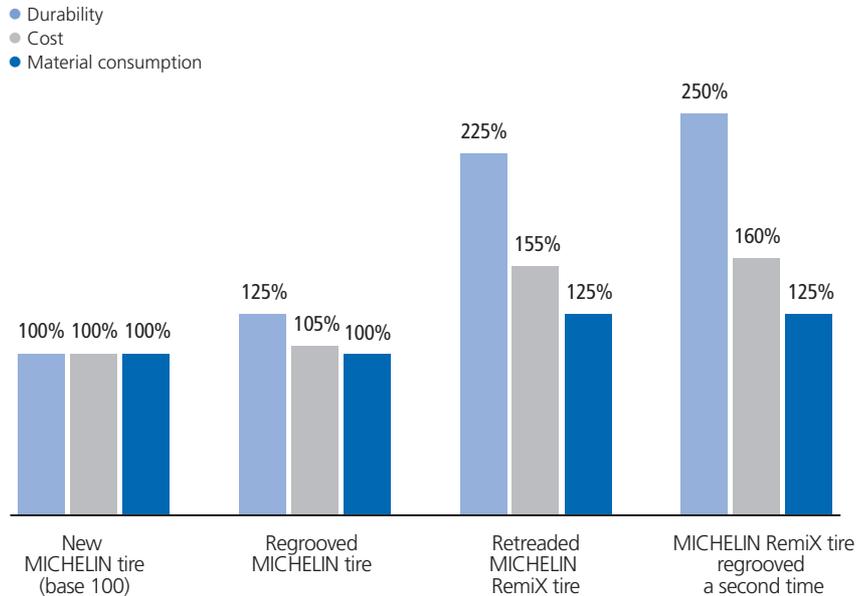
Raw materials consumption is being optimized in several ways:

- The amount of wastage and scrap is being reduced across the production process, while the Prevention and Industrial Performance Department is deploying a wide range of waste reduction programs. These initiatives have proven highly effective, with a close to 30% decline in wastage and scrap in 2012 compared with 2005. In particular, the Michelin Manufacturing Way program is making it easier to share and deploy the best practices identified in the various production plants.
- In designing tires, Michelin optimizes raw materials use by consistently seeking to deliver the same or better performance than previous generations, while using less material and without compromising on safety and quality standards. In truck tires, for example, Michelin tires can be regrooved when the tread is worn, mold-cure retreaded using the Remix process, regrooved

a second time before the components are reused in end-of-life tire recovery solutions. Assuming a theoretical lifespan of 100 units for a heavy truck tire, regrooving can add 25 units without any more material; retreading then adds a further 100 units with 25 units in new material (or four times less than the amount

of material needed to make a new tire); and lastly, the final regrooving increases total tread life by another 25 units. In all, with one retreading and two regroovings, a Michelin heavy truck tire can last 2.5 times longer than a new Michelin tire with just an additional 25 units of material.

The following chart illustrates these benefits:



In the same way, the durability of Michelin passenger car tires compared with the European market reflects optimized materials use, as shown in the Tyre Advisor above.

Energy consumption, measures taken to improve energy efficiency and use of renewable energies

The Group's energy consumption per tonne of tires produced has decreased by more than 4% over the past two years, to 13.8 GJ in 2012. Despite the decline in production volumes in 2012, this result confirms the steady improvement in energy efficiency initiated in recent years.

This progress has primarily been led by the effectiveness of the cross-functional Energy organization, which is tasked with improving the energy efficiency of our plants by applying its energy diagnostic method, identifying best practices, and sharing them by incorporating them in a Group standards manual.

Each facility has appointed an Energy Performance Leader to drive faster on-site deployment of energy management tools, methods and best practices.

By the end of 2011, all of the plants had performed an audit, followed by an action plan. After this initial diagnosis, plants are subject to follow-up audits every three years, with 17 facilities already on their fourth procedure in 2012.

As described in section 6.4.4 "Climate change – greenhouse gas emissions" below, Michelin is continuing to deploy a variety of renewable energy projects, in a commitment to improving both environmental and financial performance.

Land use

Michelin's production operations occupy much the same surface area as facilities in any other manufacturing industry. Our plants are generally located in pre-existing industrial parks and when they are not, environmental impact studies are performed in order to obtain both the operating license and construction permit. In most cases, these permit applications are the subject of public hearings.

The only activities that use a larger surface area are the rolling test tracks like those in Ladoux, France and Almeria, Spain. They do not conflict with any other land uses and even have a beneficial impact on the environment, thanks to the programs undertaken by the facilities to support biodiversity (see section 6.4.5 below).

6.4.4. CLIMATE CHANGE

Greenhouse gas emissions

Michelin is assertively contributing to global efforts to reduce greenhouse gas emissions in the overland transportation and manufacturing industries. For example, carbon emissions from all of the Group's manufacturing operations, per tonne of product, have now been reduced by 21% compared with 2005.

Energy efficiency programs are being pursued across the Group through the deployment of action plans based on the energy audits conducted in the production facilities. Michelin is committed to reducing energy use per tonne of tire produced by 20% between 2010 and 2015.

Since 2008, production facilities have been developing new renewable energy projects each time that they offer the possibility of improving the site's environmental and financial performance.

Although these biomass, solar power and wind power projects have long maturity cycles, they are already helping to sustainably reduce our carbon footprint.

Rated output of the photovoltaic roof panels installed on several facilities in Germany (in Bad Fallingbostal, Bad Kreuznach, Bamberg, Homburg, Karlsruhe, Landau and Ulm) has risen from 9 MWp in 2006 to 16.5 MWp in 2010 and 19 MWp at year-end 2011. In Valladolid, Spain, 21,000 square meters of solar panels with peak capacity of 2 MWp were commissioned in 2010, followed by start-up of a new 1 MWp unit in 2011.

Since 2007, wind turbines have been generating around 20% of the electricity used by the Dundee plant in Scotland.

Commissioned in 2010, two biomass-fired boilers installed to replace natural gas-fired systems at the Bourges and Cholet plants in France avoided the emission of 13,000 tonnes of CO₂ in 2011.

Also in France, the rooftop solar power panels on the Puy-en-Velay plant began generating their first electricity in September 2011. Covering three hectares, or three-quarters of the roof's surface, the panels are producing more than 3,000 MWh of clean power a year.

Since late 2010, a solar wall has replaced heavy fuel as a source of heat for the Waterville plant in Canada. Other projects include the ongoing installation of two wind turbine units in Ballymena, Northern Ireland and studies to determine how to use the heat generated by a household waste incinerator at the Dundee plant.

On-site renewable energy installations avoided the emission of more than 31,000 tonnes-equivalent of CO₂ in 2012. This was less than the 35,000 tonnes avoided in 2011 because until May the Bassens plant could not be supplied with the steam generated from the waste incinerator used since 2007, due to erosion along the road where the steam piping was laid.

Facility	Technology	Tonnes of CO ₂ emissions avoided in 2012 ⁽¹⁾
Bassens, France	Heat recovery from CHP incinerators located 1 km away	4,500 (direct CO ₂)
Cholet, France	Biomass-fired boiler	8,000 (direct CO ₂)
Bourges, France	Biomass-fired boiler	6,400 (direct CO ₂)
Waterville, Canada	Solar wall	100 (direct CO ₂)
Dundee, Scotland	Wind turbines	3,000 (indirect CO ₂)
Germany, seven facilities	Photovoltaic panels	7,400 (power sold back to the grid)
Valladolid, Spain	Photovoltaic panels	1,550 (power sold back to the grid)
Le Puy, France	Photovoltaic panels	250 (power sold back to the grid)

(1) Based on national emissions factors published by the International Energy Agency in CO₂ Emissions from Fuel Combustion 2011 Edition.

Today, 17 facilities use renewable energy solutions, of which three came on stream in late 2012: two wind-turbine installations at Ballymena, Northern Ireland; the purchase of biomass heat from an outside provider at the Combaude facility in Clermont-Ferrand, France; and the purchase of household waste methanation heat from an outside provider at Vannes, France.

MFPM makes the greatest use of renewable or alternative energies of any Group company, with five facilities using such solutions and renewables accounting for 4% of the Company's energy use in 2012.

Adapting to the impact of climate change

Michelin's 69 production plants are located in 18 countries. In line with recommendations issued by our risk managers, risks associated with climate change have been reviewed and business continuity plans in the event of extreme weather events have been assessed. A flood risk analysis led us to build dikes to protect a facility in Thailand that was particularly exposed to flooding. Over the past ten years, one Group plant has been damaged by a tornado in North America. This type of weather phenomena concerns only a

few facilities and has been integrated into the appropriate business continuity plans. An analysis of the Group's sensitivity to energy supply is also studied. Climate change is estimated to have only a moderate impact, because of the geographic distribution of the facilities, but also because of their number.

A large amount of natural rubber is required to produce Michelin tires. It is produced in a limited part of the planet, in a region with certain weather and soil characteristics. The changing climate

could make these resources more difficult to access or use, or else endanger them by facilitating the emergence of new diseases. They could be countered by new, more resistant and more productive species being studied by Group agronomists.

In the case of sourced raw materials, certain suppliers deemed to be exposed to possible climate-related problems have been asked to take steps to protect their operations from any extreme weather events.

6.4.5. PROTECTING BIODIVERSITY

Measures undertaken to preserve or enhance biodiversity

Michelin benefits from local ecosystems and is acutely aware of both the important role they play and their fragility. In particular, around 40% of the rubber we use is natural rubber, which is a renewable resource that comes from trees.

To sustainably secure our ecosystem benefits and protect biodiversity, steps are being taken in a variety of areas to abate the impact of our operations. For many years, programs have been in place to preserve fragile environments around certain facilities (see below). In addition, this issue has been integrated into the Michelin Performance and Responsibility approach. Awareness of the interactions between production facilities and their local ecosystems is being gradually instilled across the Group. We consistently comply with local ecosystem protection legislation and apply Group Environmental Standards where they are more demanding. New processes and equipment are being installed to limit water consumption. Lastly, we are designing lighter tires, which use fewer raw materials for their production, are more energy efficient and last longer.

■ A deep commitment to biodiversity

In 2008, the plant in Nyiregyhaza, Hungary conducted a pilot Ecosystem Services Review (ESR), which is designed to reveal a facility's dependence on its environment. Performed by a specially trained Michelin engineer, the process is based on an assessment method developed by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) and adapted to the tire industry. In particular, the review showed that the plant could be at risk under certain situations that were possibly beyond its control, such as air pollution, and remedial actions are now underway. To improve the Group's understanding, a different method for measuring the facility's dependence and impact on the environment was trialed in late 2010 with an independent organization. These pilot programs are part of Michelin's commitment to exploring a variety of tools and resources, so that the plants' potential interactions with surrounding ecosystems can be measured, thereby enabling the deployment of more effective preservation techniques. The initial objective is to identify, by 2013 or 2014, all of the protected areas located near each production facility. As of December 31, 2012, this process had been completed for 57 facilities.

Supporting biodiversity at the Almería test center

Initiatives underway at the Almería Test Center (CEMA) were presented by the World Business Council for Sustainable Development at the International Union for Conservation of Nature (IUCN) Congress devoted to preserving biodiversity and ecosystems, held in Jeju, South Korea, in September 2012.

Michelin's objectives for the CEMA were not only to build and efficiently use its capabilities, but also to preserve the site's ecosystems by including conservation and environmental targets into the center's day-to-day operating indicators. Later, when the Andalusia government decided to protect the area's seacoast and landscape by creating the Cabo de Gata-Níjar Natural Park in 1987, Michelin also began working with park authorities to share best practices and enhance the conservation measures in place.

Michelin's efforts on the Almería site are regularly commended by the government and in academia. Working hand in hand with local authorities – even well before the official agreement was signed in 1995 – Michelin successfully achieved a balance between its manufacturing operations and its commitment to environmental stewardship.

From the beginning, the CEMA has been very assertively involved in preserving the local environment, and the authorities have recognized both Michelin's engagement and its understanding of local conditions.

Created in 1973 and certified ISO 14001 since 2005, the Almería Test Center covers 4,500 hectares, of which 1,500 lie in the heart of the Cabo de Gata-Níjar Natural Park in Andalusia, in southern Spain. The park, which was created in 1987, is located in an arid region with the lowest rainfall in Europe and is home to a number of plant and animal species, including many found only in the park.

The Group's actions have helped to preserve a specimen of the Canary Islands Dragon Tree (*Dracaena Draco*) that is more than 500 years old.

Preserving biodiversity on the Bahia plantation

As part of the *Ouro Verde* (Green Gold) project conducted on the experimental farm in Bahia, Brazil, Michelin has been working since 2003 to preserve a rare and threatened portion of the primary Atlantic Forest that is exceptionally rich in biodiversity.

Located on the plantation is a Center for the Study of Biodiversity that offers scientists from around the world an open-air laboratory on the Atlantic Forest. The Center can accommodate up to 16 researchers at the same time, with the equipment necessary for their work. Michelin is helping to finance some of the Center's research programs, including 36 biodiversity studies.

Educational walking trails have been prepared for visitors and particular attention has been paid to raising awareness of environmental issues in the local community. The Understanding the Atlantic Forest program, for example, offers guided tours of the protected area for small groups or field trips for school children. In addition, the Michelin Environmental Reference Center provides detailed information on the Atlantic Forest.

Creating wildlife refuges at the Louisville, KY plant in the United States

At the Louisville, Kentucky facility in the United States, Michelin joined forces with a local firm of wildlife biologists to transform two closed landfills it co-owns into a wildlife refuge with forests, prairies, wetlands and wildflowers. Volunteers from both companies participated in a replanting campaign and the site now attracts birds, foxes, deer and other wild animals. The three-year project was completed in late 2011 and has earned Wildlife at Work certification from the Wildlife Habitat Council.

Protecting a special habitat at the Ladoux Testing and Research Center

In July 2011, an agreement was signed with the Auvergne Regional Nature Conservancy to ensure protection of a 3.5-hectare continental salt meadow located on the grounds of the Ladoux Testing and Research Center. Extremely rare in Europe, this type of habitat is home to protected maritime species in the Auvergne region (such as the sea plantain and *Juncus Gerardii* black grass) and has been designated as a priority for conservation.

6.5. ATTESTATION AND ASSURANCE REPORT OF ONE OF THE STATUTORY AUDITORS ON SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION

This is a free translation into English of the Statutory Auditor's review report issued in the French language and is provided solely for the convenience of English speaking readers. The review report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Year ended December 31, 2012

Pursuant to your request and in our capacity as independent verifier of Compagnie Générale des Établissements Michelin, we hereby report to you on the consolidated social, environmental and societal information presented in the management report issued for the year ended December 31, 2012 in accordance with the requirements of Article L. 225-102-1 of the French Commercial Code (*Code de commerce*). We also have carried out a review for the purpose of enabling us to express moderate assurance on the processes used to compile certain of the Information marked (**).

■ Management's responsibility

The Managing Chairman is responsible for the preparation of the management report including the consolidated social, environmental and societal information (the "Information") in accordance with the requirements of Article R. 225-105-1 of the French Commercial Code (*Code de commerce*), presented as required by the entity's internal reporting standards (the "Guidelines") and available at the entity's premises.

■ Our independence and quality control

Our independence is defined by regulatory requirements, the Code of Ethics of our profession (*Code de déontologie*) and Article L. 822-11 of the French Commercial Code (*Code de commerce*). In addition, we maintain a comprehensive system of quality control including documented policies and procedures to ensure compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

■ Independent verifier's responsibility

It is our role, on the basis of our work:

- to attest whether the required Information is presented in the management report or, if not presented, whether an appropriate explanation is given in accordance with the third paragraph of Article R. 225-105 of the French Commercial Code (*Code de commerce*) and Decree No. 2012-557 dated April 24, 2012 (Attestation of presentation);
- to provide limited assurance on whether the other Information marked (**) is fairly presented, in all material respects, in accordance with the Guidelines (Limited assurance).

We called upon our Corporate Social Responsibility experts to assist us in the performance of our work.

1. Attestation of presentation

Our engagement was performed in accordance with professional standards applicable in France:

- We compared the Information presented in the management report with the list as provided for in Article R. 225-105-1 of the French Commercial Code (*Code de commerce*).
- We verified that the Information covers the consolidated perimeter, namely the entity and its subsidiaries within the meaning of Article L. 233-1 and the controlled entities within the meaning of Article L. 233-3 of the French Commercial Code (*Code de commerce*).
- In the event of the omission of certain consolidated Information, we verified that an appropriate explanation was given in accordance with Decree No. 2012-557 dated April 24, 2012.

On the basis of our work, we attest that the required Information is presented in the management report.

2. Assurance report

■ Nature and scope of the work

We conducted our engagement in accordance with ISAE 3000 (International Standard on Assurance Engagements) and French professional guidance.

We performed the following procedures to obtain a limited assurance that nothing has come to our attention that causes us to believe that the Information marked (**) and presented in Section 6 of the management report is not fairly presented, in all material respects, in accordance with the Guidelines.

- Social information includes indicators for “Frequency rate” and “Severity rate” for workplace accidents, “Headcount”, “Full-time equivalent”, “Women rate in headcount”, “Absenteeism”, “Training access rate”, “Male/female distribution by status and geographic zone”, “Women rate in top management”, and “Non-French in top management”;
- Environmental indicators include all indicators shown in the “Summary table of environmental data”.

Our work consisted in the following:

- We assessed the appropriateness of the Guidelines as regards their relevance, completeness, neutrality, clarity and reliability, taking into consideration, where applicable, the good practices in the sector.
- We verified that the Group had set up a process for the collection, compilation, processing and control of the Information to ensure its completeness and consistency. We examined the internal control and risk management procedures relating to the preparation of the Information. We conducted interviews with those responsible for social and environmental reporting.
- Concerning the quantitative consolidated information that we deemed to be the most important:
 - at the level of the consolidating entity and the controlled entities, we implemented analytical procedures and, based on sampling, verified the calculations and the consolidation of this information;
 - at the level of the sites that we selected (Aranda, Ballymena, Bourges, Campo Grande, Greenville, Laem Chabang TME, Olsztyn, Vitoria and Waterville) based on their business, their contribution to the consolidated indicators, their location and a risk analysis:
 - we conducted interviews to verify that the procedures were correctly applied,
 - we performed tests of detail based on sampling, consisting in verifying the calculations made and reconciling the data with the supporting documents.

The sample thus selected represents between 15% to 19% of the selected quantitative social information and between 20% to 30% of the selected quantitative environmental information.

Conclusion

Based on our work described in this report, nothing has come to our attention that causes us to believe that the Information marked (**) is not fairly presented, in all material respects, in accordance with the Guidelines.

Neuilly-sur-Seine, February 26, 2013

PricewaterhouseCoopers Audit

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