



## **CONSTRUCTIONS INDUSTRIELLES DE LA MÉDITERRANÉE (CNIM)**

*Société anonyme* having a Management Board and a Supervisory Board with share capital of €6,056,220

Registered office: 35, Rue de Bassano, 75008 Paris

Paris Trade & Companies Register no. 662 043 595

### **Corporate Social Responsibility Report**

# **2017**

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# Introduction

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Since 2012, the CNIM Group has provided, in addition to its management reports, an annual report on the social and environmental impact of its activities, referred to as the Corporate Social Responsibility (CSR) Report.

A significant proportion of CNIM's activities and its future development is founded on its capacity for innovation in environmental matters: producing energy from waste or biomass, improving energy efficiency at its industrial facilities, cutting emissions of pollutants into the air and generating renewable energy. In these activities, the Group's current and future commercial success is therefore directly linked to the challenges of sustainable development and CSR.

With its strong commitment to health, safety and the environment, the Group is mobilizing all of its staff and making them aware of their responsibilities in the face of these major challenges, using corporate social responsibility as a means of adding momentum to its progress. By implementing a pro-active CSR initiative, CNIM aims to pursue its economic development, ensuring that balanced and sustainable relationships are maintained with all of its partners and stakeholders.

## **CNIM's CSR performance recognized by Gaïa-Index**

For the third year in succession, CNIM is among the top 70 companies monitored by Gaïa Index, the EthiFinance subsidiary that specializes in analyzing and scoring CSR performance for SMEs and mid-sized companies in Europe. Gaïa Index gave CNIM a score of 80/100 for its CSR policy in 2016. For CNIM, this performance is proof of the commitment of our management and staff to the sustainable development of the Group's activities. Over 500 small-cap and mid-cap companies were assessed by Gaïa-Index in 2016. The data collected is used to score the transparency and performance level of the companies concerned. The top 70 performers make up the Gaïa Index.

# 1 THE PEOPLE OF CNIM

## 1.1 About us

### 1.1.1 Total staff and breakdown of employees

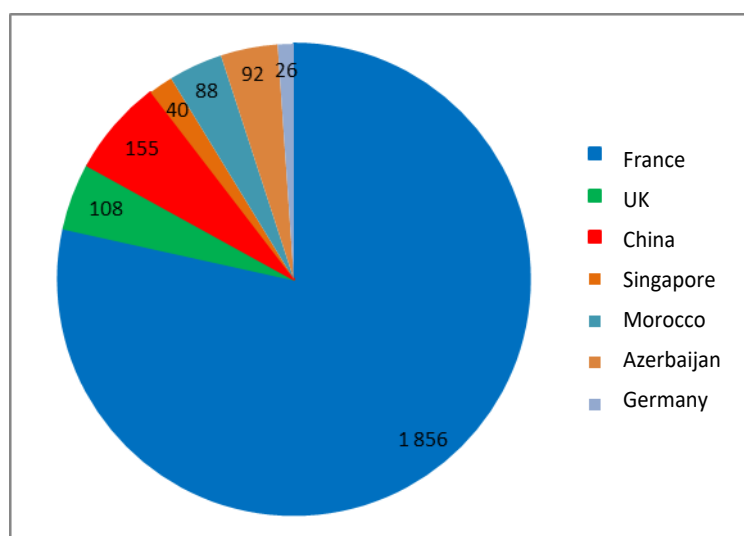
- Total staff\* and breakdown of employees by company, by gender and by geographical area

	Men	Women	Total	
BERTIN IT	73%	27%	69	3%
BERTIN PHARMA	44%	56%	11	0%
BERTIN Technologies	65%	35%	464	20%
CNIM Babcock Maroc	92%	8%	88	4%
CNIM AZERBAIJAN	89%	11%	92	4%
CNIM CENTRE France	100%	0%	23	1%
CNIM ENERGIE BIOMASSE	97%	3%	29	1%
CNIM Insertion	72%	28%	31	1%
CNIM OUEST ARMOR	95%	5%	30	1%
CNIM SA	80%	20%	1,021	43%
CNIM Singapore	85%	15%	40	2%
CNIM Terre Atlantique	100%	0%	17	1%
CNIM THIVERVAL GRIGNON	85%	15%	15	1%
LAB SA	76%	24%	89	4%
MES Environmental Ltd	92%	8%	108	5%
SUNCNIM	87%	13%	32	1%
VECSYS	84%	16%	25	1%
CNIM Transport Equipment	92%	8%	155	7%
SAPHYMO GMBH	84%	16%	26	1%
<b>Combined total</b>	<b>80%</b>	<b>20%</b>	<b>2,365</b>	<b>100%</b>

\*Average total number of employees.

Based on the same companies taken into account in the 2016 report, the number of employees was up 1.6%:

- More than 95% of the Group's total workforce is covered by the CSR report;
- 78% of the staff covered are based in France, with the rest distributed evenly between the UK, Asia, Morocco and Azerbaijan;
- 20% of the Group's staff are female, but it should be noted that this low figure is partly due to the subsidiaries which operate waste processing sites.



- Proportion of executives, employees and blue-collar workers in the average total number of employees

	Engineers and Executives	Employees, Technicians	Workers
	(Managers)	and Supervisors	(Blue-collar staff)
		(White-collar staff)	
BERTIN IT	93%	7%	0%
BERTIN PHARMA	66%	34%	0%
BERTIN Technologies	72%	28%	0%
CNIM Babcock Maroc	16%	27%	57%
CNIM AZERBAIJAN	15%	41%	44%
CNIM CENTRE France	11%	44%	44%
CNIM ENERGIE BIOMASSE	12%	71%	17%
CNIM Insertion	3%	0%	97%
CNIM OUEST ARMOR	20%	56%	24%
CNIM SA	59%	24%	17%
CNIM Singapore	15%	18%	67%
CNIM Terre Atlantique	12%	0%	88%
CNIM THIVERVAL GRIGNON	14%	58%	29%
LAB SA	86%	14%	0%
MES Environmental Ltd	11%	11%	79%
SUNCNIM	73%	18%	9%
VECSYS	45%	55%	0%
CNIM Transport Equipment	22%	18%	60%
SAPHYMO GMBH	23%	77%	0%
<b>Combined total</b>	<b>52%</b>	<b>25%</b>	<b>23%</b>

The CNIM Group is mainly made up of engineers and executives, but substantial variation exists:

- Certain subsidiaries, such as LAB SA, Bertin IT and Bertin Technologie are engineering companies and therefore have a very high proportion of engineers and executives.
- More than 80% of the workforce of the subsidiaries that operate waste processing plants, such as CNIM Azerbaijan, MES Environmental, CNIM Centre France, CNIM Ouest Armor, CNIM Thiverval Grignon and CNIM Terre Atlantique comprises blue-collar workers and supervisors.
- Almost 80% of the workforce at manufacturing subsidiaries, like CNIM Babcock Maroc and CNIM Transport Equipment, are also blue-collar workers and supervisors. It should be noted that almost one worker in four is a manual worker, which demonstrates the importance of industrial relations to the Group.

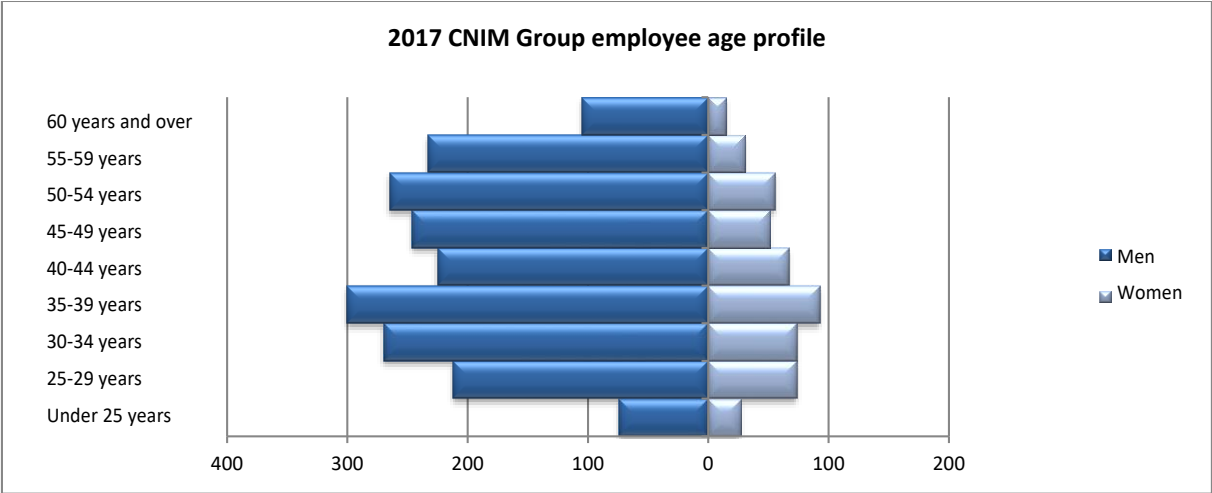
- Proportion of staff employed under fixed-term/permanent contracts\*

	Fixed-term	Permanent
BERTIN IT	7%	93%
BERTIN PHARMA	10%	90%
BERTIN Technologies	5%	95%
CNIM Babcock Maroc	7%	93%
CNIM AZERBAIJAN	12%	88%
CNIM CENTRE France	4%	96%
CNIM ENERGIE BIOMASSE	0%	100%
CNIM Insertion*	97%	3%
CNIM OUEST ARMOR	3%	97%
CNIM SA	4%	96%
CNIM Singapore	0%	100%
CNIM Terre Atlantique	0%	100%
CNIM THIVERVAL GRIGNON	0%	100%
LAB SA	7%	93%
MES Environmental Ltd	2%	98%
SUNCNIM	16%	84%
VECSYS	4%	96%
CNIM Transport Equipment	54%	46%
SAPHYMO GMBH	0%	100%
<b>Combined total</b>	<b>9%</b>	<b>91%</b>

\*Statistics for December of the year in question, in accordance with French legislation on human resources reporting.

9% of CNIM Group employees are employed on fixed-term contracts. It should be noted that this rate is principally due to CNIM Insertion, whose corporate purpose is to offer fixed-term reintegration contracts, and to CNIM Transport Equipment. When these subsidiaries, which have specific operational functions, are excluded, the percentage of fixed-term contracts falls to 4.7%.

- **Average age and employee age profile**



The group's average age is stable, at 42.

## 1.1.2 Turnover

### A. Hiring

	Men	Women	Total	
< 25 years	12%	3%	93	15%
25-29 years	17%	6%	140	23%
30-34 years	15%	3%	104	17%
35-39 years	11%	3%	85	14%
40-44 years	7%	1%	51	8%
45-49 years	7%	1%	50	8%
50-54 years	7%	0%	43	7%
55-59 years	4%	0%	27	4%
> 60 years	2%	0%	12	2%
<b>Total</b>	<b>81%</b>	<b>19%</b>	<b>605</b>	<b>100%</b>

More than 5 out of 10 new hires were aged under 35. One in five new recruits is female. It should also be noted that the Group is attentive to skills and expertise, and does not discriminate on the basis of age: 14% of staff recruited in 2017 were aged 50 or above. More than half of new employees are also recruited on permanent contracts.

## B. Departures

	Men	Women	Total		Turnover rate*
< 25 years	8%	2%	52	11%	2%
25-29 years	14%	5%	96	20%	4%
30-34 years	12%	4%	79	16%	3%
35-39 years	11%	2%	64	13%	3%
40-44 years	7%	1%	40	8%	2%
45-49 years	6%	3%	42	9%	2%
50-54 years	4%	1%	26	5%	1%
55-59 years	5%	1%	26	5%	1%
> 60 years	10%	2%	62	13%	3%
<b>Total</b>	<b>78%</b>	<b>22%</b>	<b>487</b>	<b>100%</b>	<b>21%</b>

It should be noted that staff on fixed-term contracts represent almost half of departures.

The age groups with the highest turnover rates were the youngest and oldest categories; these two categories represent over half of all departures. This is explained by two factors: the youngest are the principal group employed under fixed-term contracts. At the other extreme, retirement is the most common cause of departure.

	Men	Women	Total		Turnover rate
<b>Involuntary turnover</b>	8%	3%	51	<b>11%</b>	<b>2%</b>
<b>Voluntary turnover</b>	47%	11%	272	<b>57%</b>	<b>12%</b>
<b>Retirement</b>	9%	2%	54	<b>11%</b>	<b>2%</b>
<b>End of contract</b>	14%	7%	98	<b>21%</b>	<b>4%</b>
<b>Total</b>	<b>78%</b>	<b>22%</b>	<b>475</b>	<b>100%</b>	<b>20%</b>

Only one of every ten departures was due to termination of the contract by the employer. Seventeen people made transfers within the Group in 2017.

### 1.1.3 Remuneration and changes in remuneration

The annual payroll for 2017, including wages and social security contributions, as recorded in the accounts of the 20 companies covered by the report, is €161.7 million.

On a like-for-like basis:

- the annual payroll rose by 7.8% between 2016 and 2017. This rise was due to the 1.6% increase in the size of the workforce over the same period.
- the annual average wage bill per employee was €68,340 in 2017, sharply up on 2016 (6.8%), which may be explained by the increase in France's relative weighting in the total payroll.

## 1.2 Organization of work

### 1.2.1 Working time

In October 2017, CNIM SA adopted a Charter on the "right to disconnect" drawn up following a number of discussion meetings with the trade unions that represent CNIM SA. This Charter formally sets out the right to disconnect in clear, shared and considerate principles on the use of communication tools and, more specifically, on the following points:

- The ways in which the right to disconnect may be exercised: employees are not required to read or respond to calls or emails during their non-work time or during daily or weekly break periods; they may disconnect from the network and set their mobile telephone to silent; emails should not be sent after 10 p.m. and during weekends.
- Regulation and monitoring initiatives: the use of electronic email configuration tools that send automatic out-of-office replies and specify the email's level of importance.
- Training and awareness-raising initiatives: dissemination to all CNIM SA employees and available on the intranet, and where an employee believes that the provisions of the Charter have not been complied with, he/she may refer the matter to his/her sector HR Manager.



The 2017 “Right to disconnect” charter supplements the “Charter on Work-Life Balance” signed in 2012, which aims to promote employees’ work-life balance, while taking account of business needs. In terms of the organization of working time, managers are encouraged to pay attention to the following matters:

- avoid scheduling meetings at late hours and allow travel to take place during working hours;
- adhere to the notice periods regarding changes to working time, except in exceptional or urgent circumstances;
- ensure adherence to the time slots during which portable business communication tools must not be used, except where justified by exceptional circumstances;
- implement a system of delegation during vacations, to ensure optimum cover for staff absences.

The charter was rolled out in early 2014 through various internal channels for all CNIM SA staff, before being extended to other Group companies such as Bertin Technologies. It is also referred to in the gender equality agreement signed on June 2016.

## 1.2.2 Breakdown of contracts: full-time, part-time

	Full-time	Part-time
BERTIN IT	95%	5%
BERTIN PHARMA	100%	0%
BERTIN Technologies	93%	7%
CNIM Babcock Maroc	100%	0%
CNIM AZERBAIJAN	98%	2%
CNIM CENTRE France	100%	0%
CNIM ENERGIE BIOMASSE	100%	0%
CNIM Insertion	100%	0%
CNIM OUEST ARMOR	97%	3%
CNIM SA	96%	4%
CNIM Singapore	100%	0%
CNIM Terre Atlantique	100%	0%
CNIM THIVERVAL GRIGNON	100%	0%
LAB SA	94%	6%
MES Environmental Ltd	90%	10%
SUNCNIM	94%	6%
VECSYS	100%	0%
CNIM Transport Equipment	100%	0%
SAPHYMO GMBH	88%	12%
<b>Combined total</b>	<b>96%</b>	<b>4%</b>

4% of Group staff are employed part-time. This figure is far below the OECD average of 16.7% (source: OECD, 2016). The great majority of part-time contracts are a matter of employee choice. The norm is for staff to be hired on full-time contracts.

## 1.2.3 Absenteeism

Group-wide, compared to 2016 there was a slight improvement in the absenteeism rate, which was 5.1%.

# 2 STAFF HEALTH AND SAFETY

## 2.1 A priority of the Management Board

The CNIM Group sets particularly high standards for accident prevention, adherence to fundamental workplace safety rules, the protection of health and conservation of the environment:

- the delegation of responsibilities by the Chairman of the Management Board is implemented;
- appropriate safety and risk prevention measures are taken at each construction site and for all work performed on client premises;
- an inquiry is held into the causes of every accident or physical incident, and prevention and training solutions are proposed in order to further reduce risks;
- all steps are taken to ensure that legal provisions are respected.

This commitment by the Management Board translates into the close involvement of all Group staff at all levels of seniority, and recognition through numerous certifications, in terms of quality, health and safety.

	COMPANY	SITES/ACTIVITIES	CERTIFICATE			
			QUALITY	HEALTH & SAFETY		
			ISO 9001	OHSAS 18 001	MASE	Other
ENVIRONMENT SECTOR	CNIM SA EPC division	Paris, La Seyne-sur-Mer, Saint Aubin	o	o		
	CNIM SA WEMS division	Paris, La Seyne-sur-Mer	o	o		
	LAB SA	Lyon, La Seyne-sur-Mer	o	o	o	
	CNIM THIVERVAL GRIGNON	Waste processing site		o		
		Thiverval Grignon sorting centre		o		
	CNIM OUEST ARMOR	Waste processing site at Pluzunet		o		
		Waste composting and green algae processing site at Lantic		o		
	CNIM CENTRE France	Saint Pantaléon de Larche waste processing site.		o		
	MES ENVIRONMENTAL LTD	Waste processing site at Dudley		o	o	
		Waste processing site at Stoke on Trent		o	o	
Waste processing site at Wolverhampton			o	o		
CNIM Babcock Services	La Plaine Saint Denis		o		CEFRI	
	Gardanne, Villepinte		o	o		
SUNCNIM	La Seyne-sur-Mer	o				

INNOVATION & SYSTEMS SECTOR	CNIM SA	La Seyne-sur-Mer	o	o		CEFRI	
	CNIM Transport Equipment	Foshan (China)	o	o			
	CNIM Singapore	Singapore	o	o			
	BERTIN TECHNOLOGIES	Montigny-le-Bretonneux, Aix-en-Provence, Tarnos, Thiron-Gardais, Saint Aubin		o	o		
		Montigny-le-Bretonneux, Aix-en-Provence, Thiron-Gardais, Montbonnot					CEFRI
	Energie Process Environnement - Tarnos		o	o	o		

\*Note: the new certifications achieved in 2017 are highlighted in yellow

- **CNIM's EPC division receives OHSAS 18001 certification**

In 2017, CNIM EPC was recommended by LRQA for OHSAS 18001 certification following an audit of its waste-to-energy factory design, production, installation and commissioning activities. This award is acknowledgement of the excellent preventive practices undertaken in relation to health and safety at work that have been rolled out for a number of years on projects led by the CNIM EPC teams. OHSAS 18001 certification will supplement the certifications already held by CNIM EPC on quality management (ISO 9001) and environmental management (ISO 14001).

In 2017, a number of subsidiaries also continued working on achieving ISO 50001 certification in waste-to-energy centres and on rolling out ISO 14001 and OHSAS 18001 certifications.

In 2017, 79% of Group staff (based on the companies included in the scope of this report) were represented on mixed management/employee health and safety committees set up to supervise and provide opinions on health and safety at work programs.

## 2.2 Expenditure on health and safety

CNIM invests in the safety of its employees. These investments operate at three levels:

- to ensure the reliability and safety of production facilities and tools for employees;
- to provide them with the personal protective equipment (PPE) they require;
- to provide them with the professional training necessary for their safety.

In companies that have joint management/employee health and safety committees, this investment is made in consultation with the committee.

€1.8 million was spent on health and safety in 2017, which equates to €774 per employee. This very high figure, which has increased every year since 2014, reflects the importance that the Group attaches to the safety of its workforce.

## 2.3 Accidents at work and work-related illness

- **Frequency rate = 16.37 (number of accidents involving time off work x 1 million/number of hours worked)**

As an illustration of the importance placed by the Management Board on employee health and safety, the frequency rate of accidents at work improved significantly from 2016. This is the result of accident prevention efforts made by everyone involved in accident prevention over a number of years.

- **Severity rate = 0.48 (number of days lost x 1,000/number of hours worked).**

The accident severity rate was 0.48 for 2017. This rate should be highlighted, given the significant proportion of staff working in factories, as itinerant site workers, and on customers' premises.

- **Work-related illnesses recorded in 2016: 2 (work-related illnesses reported by staff in 2016).**

## 3 DEVELOPMENT OF SKILLS

### 3.1 Training policies implemented

The CNIM Group training policy is directly in line with the business development strategy and its forward-planning policy on jobs and skills management. It has three focal points:

- technical or occupational training courses aimed at developing and maintaining the technical skills of Group staff. CNIM has rolled out numerous training sessions on defence, nuclear, parts control, and industrial machinery as well as on factory design and operation. “Operational support” training has also been put in place in areas such as procurement, legal, accounting and quality. We also provide language training, by video conference and in the classroom, to keep pace with the internationalization of the Group.
- safety training, which represents close to a quarter of our total training investment. These training courses go beyond the minimum legal requirements and include training in e.g. gestures and posture for Production personnel.
- corporate training courses aimed at supporting our managers, project leaders and sales staff via multi-day modules jointly designed with external partners. The Management program, which will run until 2017, comprises five days of training per person split into four modules, half of which are delivered by in-house trainers. Almost 300 managers have followed the programme since it was created in 2015, including 120 in 2017. Two other programmes, containing modules on complex sales and project management, have also been organized for sales personnel, project leaders or staff interacting with customers. It should be noted that, in 2018, a module containing a presentation on the Group's values and ambitions will be extensively rolled out.

In organizational terms, the emphasis has been placed on delivery through a variety of teaching methods with a “blended learning” approach that combines classroom teaching with distance learning modules.

As every year, the use of experts from within the Group to teach more specific modules on e.g. operational safety, nuclear power and production software contributed toward raising the skills of our workforce. Almost 100 internal trainers have therefore completed the course on “Taking and leading an in-house training course”. This course enables them to wear their trainer's hat more comfortably, especially as regards their teaching skills and the oversight of interns.

Finally, in 2017, two staff members underwent a professional development period with a dedicated specialist mentor with a view to switching professions.

- **More block-release training**

CNIM Group encourages apprenticeship and professional training contracts that involve block-release training. Such contracts enable the company to publicize the career options it has to offer, as well as training young people and enabling them to discover the world of work. Trainees are assisted by mentors who pass on their know-how and skills, ensure training programs are followed and liaise between the trainee, the business and the training organization.

- **In-house trainers pass on their knowledge**

In 2017, 15% of the CNIM SA training plan was delivered via in-house training. The Group has over 160 internal trainers, who work on developing new modules for specialist technical and cross-functional training. Developing in-house training modules with the help of staff and helping staff to learn are a point of honour for the CNIM Group. Our trainers are people with a mastery of a skill or area of know-how that they are willing to pass on to other employees in the Group.

- **Strategic Workforce Planning**

During 2016, a large-scale Strategic Workforce Planning project was begun in the Group. The aims of the project are:

- to anticipate future skills needs in connection with CNIM's strategic management, to lay the ground for inter-generational skills transfer,
- to adapt skills to evolve with changing job requirements,
- to optimize workforce management and the overall performance of our operating structures, and
- to help employees maintain their employability.

One of the project's early stages involved defining a shared reference catalogue of skills and making it relevant to all Group's specialist fields. To achieve this, several one-day workshops were organized between June and December 2016

which systematically targeted specialist operating staff and HR managers. These enabled the key professional skills and practices to be defined for the different standard roles in a variety of specialist fields (Projects, Design, Maintenance, Scheduling, Finance, HR etc.).

At the beginning of 2018, the method was applied to nine specialist fields, and we aim to cover all specialist fields in 2019.

This will provide the Group with an integrated tool from which it can manage the assessment, training and development of our employees' skills, as well as anticipating future changes in skills and staffing needs and aiding career mobility.

- **Esprit CNIM: a new training module to promote understanding between Group entities**

In 2015, the Group's Human Resources department launched the "Management" training programme, which was very popular with participants. As a result of this positive feedback, one of its modules, "CNIM Esprit" was extended in 2017 to a larger group of employees. This module covers the world of CNIM, its history and strategy and aims to allow employees from the various entities to hold discussions around a common frame of reference and to promote cohesion between teams.

## 3.2 Number of training hours

In 2017, 52,350 hours of training were provided to CNIM SA employees, representing an average of 22 hours per employee. This figure is steady relative to 2016.

Two-thirds of the Group's staff members followed at least one training course during the year, which was, once more, an increase on 2016.

## 3.3 Staff appraisal and career development interviews

In 2017, 92% of staff falling within the scope of the analysis received an appraisal and career development interview.

## 4 DIVERSITY MANAGEMENT

### 4.1 Measures adopted to promote gender equality

Composition of the governing bodies in 2017:

- the Management Board currently comprises four members, all of whom are male;
- the CNIM Supervisory Board comprises twelve members, of whom seven are men and five are women, with one of them representing employee shareholders.

Female members thus represent 45% of the Supervisory Board. This means that the CNIM Group's governance complies with French Act No. 2011-103 of January 27, 2011 concerning gender equality in the workplace, which states that the proportion of members of either sex must not be lower than 40%.

- **Gender equality in the workplace: a new agreement signed in 2016**

The distribution of jobs within the CNIM Group shows that the vast majority of female staff work in support functions such as communications, human resources, finance and legal. Although the percentage of women in engineering and managerial positions has virtually doubled in just under ten years, shop floor staff are still almost exclusively male.

During 2016, CNIM's management met on several occasions with trade union representatives in order to discuss observations, issues and actions aimed at underpinning CNIM's commitment to gender equality in the workplace.

The signatories to the agreement wished efforts to be continued towards promoting gender diversity at the workplace, especially as regards access to jobs and work/life balance, and towards preventing all unjustified gaps in terms of pay, promotion and access to professional training (in equal positions, irrespective of skills, age and seniority)

Precise metrics have been developed. These will be monitored annually, over and above the gender balance report given each year to the Central Works Council. To ensure that the entire workforce knows and passes on the commitments we have made, it has been agreed that internal communications will be sent out to all staff and managers over the lifetime of the agreement.

#### 4.1.1 Proportion of women in the CNIM Group\*

	Men	Women
< 25 years	73%	27%
25-29 years	74%	26%
30-34 years	78%	22%
35-39 years	76%	24%
40-44 years	77%	23%
45-49 years	83%	17%
50-54 years	83%	17%
55-59 years	88%	12%
> 60 years	88%	13%
<b>Total</b>	<b>80%</b>	<b>20%</b>

The proportion of women in the CNIM Group is representative of those generally observed in the industry.

## 4.1.2 Proportion of women in the engineering and executive workforce (managers)\*

	Men	Women
< 25 years	68%	32%
25-29 years	68%	32%
30-34 years	75%	25%
35-39 years	72%	28%
40-44 years	77%	23%
45-49 years	80%	20%
50-54 years	87%	13%
55-59 years	92%	8%
> 60 years	88%	12%
<b>Total</b>	<b>78%</b>	<b>22%</b>

The proportion of women among the youngest members of staff has increased.

## 4.1.3 Proportion of women in the white-collar workforce (employees, technicians and supervisors) \*

	Men	Women
< 25 years	71%	29%
25-29 years	69%	31%
30-34 years	73%	27%
35-39 years	70%	30%
40-44 years	60%	40%
45-49 years	75%	25%
50-54 years	61%	39%
55-59 years	73%	27%
> 60 years	73%	27%
<b>Total</b>	<b>69%</b>	<b>31%</b>

\*Statistics for December of the year in question, in accordance with French legislation on human resources reporting.

## 4.1.4 Indices based on the median monthly salary of men and women, by age group and category

	Engineers and executives (Managers)		Employees, technicians and supervisors (White-collar staff)		Workers (Blue-collar staff)	
	Men	Women	Men	Women	Men	Women
< 25 years	960	903	730	NS	574	-
25-29 years	1,008	997	775	757	612	NS
30-34 years	1,207	1,126	868	715	623	NS
35-39 years	1,381	1,417	911	783	627	NS
40-44 years	1,584	1,347	875	858	687	NS
45-49 years	1,709	1,502	998	831	779	-
50-54 years	1,785	1,735	971	920	845	-
55-59 years	1,942	1,919	1,011	902	861	-
> 60 years	2,130	1,634	1,155	813	844	-
<b>Total</b>	<b>1,457</b>	<b>1,264</b>	<b>903</b>	<b>830</b>	<b>724</b>	<b>100</b>

100 is the lowest median value by category and gender.

The difference between male and female blue-collar workers is significant, due to the fact that, for women, 100 is located in Azerbaijan, while for men the median is in France. This therefore represents a wage gap between Azerbaijan and France and not a gap between men and women.

The gender wage gap is 3.6%. This compares to a wage gap of 16% between men and women in the EU as a whole (Source: ILO, data for 2016).

The Group is attentive to all fairness issues, and staff remuneration in particular. Remuneration is the subject of a special action plan envisaged in the agreement on gender equality at work signed by management and labour in France.

In order to prevent gender discrimination, the Group takes part in annual pay surveys. The surveys put the Group's pay levels in perspective compared to the rest of the market, to ensure fair pay for the same level of responsibility, without gender distinctions. A special action plan has also been included in the agreement on gender equality at work signed by management and labour in France.

## 4.2 Policy on combating discrimination

The CNIM Group's discrimination policy, whether relating to age, disability or gender, for example, is explained and discussed with managers during employment law training sessions that have been held since 2015. This training programme contains a specific module that raises managers' awareness of the various forms of discrimination that must be eradicated in the Group.

In terms of age discrimination, the Group's policy has, for a number of years, been implemented through the commitments made in the Generation Contract. Although legislators have put an end to this initiative, the Group continues to implement its policy through the following measures:

- developing block-release training with apprenticeship and professional development contracts;
- offering high-quality work experience to students;
- the recruitment of employees aged over fifty;
- listening to any specific request relating to health and the organization of working time.

### • Measures to promote the employment and integration of disabled people

The CNIM Group has forty-five disabled employees, representing 1.9% of the workforce. Five disabled persons were recruited in 2017.

Committed to non-discrimination and equal opportunities for disabled employees, the Group wishes to continuously strive to promote the appointment, retention, training and development of disabled people. To that end, the Group offers disabled employees three non-working days in which they can take the necessary steps with the authorities to obtain recognition as a disabled worker. A disabled worker may benefit from:

- an adapted work station;
- special attention being given to his/her working times;
- early retirement, provided he/she demonstrates a certain level of disability, and a certain period of insurance during this disability period.



## 5 PROMOTION OF SOCIAL DIALOGUE

### 5.1 Respecting freedom of association and the right to collective bargaining

- **Staff representation within the Group**

Staff are represented within the CNIM Group in a variety of bodies.

Four members of CNIM La Seyne-sur-Mer's Establishment Committee are appointed to represent staff on the CNIM SA Supervisory Board. Three members of the CWC are also appointed, along with three deputies, to the Supervisory Board of the CNIM Participation fund. A representative of employee shareholders is also a member of the CNIM SA Supervisory Board. Two members of the CWC are also elected to attend General Meetings of CNIM shareholders.

Finally, the ten staff representative positions on the Group Works Council are divided between the four labour union confederations present in the Group. Without substituting for the representative bodies of individual entities in the CNIM Group, the Group Council acts as an advisory body on Group strategy. It is designed to be a forum for discussion and debate, thereby ensuring the reciprocal sharing of information between Group management and staff representatives. Going beyond its legal obligations, CNIM Group management has made a Group-level agreement whereby all trade unions representing staff members can nominate a union representative. These measures reflect CNIM's desire to promote constructive labour relations across the widest possible range of issues.

### 5.2 Organization of labour relations

The Group is committed to the quality of labour relations within the different companies that form a part of it. By establishing common principles, and then bargaining where necessary, different subjects are broached with management and labour in order to accommodate the special features and the diversity of the Group. Employee safety is an absolute priority. Health and safety in the workplace thus continues to be a focus area for ongoing measures with ambitious targets, and labour relations have an important role to play in this respect. All the Health, Safety and Working Conditions Committees within the various companies are focused on this issue.

In a multi-activity group like CNIM, labour relations are organized at all legal levels of the business: group (Group Works Council), company (Central Works Council) and site (Employee Representatives; Works Council; Health, Safety and Working Conditions Committee). Site-level meetings take place monthly, with extraordinary meetings being held to respond to exceptional requests, address particular topics or consult the representatives on specific projects.

Regular negotiations are also held with trade unions, enabling dialogue to be held on a wide range of subjects such as work/life balance, combating discrimination, working hours, salaries and profit-sharing. As well as responding to staff concerns reported by the representatives, labour relations constitutes a vital route for supporting change management, the quality of life at work and the Group's needs to adapt to its markets.

Over 78% of staff are covered by one of the following collective labour agreements:

- the collective labour agreement on the metalworking industry (at both national and regional level);
- the collective labour agreement on the waste industry;
- the national collective labour agreement on executives, engineers and equivalent employees of companies managing thermal and air conditioning plant operations;
- the national collective labour agreement on blue-collar workers, employees, technicians and supervisors of thermal plant operations;
- the collective labour agreement for engineering firms/engineering consultancies/consultancy firms;

- **CNIM Group internal opinion barometer**

In 2016, the Group Human Resources Department launched CNIM's third internal opinion survey, following on from those conducted in 2012 and 2014. This time, the pool of survey subjects was widened significantly to cover all of the Group's employees in France; the goal for the longer term is to cover every company in the Group.

Staff were questioned about their perceptions of their job as well about changes, management, working conditions, pay and benefits and internal communications. The wording of the questions was the same as in the two previous surveys, so that changes could be measured.

The results of the barometer showed that 97% of staff members surveyed believe they have the right skills to perform their job, while 87% state that they are satisfied and motivated in terms of the interest level of their work and their degree of independence and 86% say they can count on their co-workers in the event of a problem.

An action plan based on the barometer has been put in place. Its roll-out started in 2017 and will continue in 2018. The focus areas of this plan relate to the improvements identified through employee feedback, internal communications, the development of managerial skills and the visibility of career opportunities, which needs improvement. The survey will be carried out again in 2018 to determine the effects of the action plan launched in 2017.

## 5.3 Collective labour agreements signed in 2017

The CNIM Group has good labour relations with management and labour. In France, these good relations enabled agreements in several areas to be signed in 2017: staff pay, diversity management, working arrangements and health and safety at work.

Occupational pay agreements signed in 2017:

- Voluntary profit-sharing scheme: CNIM SA, LAB SA, SUNCNIM and BERTIN IT;
- Statutory profit-sharing scheme: CNIM SA and BERTIN IT;
- Workplace Savings Scheme: LAB SA and BERTIN IT;
- Mandatory annual bargaining rounds: BERTIN Technologies;
- Holiday bonuses: BERTIN IT.

Mandatory annual bargaining rounds at CNIM began in the fourth quarter of 2017 and concluded in an agreement signed in 2018.

Agreements signed in 2017 on working arrangements:

- Adjustment and reduction of working hours: CNIM SA's La Seyne-sur-Mer site (working time and rest time for white-collar workers on a fixed number of working days);
- Adjustment and reduction of working hours: BERTIN Technologies (length and granting of additional rest days for blue-collar workers at the Thiron-Gardais site);
- Adjustment and reduction of working hours: BERTIN IT;
- Solidarity day: BERTIN IT.

Agreement signed in 2017 on diversity management:

- Gender equality in the workplace at BERTIN IT.

Agreements signed in 2017 on health and safety in the workplace:

- Healthcare costs at CNIM SA, LAB SA and BERTIN IT.

Other agreements signed in 2017:

- Amendment to the substitution and adaptation agreement at SUNCNIM.

## 6 OUR ENVIRONMENTAL COMMITMENT

### 6.1 General policy on environmental management, and QSE policy

Within the framework of the sustainable development policy and its environmental responsibility, the Group has adopted a preventive approach toward the environmental impact of its activities, as it has for all the risks that it must manage.

Environmental management is closely linked to the preventive measures undertaken in relation to health and safety at work.

Legislative and technological surveillance, training, information and communication with its employees and external contacts (customers, suppliers, subcontractors and authorities) are the basis for the Group Quality, Health, Safety and Environment policy.

Several subsidiaries or sites of the Group have for a number of years made an effort to reduce the ecological footprint of their activities, whether they are production, research or engineering sites.

Each company has a Health, Safety and Environment Director who ensures that legislation is observed and preventive measures are implemented in relation to:

- noise pollution;
- waste treatment;
- land pollution;
- air pollution;
- the control of hazardous products.

All provisions are monitored, documented and their compliance with the legislation and the regulatory framework can be demonstrated at any time.

All of these matters are also discussed at meetings of the Health and Safety Committees of the various companies.

In 2017, the Group did not incur any fines or non-pecuniary penalties for failure to comply with environmental legislation and regulations.

The Group's know-how is used to improve the energy efficiency of the facilities designed, made, maintained or operated by the Group in all its activities and in the Environment Sector in particular. The Group is keen to improve the reliability and performance of its products and services in terms of energy efficiency and reduction in emissions so as to allow its customers to achieve their own objectives.

These arrangements have placed the Group in a position where it has not had to pay any compensation during this financial year in respect of court decisions relating to environmental matters, and has not had to make any provisions for risk in this regard.

#### • Environment Sector

The CNIM EPC Contracts business division provides its clients with waste and biomass recovery processes based on the Best Available Techniques (BATs) in the areas of environmental protection, energy efficiency and waste reduction.

To the end, Management endeavours to:

- optimize, as early as the tender phase, facilities' environmental performances, in accordance with clients' instructions and applicable regulations;
- take the necessary steps to protect the environment, and provide the necessary resources while complying with statutory and regulatory obligations applicable to worksites;
- ensure compliance with regulatory thresholds for airborne emissions during commissioning activities, and obtain the expected environmental performance from the facility;
- introduce a continuous improvement programme based on:
  - o assessing environmental impacts;
  - o implementing resources to prevent pollution, and to reduce and control our impacts,

- periodic assessment of our performances on environmental protection.
- Train and raise awareness among staff about environmental protection;
- Promote this initiative with our sub-contractors and partners;
- Promote communications with interested parties.

The Waste & Energy Management Solutions (WEMS) business division uses an integrated and certified QHSE management system, with a view to ensuring the success and sustainable development of its business activities through continuous improvement, depending on the opportunities and the assessment of risks:

- Development of all forms of risk prevention in relation to our activities in the areas of health, safety and the environment;
- Compliance of our practices with regulations and other application obligations;
- Satisfaction of Clients and other stakeholders over the long term;
- Quality of the performance of products and services, based on Best Available Techniques (BATs), innovation and R&D, as well as the evaluation of feedback;
- The environmental footprint of its products and services, in terms of waste recovery, the consumption of resources, emissions into the air, ground and waste, minimizing reagent consumption and the production of residues.

#### • Environmental certifications

The Group's commitment to environmental management can be seen in the number of certifications it has obtained. This continuous improvement programme will be continued in 2018 and will target certification of further sites under ISO 14 001 or ISO 50 001.

	COMPANY	SITES/ACTIVITIES	CERTIFICATE		
			ISO 14,001	ISO 50,001	Other
ENVIRONMENT SECTOR	CNIM SA EPC division	Paris, La Seyne-sur-Mer, Saint-Aubin	o		
	CNIM SA WEMS division	Paris, La Seyne-sur-Mer	o		
	LAB SA	Lyon, La Seyne-sur-Mer	o		
	CNIM THIVERVAL GRIGNON	Waste processing site	o		
		Thiverval Grignon sorting centre	o		
	CNIM OUEST ARMOR	Waste processing site at Pluzunet	o	o	
		Waste composting and green algae processing site at Lantic	o		
	CNIM CENTRE France	Saint Pantaléon de Larche waste processing site.	o		
	CNIM TERRE ATLANTIQUE	Waste processing site at Plouharnel	o		
	MES ENVIRONMENTAL LTD	Waste processing site at Dudley	o		
Waste processing site at Stoke on Trent		o			
Waste processing site at Wolverhampton		o			
INNOVATION & SYSTEMS SECTOR	CNIM Transport Equipment	Foshan (China)	o		
	CNIM Singapore	Singapore	o		
	BERTIN TECHNOLOGIES	Montigny-le-Bretonneux, Aix-en-Provence, Tarnos, Thiron-Gardais, Saint Aubin	o		
		Montigny-le-Bretonneux, Aix-en-Provence, Thiron-Gardais, Montbonnot			
		Energie Process Environnement - Tarnos	o		OPQIBI

\*Note: the new certifications achieved in 2017 are highlighted in yellow

## 6.2 Employee training and information on environmental protection

In 2017, ten Group companies were certified under ISO 14 001 and/or ISO 50 001; a total of 19 sites thus incorporate environmental issues into their management systems. Over a thousand employees are thus regularly trained in and/or familiarized with the various continuous improvement programs that aim to enhance our ability to anticipate and counteract environmental risks.

## 6.3 Provisions and guarantees for environmental risks

A regulatory watch and compliance assessments are conducted in the Group's various sectors and subsidiaries so as to minimize risks. No risks were identified after these assessments, and therefore no provision has been made in the accounts for environmental risks.

In terms of guarantees for environmental risks, the CNIM Group has an "environmental breaches and damage" insurance policy that covers losses incurred by third parties and damage to the environment. The guaranteed amounts vary depending on the type of insurance cover provided in the contract.

# 7 LIMITING OUR ENVIRONMENTAL IMPACT AND WORKING TO REDUCE THAT OF OUR CUSTOMERS

## 7.1 Waste management and waste-reduction measures

### 7.1.1 Waste management

Over 83% of waste was directed toward the following channels:

- for use mainly as fuel or another way in which to produce energy;
- for the recycling or recovery of metals and metallic compounds;
- for the recycling or recovery of other inorganic materials.

*\*Excluding the LAB Washington site, where the process aims to recover metals from final waste (ash).*

It should be noted that there is no waste processing business in some of the countries in which the CNIM Group operates.

- **Waste at sorting centres:**

INCOMING TONNAGES		SORTING CENTRES	OUTGOING TONNAGES	
TYPE	(T)		TYPE	(T)
Multiple	18,032		Cardboard and printed matter	4,963
Packaging	736		Tetra	190
Newspapers and magazines	586		Lower quality paper	1,974
Glass	10,521		Dark PET	343
			Light PET	997
			HDPE	421
			Steel	446
			Aluminium	27
		Newspapers and magazines	5,355	
		Glass	10,646	

- **Waste of household waste composting units and non-hazardous waste storage facilities:**

INCOMING TONNAGES		Household waste composting units and non-hazardous waste landfill sites	OUTGOING TONNAGES	
TYPE	(T)		TYPE	(T)
Waste collected in a composting/separation tank	14,741		Compost	6,435
Green algae	9,396		Ferrous metals	73
Wood and green waste	9,857		Glass	2,653
Bulky waste and NHIW	2,518			
Glass	2,653			
Asbestos	-			

- **Waste from waste-to-energy centres:**

INCOMING TONNAGES		Waste processing	OUTGOING TONNAGES	
TYPE	(T)		TYPE	(T)
Household waste	1,041,353		Bottom ash and fly ash	332,141
Timber	404,530		Flue-gas cleaning residues from household waste incineration and salts	37,795
NHIW	60,886		Ferrous metals	18,587
Other	179,560	Other	14,534	

Reuse of waste: the waste incineration bottom ash is reused in road engineering processes.

- **Waste from CNIM Environment Division sites:**

CNIM SA: Environment Division sites*	
OUTGOING TONNAGES	
TYPE	(T)
NHIW	296
Timber	180
Metal	42
Other	15

\*Sites included: Beddington, Kemsley, Llo.

In respect of short-term worksites that last no longer than a few months, waste is processed in accordance with clients' existing procedures.

- **Waste from third-party sites:**

THIRD-PARTY SITES*	
OUTGOING TONNAGES	
TYPE	(T)
Paper/cardboard	26
Miscellaneous NHIW	20
Timber	4
Scrap metal	3
WEEE	3

\*Note: the quantities of waste from some third-party sites, collected by a local authority, are not known.

- **Waste from industrial sites:**

Industrial sites	
OUTGOING TONNAGES	
TYPE	(T)
Metal	1,131
Hazardous industrial waste	241
NHIW	126
Timber	50
Paper/cardboard	10

## 7.1.2 Measures taken to improve waste recovery, recycling and reuse

- **CNIM is to deliver the first turnkey energy recovery unit in Serbia and the Balkans**

CNIM has signed an agreement with the SPV SUEZ&ITOCHE consortium for the delivery of the future turnkey waste energy recovery unit in Belgrade, which is to be built at the Vinča landfill site. Open since 1977, this landfill site covers more than 68 hectares and the 2,700 tonnes of waste which are unloaded there on a daily basis are a significant source of pollution. Every year, the energy recovery unit will convert 340,000 of the 510,000 tonnes of waste generated annually by the city into electricity. SPV SUEZ&ITOCHE will be responsible for operating the plant for a period of 25 years. This is the first plant of this type to be built in Serbia and in the Balkans.

- **Valaubia project**

In 2017, CNIM entered into a contract concerning the supply, installation and commissioning of the Process work package for the waste-to-energy plant in Troyes. An initial service order was issued under this contract in 2017, covering studies relating to the planning application and design studies for the planned plant's principal equipment systems. The plant will process half of the household waste produced by the Aube department, i.e. 60,000 tonnes, as well as 5,000 tonnes of non-hazardous industrial waste and 10,000 tonnes of wood. The waste-to-energy plant will supply energy to local industries, heat homes and generate electricity. It will generate 41 GWh of electricity, equivalent to the power consumption of nearly 50,000 people, as well as 60 GWh of thermal energy, covering the consumption of nearly 8,900 people. Delivery is scheduled for 2020.

- **Syctom and CNIM lay the foundation stone of the future selective waste sorting plant in Paris XVII**

On 10 November 2017, Jacques Gautier, the Chairman of Syctom and Stanislas Ancel (member of CNIM's Management Board and Chief Executive of the Environment & Energy sector), laid the foundation stone of the future selective waste sorting plant in Paris XVII. Located in the new Clichy-Batignolles neighbourhood, this high-capacity, fully automated centre will recover recyclable waste from more than 900,000 residents by 2019. This cutting-edge, high-performance plant will be able to treat up to 15 tonnes per hour using its 13 optical sorting machines. Well-suited to sorting new plastics as part of the extended sorting instructions, it will enable us to go a step further in the recycling of household packaging and will help us to meet the legal target of recycling 75% of household packaging.

- **Sterilwave, the innovation of the year**

Sterilwave was named the 2017 Innovation of the Year in the UK healthcare sector: this title was achieved by the Sterilwave site at the Whipps Cross NHS hospital, operated by our partner Eurotec Environmental Limited.

The price acknowledges the installation of the first site in the United Kingdom for converting potentially infectious hospital waste - an economic and ecological alternative to traditional off-site collection and elimination. Sterilwave is currently the only technology approved by the United Kingdom authorities for converting hospital waste.

Between 2 and 2.5 tonnes of potentially infectious hospital waste are treated each day by Sterilwave at the Whipps Cross hospital. Once converted by Sterilwave, the waste is classified as refuse-derived fuel (RDF) or solid recovered fuel (SRF) with the European waste code EWC 19 12 10. With an average calorific value of 14 mj/kg, the converted waste that leaves Sterilwave is compacted into a 20-tonne container and sent as fuel to be burned in ovens at heavy industry sites (e.g. cement plants) or waste-to-energy centres.

- **Ash treatment: recovery and reuse of all metal residues within ash**

Since acquiring the technology and assets of Geodur Recycling AG in April 2013, LAB has offered solutions and services in relation to bottom ash treatment and the recovery of ferrous, non-ferrous and precious metals. There are two specific metal extraction processes: RecuLAB™ NF, a dry process that enables non-ferrous metals to be extracted from coarse particulates and RecuLAB™ Au, a wet process that allows precious metals such as gold and silver to be recovered from fine particulates.

LAB signed two contracts to build plants utilizing these two processes in 2015 in Washington state, USA and in the Zurich region in Switzerland. Both contracts were delivered in 2016. The facilities in question are now operational.

- **Reuse of IT equipment**

Since 2014, the CNIM Group has signed partnership agreements with organizations for the employment of the disabled, respectively concerning the recycling or reconditioning of used IT equipment and screens for all French subsidiaries and the sorting and recycling of third-party site waste.

Under these agreements, the CNIM Group contributes on the one hand to reintegrating people into the job market who find it difficult to obtain work and on the other to the circular economy, by:

- reducing the Group's environmental impact by reducing waste and the associated CO<sub>2</sub> emissions;
- transforming waste into resources, thus limiting the consumption of raw materials;
- prioritising reuse.

In 2017, the partnership on the management of the Group's end-of-life IT equipment collected 6.5 tonnes of equipment, with a reuse rate of almost 64%. The direct environmental impact of this activity were savings of 229,000 litres of water and 78 tCO<sub>2</sub>e. Given the low levels of recycling for this type of equipment and their significant environmental impact, the results achieved by this partnership are very positive.

- **Sorting and recycling of tertiary waste**

In 2017, the partnerships on the collection, sorting and recycling of tertiary waste were extended: they now cover 6 sites, and have led to the recycling of 26 tonnes of paper and cardboard.



## 7.1.3 Measures taken to reduce food waste

The CNIM Group does not buy, process, distribute or sell food products. Furthermore, only two companies in the Group, representing 10% of the workforce covered by this report, have a workplace canteen. Food waste is therefore a minor issue for the Group, and no specific action plan has been established for this topic other than the vigilance and common-sense measures that the Group applies to all of its consumption and waste.

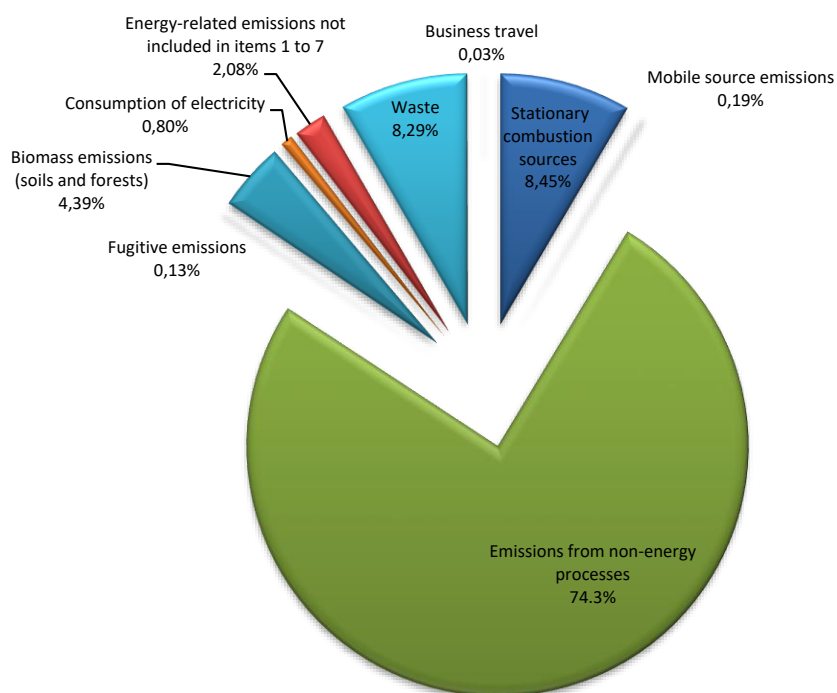
## 7.2 Greenhouse gases and measures to reduce and purify air emissions

### 7.2.1 Greenhouse gas emissions

In 2017, aggregated scope 1 and 2 greenhouse gas emissions for the CNIM Group were 485,598 tCO<sub>2</sub>e, with uncertainty of almost 40%.

Emissions categories	Numbers	Emissions headings	Values							Avoided emissions Total (t CO <sub>2</sub> e)
			Greenhouse gas emissions							
			CO <sub>2</sub> (t CO <sub>2</sub> e)	CH <sub>4</sub> (t CO <sub>2</sub> e)	N <sub>2</sub> O (t CO <sub>2</sub> e)	Other gases (t CO <sub>2</sub> e)	Total (t CO <sub>2</sub> e)	CO <sub>2</sub> b (t CO <sub>2</sub> e)	Uncertainty (t CO <sub>2</sub> e)	
Direct greenhouse gas emissions	1	Stationary combustion emissions	45,311	63	428	0	45,802	1,450	2,629	0
	2	Mobile emissions	997	1	9	0	1,007	195	31	0
	3	Emissions from non-energy processes	379,961	5	0	58	409,888	0	193,565	291,596
	4	Fugitive emissions	0	0	0	725	725	0	217	31,891
	5	Biomass emissions (soils and forests)	18,904	0	0	0	23,807	541,211	1,471	0
		<b>Sub-total</b>	<b>445,174</b>	<b>69</b>	<b>437</b>	<b>783</b>	<b>481,229</b>	<b>542,856</b>	<b>193,589</b>	<b>323,487</b>
Indirect emissions associated with energy	6	Indirect emissions associated with electricity consumption	4,334	0	0	0	4,334	0	150	0
	7	Indirect emissions associated with steam, heat or cold energy consumption	35	0	0	0	35	0	8	0
		<b>Sub-total</b>	<b>4,369</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,369</b>	<b>0</b>	<b>150</b>	<b>0</b>
Other indirect greenhouse gas emissions	8	Energy-related emissions not included in items 1-7	9,150	1,801	325	0	11,276	-1,645	670	0
	9	Purchased goods and services	0	0	0	0	0	0	0	0
	10	Capital property	0	0	0	0	0	0	3	0
	11	Waste	44,596	0	339	0	44,935	18	11,213	0
	12	Upstream goods transport	0	0	0	0	0	0	0	0
	13	Business travel	157	0	0	0	157	0	0	0
	14	Upstream leasing	0	0	0	0	0	0	0	0
	15	Investments	0	0	0	0	0	0	0	0
	16	Visitor and customer transport	0	0	0	0	0	0	0	0
	17	Upstream goods transport	0	0	0	0	0	0	0	0
	18	Use of products sold	0	0	0	0	0	0	0	0
	19	End-of-life of products sold	0	0	0	0	0	0	0	0
	20	Downstream tax exemption	0	0	0	0	0	0	0	0
	21	Downstream leasing	0	0	0	0	0	0	0	0

## Breakdown of CO2e emissions by category



- **Emissions avoided**

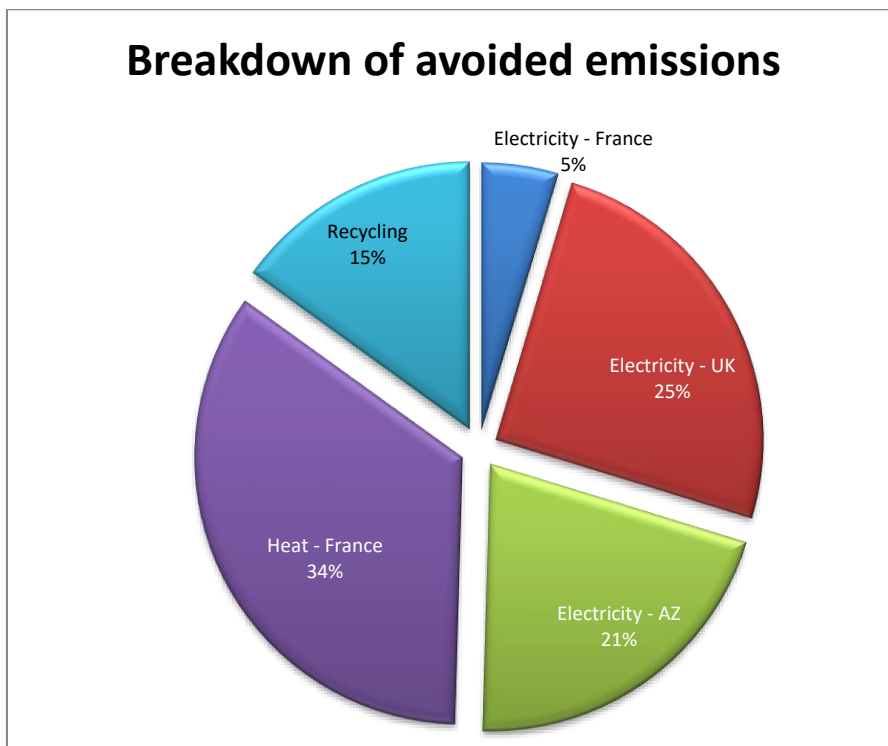
The Carbon Accounting method estimates the emissions avoided by a certain activity. In the case of CNIM, this activity is waste-to-energy reprocessing and the recycling of materials.

**Avoided emissions: emissions that would have been generated in order to produce the same quantity of energy or raw material according to conventional production methods (national energy mix).**

In 2017, the CNIM Group sites enabled 323,487 tCO<sub>2</sub>e of emissions to be avoided.

	Emissions factor	Emissions avoided
	kgCO <sub>2</sub> e/MWh	tCO <sub>2</sub> e
Electricity sold in the UK	505	81,422
Electricity sold in Azerbaijan	473	66,966
Electricity sold in France	56*	14,814
Heat sold in France	279	111,553
Recycling of materials		48,730

\*The carbon database emissions factor is 72kgCO<sub>2</sub>e/MWh for France, but 56kgCO<sub>2</sub>e/MWh if the part related to the distribution and transportation of electricity (which is outside CNIM's scope) is excluded. This figure is very low in comparison with the UK or Azerbaijan, which is due to the very considerable role of nuclear power in France's energy mix.



## 7.2.2 Measures taken to reduce and purify air emissions

- **Reducing polluting emissions**

With regard to emissions of fumes and the associated environmental nuisances, LAB has developed and patented technologies that enable the emission levels of particulates, dioxins, sulphur, NOx, mercury and other heavy metals to be kept down in a way that goes beyond the standards currently in force in Europe. LAB's projects often ensure that emissions fall far below the thresholds set by current environmental standards.

- **LAB wins a contract to install marine scrubbers on cruise ships**

In 2017, LAB won a contract to install marine scrubbers on three cruise ships. This contract was performed in partnership with a major company in the French ship construction industry (an engineering and installation firm). LAB is responsible for the dimensioning, technical specifications, purchasing, manufacturing control and the commissioning of the equipment. On this contract, LAB is using the DeepBlueLAB® technology, the result of 15 years of R&D. Three scrubbers have already been installed on the first ship. They will clean more than 97.1% of sulphur dioxide emissions and 90% of fine particles larger than two microns, allowing the shipping company that owns the three ships to comply with the MARPOL directive, which seeks to reduce polluting emissions by ships.

- **Helsingør Kraftvarmeværk A/S chooses a smoke treatment created by LAB for its biomass electricity plant**

In Denmark, the Helsingør thermal power plant is converting to biomass to meet the energy and environmental performance targets of Helsingør Kraftvarmeværk A/S, a major player in the utilities sector (a supplier of electricity, urban heating and water) and waste-to-energy processing in Denmark, in particular the reduction in CO2 emissions. LAB has won a contract to design, engineer, install and commission a combined smoke treatment system, namely a process of the SecoLAB® type followed by a condensation and combustion air humidification system.

- **An in-depth technical analysis with a view to converting two coal-fired urban heating boilers (operated by CPCU) to use biomass exclusively**

In 2017, CNIM Babcock Services conducted an in-depth technical analysis with a view to converting two coal-fired urban heating boilers (operated by CPCU Saint Ouen) to use biomass exclusively. In addition to this assessment, the company

performed production tests. Converting to wood significantly cut NOx, sulphur and particulate emissions. As the site is located in a residential area, CNIM Babcock Services also carried out a joint study with Bertin Technologies, with the aim of abating noise and visual nuisances (including eliminating the plume) at the facility.

## 7.3 Sustainable use of resources

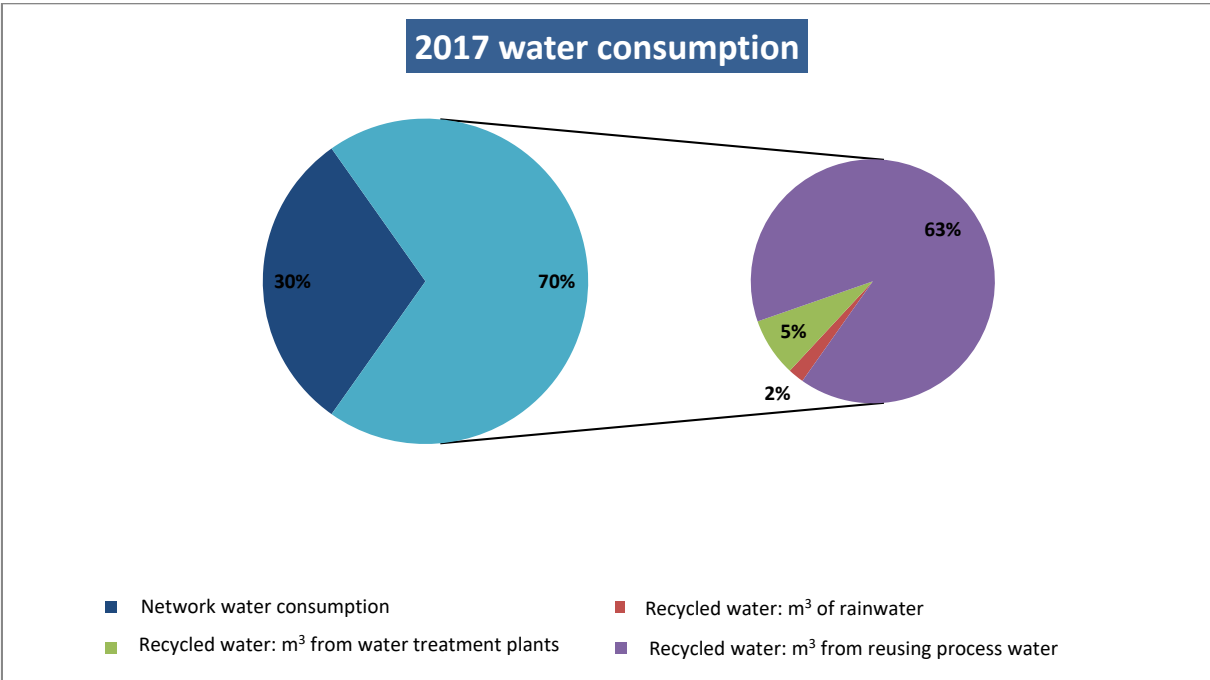
### 7.3.1 Water consumption and measures taken to reduce it

Based on the 2017 scope of analysis, the CNIM Group’s total water consumption was 2,090,431 m<sup>3</sup>, 1,454,701 m<sup>3</sup> of which (70 %) was recycled.

The recycled water is:

- either rainwater;
- or pumped directly from a cleaning station to be reused in the waste-to-energy process (with administrative authorization);
- or is the result of the reuse of water within the industrial process.

Four waste-to-energy plants are “zero waste”: industrial and rain water are reused in the process. Three are located in France – Thiverval-Grignon, Pluzunet and Saint Pantaleon – while the fourth is the CNIM site in Azerbaijan.



### 7.3.2 Consumption of raw materials and efficiency measures

- **Optimizing raw materials procurement**

CNIM Group's purchases mainly relate to complete equipment, on-site services, semi-finished items and intellectual creative services. This means that the raw materials component is limited and, as the Group's historical core business is boilermaking, it mostly consists of metallic raw materials (tubes, sheet metal, etc.).

The optimization of raw material consumption is a major issue for its waste-to-energy plant construction business as, on average, this type of plant requires 1,000 tonnes for the frame, 1,500 tonnes for the boiler and 250 tonnes for the pipework. The material consumption optimization process is systematically followed for the purchase of tubes, tanks, refractory materials, pipework and thermal insulation and is conducted in four stages:

- selection of the optimum material, which should represent the best compromise between the dimensioning (flow rate, pressure and temperature), conditions of use and price;
- optimization of the installed thicknesses, in accordance with the Pressure Equipment Directive (PED) construction code and the classes of lines;
- the cutting of the boiler, which must take transport dimensions into account;
- the lead time which, depending on the case, will allow, or preclude ordering finite lengths from steel producers, as opposed to receiving standard lengths that will result in more waste.

100% of metal waste leaves for reuse or recovery circuits.

- **Biomass sourcing**

The two biomass-to-energy plants in Picardy mostly use wood chips from nearby forests, supplemented by shredded industrial wood waste.

The fuel sourcing radius largely covers Picardy plus smaller sections of the Champagne Ardenne and Upper Normandy.

Cogeneration means that the two facilities have high cycle yields of around 60%:

- Electricity is generated for the RTE electricity grid in France;
- Steam is generated for use by nearby industrial sites.

Achieving these high yields means that electricity can be sold into the grid at a subsidized price, under contracts made with the French Energy Regulation Commission.

### 7.3.3 Energy consumption

Data	Unit	Quantity
City gas for heating and processes	kWh	95,464,104
Ordinary domestic fuel	L	771,169
Mobile sources of petrol fuel (light and heavy vehicles)	L	483,907
Non-road diesel	L	86,265
Mobile sources of petrol fuel	L	44,259
Forklift gas (propane)	kg	10,696
Process gases (acetylene)	m <sup>3</sup>	1,631
Electricity	kWh	93,371,430
Heating network	kWh	1,737,000

- **CNIM WEMS division and CNIM Ouest Armor obtain ISO 50001 certification**

In 2017, CNIM WEMS obtained ISO 50001(\*) certification for the factories operated through Group subsidiaries. This certification supplements the ISO 14001 and OHSAS 18001 certifications it previously obtained. In addition to demonstrating that energy aspects are prioritized in operating these plants, this certification allows CNIM's French customers to benefit from a reduction in the *Taxe Générale sur les Activités Polluantes* (General Tax on Polluting Activities). It should also be noted that, in 2017, the Pluzunet plant, operated by the subsidiary CNIM Ouest Armor (COA), obtained the ISO 50001 certification. This plant is the first CNIM plant to hold all three certifications.

### 7.3.4 Energy consumption reduction measures

- **Energy audits**

Energy audits have been conducted in the various companies in the Group since 2015, in accordance with European Directive 2012/27/EU and the EN 16 247 standard. This measure is aimed at encouraging companies exceeding certain size or revenue thresholds to put an energy efficiency strategy in place for their businesses. Following this structured approach enables opportunities to improve energy efficiency to be identified, as well as the capital expenditure that would be required and the payback period for the investments. These audits confirmed that steps had already been under way for several years to control energy consumption at the main sites.

- **La Seyne-sur-Mer: a multi-year plan to cut consumption**

At the La Seyne-sur-Mer site, the Group’s principal site, the multi-year campaign of works initiated with the objective of reducing energy consumption is continuing. The main measures undertaken in 2017 were:

- all outside outdoor sodium spotlights have now been replaced by LEDs;
- work has continued on replacing indoor lights by LEDs and replacing light switches by individual sensors: work is complete in 900m<sup>2</sup> of office space;
- the fitting of solar protection films to reduce use of air conditioning in summer has finished: all tertiary buildings now have the films;
- the acquisition of software enabling consumption of all fluids to be firstly monitored and then ultimately controlled for each building: one complete site now has the software, which issues alerts in the event of abnormal consumption;
- the acquisition of four electric vehicles for on-site industrial maintenance, which have replaced carbon vehicles, and the introduction of recharging terminals for these vehicles and employees’ vehicles.

- **Recovery of trapped energy**

For over half a century, CNIM’s technology has enabled energy trapped in household or other waste to be recovered. Such inherent energy would otherwise be little used or else lost entirely in landfills. Using this energy in place of traditional energy sources helps to conserve resources.

In 2017, the sites operated by the CNIM Group produced and sold 567,164 MWh of electricity and 399,831 MWh of heat, broken down as follows:

	MWh
Electricity sold outside France	302,808
Electricity sold in France	264,356
Heat sold in France	399,831

- **Bertin is supporting SITCOM is reducing its greenhouse gas emissions**

In December 2017, SITCOM (the inter-municipal household waste collection and treatment syndicate) for Côte Sud des Landes signed a CO2 Target Charter in partnership with the French Ministry of the Environment and France's Agency for Environment and Energy Management. Through this partnership, the syndicate undertakes to reduce the fuel consumption of its collection vehicles and the associated greenhouse gas emissions.

The syndicate, which has a fleet of more than 80 HGVs, has targeted an 8% reduction its fuel consumption from 2018 onwards.

Bertin Énergie Environnement carried out a technical and economic study with a view to identifying alternative solutions to diesel. This study led Bertin Énergie Environnement to propose structural changes (reduction at source) and a multi-year investment plan to gradually replace the fleet with operational technologies that will limit CO2 emissions.

The proposed plan covers 46 vehicles and will enable 180 tonnes/year of CO2 emissions to be avoided.

## 7.3.5 Development of services helping to improve our customers' energy efficiency

- **Energy efficiency at waste treatment plants**

CNIM, the global leader in the construction of waste-to-energy plants, has long aligned the energy performance of its buildings with respect for the environment. CNIM pioneered energy efficiency in 2005 when it built a plant in Bilbao which combines waste incineration and a recovery boiler with a gas turbine that enables steam to be superheated and re-superheated to 540°C. This combination allows waste to be treated in an extremely energy-efficient way.

The experience the company has gained, along with the development of new low-corrosion alloys, means that CNIM is now able to offer highly advanced thermal cycles (steam pressure and temperature) that help customers improve their energy performance by around 10%.

- **An innovative smoke treatment from LAB for the Waste-to-Energy plant at Kaunas in Lithuania**

LAB, a subsidiary of the CNIM Group, has won a contract to supply a turnkey smoke treatment facility for the new waste-to-energy plant at Kaunas, the second largest city in Lithuania. LAB's services will include the design, engineering, manufacturing, construction and commissioning of a smoke treatment facility with condensing unit that recovers the energy contained in the smoke. The plant, which will be delivered in 2020, will produce electricity and heat from the waste. Fitted with a unit with a waste capacity of 200,000 tonnes of waste per year, it will produce 24 MW of electricity and 70 MW of heat, of which approximately 22MW will be generated by the smoke condensing unit. It will provide 40% of the city of Kaunas's heat.

- **In Høfor, work has started on the smoke treatment and condensing units**

Copenhagen in Denmark has set itself the target of no longer using fossil fuels by 2025. The development of the BIO4 Energiproduktion facility, owned by the HOFOR Group, forms part of the conversion to biomass of the Amagerværket cogeneration plant, where the former coal-powered heat production unit will be replaced by a unit that will solely process wood chips. After receiving an order in 2016 to design, engineer, supply, source, install and commission smoke treatment and condensing units for the BIO4 facility, LAB began work in 2017, raising the first fittings, in particular the first portion of the chimney. The new unit's production capacity is 150 MW of electricity and 415 MW of heat on the urban heating network, including 125 MW obtained solely through the condensation of smoke. This will be the largest condensing facility in Europe.

- **CNIM is helping the world leader in bricks to improve its energy efficiency**

The CNIM Group was chosen by Wienerberger to equip one of its factories in the Linz region in Austria with a full heat recovery system. Developed by CNIM working very closely with Wienerberger, this system is based on an original design for an absorption heat pump. It recovers energy lost in the form of hot air when leaving the drying oven. Wienerberger will be able to save the equivalent of 500 kW of gas in pre-heating the oven.

- **CNIM has been awarded a contract to modernize the waste-to-energy site at Thiverval-Grignon (France)**

At the end of 2016, CNIM was awarded a Design-Build-Operate-Maintain (DBOM) contract for the energy optimization of the Thiverval-Grignon waste-to-energy centre. The centre is able to process an average of 200,000 tonnes of waste each year, as well as 20,000 tonnes of sludge from urban or rural wastewater plants. The project consists in optimizing the waste-to-energy centre in order to respond to the following challenges:

- increasing the recovery of energy from waste incineration;
- improving energy performance in order to meet the European R1 (Recovery One) criterion;
- improving the treatment of the flue gas of the preserved existing line, with the current wet treatment system being replaced with a dry treatment system, and with elimination of stack plumes and reduction of NOx content;
- conducting an educational site tour.

# 7.4 Contributing to the development of renewable energy use

## 7.4.1 Solar energy

- **SUNCNIM continues building the Llo concentrated solar power plant**

In 2017, SUNCNIM continued its building work at the Llo concentrated solar power plant in the Pyrénées-Orientales region. It will be operated by SUNCNIM from 2018 onwards. This will be the first Fresnel concentrated solar power plant in the world with the ability to store several hours' worth of power. The plant will have a thermal energy storage unit and will produce 9 MW of renewable electricity for export to the EDF grid – enough to supply power to over 6,000 households. Eco-designed and with 100% recyclable or reusable components, it will use SUNCNIM's Fresnel mirror technology, based on capturing thermal energy through mechanically driven mirrors which focus the sun's rays onto a receptor, the solar boiler. This generates thermal energy which can be stored or converted into electricity via a steam generation cycle.

## 7.4.2 Biomass

European Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources defines the biodegradable fraction of industrial and municipal waste as being biomass, and biomass as one of the non-fossil sources of renewable energy. As more than half of the carbon content of municipal waste is non-fossil in origin, half of the energy derived from its combustion is thus considered to be renewable energy.

- **Energy production from biomass**

CNIM designed, built and now operates two biomass cogeneration facilities which treat clean biomass obtained from forestry, sawmill by-products and wood chips from packaging materials or park and garden maintenance.

**Estrées-Mons, (France):** The plant is a power generation facility fuelled by clean biomass. It generates 13 MWe of electricity, and supplies energy in the form of steam to a nearby industrial company, which uses in its processes.

**Nesle (France):** The plant is a power generation facility fuelled by clean biomass. Generating enough electricity to supply a town of 5,000 homes, it will enable three million tonnes of CO2 to be saved over a twenty-year period. The plant can produce up to 130 GWh of electricity and 300 GW of heat energy each year from 250,000 tonnes of biomass. The heat is used by an industrial company.

	Energy production from biomass	
	MWh	
Electricity sold		225,049
Heat sold		306,890



- **LAB supplies a high-performing smoke condensing unit to the Ørsted heat power plant in Herring (Denmark)**

LAB won a contract from ØRSTED (formerly, DONG Energy), the largest producer of electricity and heat in Denmark, to supply a smoke condensing heat recovery unit. This unit will be installed at the Herring biomass power plant.

The contract covers the design, engineering, supply, installation and commissioning of the heat recovery unit. This will improve the plant's energy efficiency through the production of an addition 41 MWth.

The boiler's rated thermal input is 263 MWth (130 MW from wood chips and 133 MW from wood pellets). Before 2003, the year in which it was converted to biomass, the boiler was coal-powered.

The commissioning of the unit is scheduled for Spring 2019. This first contract with ØRSTED strengthens LAB's presence in Denmark and constitutes a new reference in the biomass sector.

- **Treatment of green algae**

In the composting field, CNIM has developed and installed a green algae treatment process based on the principle of dehydration through hot air ventilation (the hot air being produced by a wood-fired generator). This method eliminates odours and suppresses toxic gas emissions (hydrogen sulphide). After taking over the operation of the waste-to-energy plant at **Lantic (France)** in 2009, CNIM first upgraded the site before building a green algae treatment unit with a capacity of almost 25,000 tonnes per annum in 2010. The waste-to-energy plant takes in around 35,000 tonnes of waste per annum. The site features two microbiological treatment units and a non-hazardous waste storage facility. The compost produced (around 10,000 tonnes per annum) is approved for use in organic agriculture.

### 7.4.3 Wind energy

- **CNIM and VPLP design join forces to develop Oceanwings®, the maritime propulsion system of the future**

In 2017, CNIM and VPLP design, the French naval architect, signed a technological partnership agreement on the design and manufacture of the Oceanwings® propulsion system. This system will be co-developed and produced at CNIM's industrial facilities in La Seyne-sur-Mer. Intended for the super-yacht, sea transport and long-range sailing markets, Oceanwings® comprises a two-element wingsail that is fully automated, furlable and reefable. Oceanwings® is used in hybrid mode, in support of propeller propulsion and leads to considerable fuel savings and reduces greenhouse gas emissions. According to a study carried out on behalf of the European Commission's DG CLIMA, by 2030, between 3,700 and 10,700 wind propulsion systems for boats will be installed on cargo ships, container ships and oil tankers worldwide. The use of such wind propulsion systems could lead to significant reductions in CO2 emissions.

## 7.5 Noise reduction measures

In 2017, more than 95% of the decibel readings taken complied with the regulations.

At all 37 sites included in the reporting scope, 22 complaints were made by local residents, all of which were examined and responded to.

- **Reducing olfactory nuisances**

The waste-to-energy facilities designed and built by CNIM comply with the most stringent regulatory requirements in terms of noise levels and odour emissions. The unloading areas are kept at a lower pressure than the rest of the building, so that odorous particles are aspirated by the fan which supplies aspirated air into the hall. They are then destroyed by combustion.

On the Lantic site, every possible step is taken to ensure that the compost fermentation process produces as little odour pollution as possible. Part of the green waste is ground and sifted to produce a plant compost. This is then mixed with raw compost from household waste to be matured in boxes. The compost ferments in special boxes that are each equipped with their own air supply and extraction system. The boxes also have air ventilation tiles that are supplied with outside air by a fan and an independent air network. The foul air aspirated from the boxes is channelled toward a biofilter that deals with any odours.

Green algae, which are mainly composed of water, are treated using a drying process in ventilated boxes. After they have been structured by green waste sifting refuse, they are confined in boxes into which air is blown at high speed. The risk of fermentation is eliminated by maintaining an adequate oxygen level, as a result of which the H2S content becomes negligible. The foul air is again aspirated into a biofilter.

## 7.6 Measures taken to conserve biodiversity and soil

All construction or extension projects involving industrial waste-to-energy conversion or energy production sites undergo prior environmental assessments to identify the preventive measures to be taken to reduce the new site's environmental footprint. These assessments systematically include biodiversity analysis and conservation.

# 8 CNIM'S SOCIAL ENGAGEMENT

## 8.1 Map of stakeholders

Based on its strategic goals, in 2013 the CNIM Group embarked on the identification and ranking<sup>1</sup> of its stakeholders. This map, which is supplemented by the identification of the forms of dialogue, the level of influence and the mutual expectations of all of the stakeholders, should allow the Group to more effectively prioritize its listening and communication efforts with regard to those with the largest impact.



<sup>1</sup> The size of the bubbles reflects this ranking.

## 8.2 Impact of the Company's activity on the local economy

Due to its positioning in high-tech, innovative industrial markets, the CNIM Group buys few standard or catalogue products. A limited number of suppliers are able to meet all of our technical and quality requirements and these suppliers operate on a national or international scale.

The strong construction site focus, whether this means the installation of complex systems on site for CNIM Industrial Systems, the construction of waste-to-energy facilities or flue gas treatment plants for the Environment Sector, or the service activities of CNIM Babcock Services, also makes it necessary to have local subcontractors.

Based on the scope of the 2017 CSR report, the local economic and social impact of the CNIM Group, including purchases, salaries, taxes and duties (taken from the financial accounts of 18 companies) is €606.2 million, spread across seven countries (France, the UK, Germany, China, Azerbaijan, Morocco and Singapore), 87% of which relates to France and the UK.

Of the €606.2 million total:

- €166.7 million relates to wages and salaries, including social security and similar charges;
- €10.6 million relates to taxes and duties;
- €428.9 million relates to purchases.

In addition, SUNCNIM's business created 68 indirect jobs (68 of them in France) in addition to 32 direct jobs in 2017.

- **A Civic Trust Award for the Ipswich plant**

The waste-to-energy plant in Ipswich in the county of Suffolk (United Kingdom), developed by CNIM in partnership with Lagan and delivered to SITA UK in 2014, received a Civic Trust Award in 2017, an award that recognizes exceptional projects in terms of architecture and local integration.

## 8.3 Consideration of subcontractors and suppliers from a social and environmental viewpoint

Based on the scope of reporting, the Group's purchases were €428.9 million in 2017.

For the reasons given above, the CNIM Group has decided to adopt a purchasing policy by subsidiary and/or business sector, according to a sector-based approach. This micro-economic approach was preferred to a global, Group-wide one, which would have lost some of its effectiveness owing to the consolidation of businesses and subsidiaries that are too different in size.

Each business sector and/or subsidiary defines its supplier approval process according to the nature of its business:

- the supplier pre-approval questionnaire used by CNIM SA and Lab SA contains questions about the company's quality, safety and environmental certification and, for service providers, about the accreditation of staff or the verification of equipment that may present a safety risk;
- LAB has also set up an end-of-construction evaluation process for its main suppliers which has taken into account Health, Safety and Environment criteria as well as their ISO 14001 and OHSAS 18001 certification.

All of these criteria are considered when selecting a supplier, which is a process that is adapted to the variety of the Group's businesses and the size of the organizations that must implement it.

## 8.4 Contribution to competitiveness clusters

The CNIM Group and its subsidiaries are fully involved with competitiveness clusters, which aim to structure the R&D activities within a region around specific themes. The Group is represented in a number of clusters, in particular:

- the Capenergies cluster, whose purpose is to control energy consumption and work on the shift toward non-greenhouse-gas-generating energy sources;
- the Mer Méditerranée cluster;
- the Mer Bretagne Atlantique cluster;
- the Optitech cluster, which is at the cutting edge of optics, photonics and image processing;
- the Safe Cluster, which covers security and aerospace;
- the Systematic cluster, which aims to connect participants in the software, digital and industrial sectors around future technologies.

## 8.5 Involvement in trade associations and unions

CNIM is very actively involved in numerous trade and environmental associations and unions. The CNIM Group is represented in the following bodies, in which it plays an active part:

- SNIDE (French National Union of Designers and Builders in the Waste Industries);
- ESWET (European Suppliers of Waste-to-Energy Technology);
- SVDU (National Syndicate for Treatment and Recovery of Urban and Similar Waste);
- FNADE (French Federation for Pollution Control and Environmental Activities);
- FEAD (European Federation for Pollution and Environmental Activities);
- CEWEP (Confederation of European Waste-to-Energy Plants);
- AMORCE (National Association of Communities, Associations and Businesses for Waste, Energy and Heating Network Management);
- SER (Authority on Renewable Energy);
- FBE (France Biomasse Énergie);
- ASTEE (Scientific and Technical Association for Water and the Environment);
- ISWA (International Solid Waste Association);
- the ADEME International Club (ADEME: French Environment and Energy Management Agency);
- MEDEF (MEDEF: French employers' federation);
- CNIM UK and MES Environmental are also members of the ESA (Environmental Services Association).

The Group is also active:

- **within the context of its shipbuilding activities:**
  - in GICAN (French Marine Industries Group).
- **within the context of its defence and terrestrial security activities:**
  - in GICAT (French defence and Land and Air/Land Security Industries Group).
- **within the context of its nuclear activities:**
  - in PFCE (China-France Electricity Partnership). PFCE aims to promote the long-term involvement of French midcaps and SMEs in the construction of the Chinese nuclear program;
  - in the PFME (France Global Electricity Partnership), which promotes French industrial companies in countries with a nuclear program.

- **within the context of its NBC threat detection activities:**
  - in the Défense NBC consortium, which brings together the main French businesses active in the NRBCE (nuclear, radiation, biological, chemical and explosive) sector;
- **within the context of its cybersecurity activities:**
  - in HexaTrust, an association of experts in IT security, cybersecurity and digital trust which responds to the needs of companies, governments and public and private organizations seeking to benefit from innovative French solutions for the full range of their IT security requirements;
  - in CLUSIF (French IT Security Club);
  - in CECyF (French Centre of Expertise on Cybercrime);
  - in CICS (French Trust and Security Industry Council);
  - in the SystemX IRT (technological research institute).
- **in associations that promote research and innovation:**
  - in the ANRT (French National Association for Research and Technology);
  - in the ASRC (French Association of Contractual Research Structures);
  - in France Innovation.

- **The ADEME International Club celebrates its 20-year anniversary in Paris**

LAB, SUNCNIM and BERTIN in the CNIM Group are members of the ADEME International Club, which celebrated its 20-year anniversary in 2017. The CNIM Group was honoured at these celebrations with a trophy given to its subsidiary, LAB, as a long-standing member of the Club.

Created by ADEME and sponsored by the French ministries for Ecology, Industry and External Trade, the ADEME International Club brings together 120 French SMEs and mid-cap companies and innovative eco-businesses active on the worldwide sustainable development market. The ADEME Club businesses offer techniques and services that respond to environmental and climatic challenges.

## 8.6 Local integration

### 8.6.1 Action to promote integration

- **CNIM Insertion**

Since 2009 and the creation of the Thiverval Grignon (Yvelines, France) sorting centre, whose operating contract was awarded to CNIM, CNIM Insertion has offered social support and employment to people in difficulty to facilitate their integration into the economy. The undertaking is a company for the integration of workers through economic activity whose status has been accredited by the State. The people in question are hired for a maximum of 24 months, trained as sorting operators and helped with their social difficulties, and especially with their search for employment, as this activity is only one stage in their journey and is a stepping stone on the path to long-term employment. CNIM Insertion's mission comprises numerous positive outcome objectives, as the reintegration process can be counted a success only when the person has been able to find a job or take a training course that matches their aspirations and skills.

Since obtaining State certification in 2009, CNIM Insertion received AFAQ EI/ETTI approval in 2013: it is the first integration enterprise in Ile-de-France to obtain AFNOR certification, which aims to validate the social practices of sheltered employment companies.

In 2017, 54 people benefited from a contract with CNIM Insertion, 8 of whom left the organization with a positive outcome: these were people who successfully obtained a fixed-term or permanent job or training leading to a qualification.

- **Paris chooses CNIM for its new city-based waste sorting centre**

In 2015, a CNIM-led consortium involving several partners was selected to design, build and run (for a two-year period) a waste sorting plant to be sited in the Clichy-Batignolles industrial zone. The plant will enter service in 2019 and employ 80 staff, of whom 35 will be employed under reintegration contracts, almost twice as many than at Thiverval-Grignon. The process will incorporate the latest in automated sorting technology, such as the optical sorting of plastics and paper and mechanical fractioning, so as to limit the amount of work done by hand and allow operatives to focus on quality control. The centre will have a capacity of around 40,000 tonnes per year and will process the “clean and dry” waste of 900,000 residents.

- **Businesses that promote the employment of disabled persons**

The CNIM Group has also signed a number of contracts with businesses that promote the employment of disabled persons: these are businesses at least 80% of whose employees are disabled, or on a professional rehabilitation programme.

## 8.6.2 Collaboration with teaching establishments

- **“My Camera Meets the Pros”**

CNIM participated, for the fifth year, in the “My Camera Meets the Pros” programme and introduced year 10 students on the DP Pro stream at the Marie France Lycée in Toulon to automated business lines at the waste-to-energy plants operated by CNIM worldwide. This exercise gave them an insight into the role of engineer and process technician responsible for overseeing all automated processes in the various projects on which CNIM works. The students also learnt about the workings of audiovisual productions: designing a script, filming and editing. The pupils at the Marie France Lycée won the prize for the best documentary. Introduced by the SFR foundation of the Ministry of National Education in 2010, the “My Camera Meets the Pros” programme aims to enable year 10 students on the professional stream to plan for their education in future business sectors and areas in their local regions, by giving them the opportunity to work with local businesses.

- **“Teachers in Business” initiative**

In November 2017, CNIM’s Engineering team welcomed 13 teachers from the national education sector to its “Teachers in Business” event. The programme offered them the chance to learn about the different stages of a project and then visit a design office and workshops. The “Teachers in Business” initiative is run by Fondation CGENIAL and aims to promote technical professions.

- **Trainees and apprentices**

Number of interns, trainees and apprentices hired on completion of their training in 2017:

	Consolidation
Interns recruited during the year	21
Career development contracts offered during the year	1
Apprentices recruited during the year	1

CNIM is also on the Board of Directors of the SeaTech school of engineering.

## 8.6.3 Partnership initiatives

- **Industry week: CNIM renews its partnership with UIMM**

During the 7th Industry Week, CNIM renewed its partnership with UIMM for the fourth consecutive year and welcomed middle school, high school and university students from the Var region to its La Seyne-sur-Mer site. This national event run by the French Ministry of the Economy and Finance, via the Directorate-General for Enterprise (<http://www.entreprises.gouv.fr/>), aims to raise the profile of business activities and change young people's perception of industry. At the regional level, UIMM was keen to demonstrate the vibrancy of industrial activity, its competitiveness and the dynamism of businesses in the metalworking sector.

# 9 ETHICS AND FAIR PRACTICES

## 9.1 Action taken to prevent corruption

### 9.1.1 The Group's ethics charter

The Management Board has decided to introduce a Group-wide ethics charter to formalize the values that each Group employee must observe in their work. Its purpose is to cover the following issues:

- respect for individuals and their work;
- respect for health, safety and the environment;
- respect for laws and regulations;
- fairness and integrity;
- transactions involving CNIM shares;
- use of the Company's property.

### 9.1.2 Group Purchasing Policy

The purpose of the purchasing policy is to set out the duties and objectives of the purchasing teams, the commitments they make, in particular in terms of ethics and corruption and the Group's expectations for suppliers of goods and services. In order to be completely transparent with the Group's various stakeholders, the purchasing policy is public and is available on the Group's website.

### 9.1.3 The Group's purchasing code of conduct

The CNIM Group drew up and implemented its purchasing code of conduct in 2013.

This code of conduct:

- concerns buyers and all of the Group's employees likely to have an influence on purchasing;
- defines the behavioural rules and ethical standards to be complied with during purchasing;
- draws employees' attention to the impact that their relationships with suppliers and partners may have on the Group's image;
- clarifies the concept of conflicts of interest.

### 9.1.4 Raising staff awareness to the risk of fraud

Since 2013, the CNIM Group has been committed to raising staff awareness to the risk of fraud. Initially aimed at managers, it was then extended to purchasers and clients and, since 2015, has been included in the Management training programme. In total, over 500 employees have undergone training or familiarization.

To reflect changes to laws, in particular the Sapin 2 law, an action is currently under way to incorporate new awareness-raising and training sessions in 2018.

### 9.1.5 Whistleblowing procedure

If any of the charters referred to above are breached, employees and the Group’s external stakeholders may report the matter using the whistleblowing procedure.

While ensuring that the report and the whistleblower’s identity remain confidential, the person responsible for implementing the Charter takes care, when recording and later processing the alert, to only communicate the data and information required to verify and process the alert.

After assessing the alert, the person responsible for implementing the charter notifies the relevant line managers. They carry out the appropriate investigations and decide on the follow-up to be given to any breaches of the charter.

### 9.1.6 Management of agents and consultants

Finally, the CNIM Group also has a procedure for selecting and monitoring agents and/or consultants, which covers the following aspects:

- selection criteria;
- search for applicants, which is based, amongst other things, on an information questionnaire to be completed by the agent;
- approval of the choice of agent;
- drafting of the agent's contract;
- monitoring and archiving of the documentation.

Due to changes of law, in particular the introduction of the Sapin 2 law, an action plan has been put together to amend the documents for all these areas, and introduce new processes.

## 10 RESPECT FOR HUMAN RIGHTS

### 10.1 Our Values

The Company's values are excellence, creativity, commitment and trust. They are based on respect for individuals, the law and the internal rules in force within the Company.

<b>Excellence:</b>	- of our professional skills and expertise; - of our industrial tools; - of our collective achievements and services.
<b>Creativity:</b>	- of our solutions to anticipate and meet the expectations of our customers; - of our teams to put forward powerful and competitive solutions.
<b>Commitment:</b>	- to Group shareholders over the long term; - to our customers, by offering them quality, flexibility and performance; - to our partners, by developing balanced and lasting relationships; - to our employees, by helping them to achieve their ambitions.
<b>Confidence:</b>	- to consolidate our relationships with our employees; - to underpin our customer relations; - at the heart of our activities to achieve greater success with responsibility and enthusiasm.

### 10.2 Human rights

Bearing in mind its aim of growing its business outside Europe, as well as the passing of the UK’s Modern Slavery Act in 2015, the Group has implemented an action plan in its various Procurement Departments that aims specifically to ensure that suppliers and subcontractors show respect for human rights. This action plan underlines the Group's commitment to honour the principles and rights proclaimed under the 1998 Declaration of the International Labour Organization, which



promotes dignity in labour and fundamental conventions worldwide, and ensure that its subsidiaries and business partners do the same. The action plan is made up as follows:

- Undertaking by the Management Board;
- Group Purchasing Policy describing the Group's CSR commitments and the expectations we have of our business partners;
- Inclusion of a clause on respect for human rights in our General Procurement Terms & Conditions;
- Inclusion of an undertaking to respect human rights in our supplier approval questionnaire;

In 2017, given the nature of their activities, CNIM SA, Lab SA and Bertin Technologies published an annual declaration under the Modern Slavery Act.

## 10.3 Other action taken to promote human rights

Furthermore, the substantive work on:

- health and safety conditions in the workplace;
- respect for dialogue between employees and management;
- combating discrimination;
- entitlement to teaching and training;
- and the duty of care exercised by the Group with regard to the payment of social security contributions by its suppliers;

described in previous reports was continued in 2017.

# 11 METHODOLOGY OF THE CNIM GROUP'S CSR REPORT FOR 2017; EXTERNAL OPINION ON FAIRNESS

To ensure the transparency and reliability of the data disclosed, the CNIM Group engaged DNV GL Business Assurance to audit its corporate, environmental and social information.

The scope is fixed as at December 31 of the financial year.

- **Change in the scope of analysis:**

21 legal entities are covered in the 2017 report:

	2012	2013	2014	2015	2016	2017
BERTIN IT					o	o
BERTIN PHARMA						o
BERTIN TECHNOLOGIES	o	o	o	o	o	o
CNIM AZERBAIJAN				o	o	o
CNIM Babcock Maroc				o	o	o
CNIM Centre France		o	o	o	o	o
CNIM Biomass Energy		o	o	o	o	o
CNIM Insertion			o	o	o	o
CNIM Ouest Armor	o	o	o	o	o	o
CNIM SA	o	o	o	o	o	o
CNIM Singapore			o	o	o	o
CNIM Terre Atlantique				o	o	o
CNIM Thiverval Grignon	o	o	o	o	o	o
CNIM Transport Equipment			o	o	o	o
ESTREE MONS Energie Biomasse		o	o	o	o	o
Lab SA	o	o	o	o	o	o

Lab WASHINGTON*					o	o
MES Environmental Ltd		o	o	o	o	o
SAPHYMO GmbH						o
SUNCNIM					o	o
VECSYS			o	o	o	o

Note: the white area identifies the scope of the consolidation area each year.

\*Environmental matters only are included in respect of Lab Washington. Other data for this company is immaterial.

Entities selected for reporting consolidate the performance and impact of the industrial facilities where they are responsible for operational technical control, including facilities operated on behalf of third parties.

As a result of the disposal by the CNIM Group of part of the business of Bertin Pharma, only those activities carried out by the CNIM Group are taken into account.

These companies account for 97% of the Group's consolidated revenues and cover 95% of its headcount over 37 sites. The companies in the analysis are covered from one year to the next, in order to enable the full consolidation of all subsidiaries in the long term.

The list of entities to be covered by the Group CSR Report is put forward by the Group CSR Manager and approved by the Management Board and General Management of the subsidiaries concerned. The Group CSR Manager is responsible for collecting and consolidating data, writing the report and coordinating the action plans implemented within each Sector or subsidiary.

In environmental terms, the scope covers all waste sorting, treatment and recovery centre operating business throughout the world.

With regard to the data published in this report, the following facts should be noted:

- for 2017, methods of estimation were defined for data that were not available, to ensure that all of the information required could be delivered within the specified deadlines. Unknown water consumption figures for certain third-party sites were therefore estimated based on the consumption figures for sites of a similar size. These estimates account for less than 1% of the total;
- The CNIM Group is concerned about what happens to the waste material produced by its activities and can provide indicators about the recovery of its waste. To this end, it relies on the definitions of 'waste' and 'recovery' established by the local regulations;
- CO<sub>2</sub> emissions were calculated based on the V8.1 spreadsheet program of the Association Bilan Carbone (French Carbon Accounting Association), with emission factors from the Carbon Database;
- given that the Group subcontracts all inbound and outbound transportation and that hauliers and freight forwards do not publish figures for the CO<sub>2</sub> emissions generated by these services, the CNIM Group does not possess sufficient data to disclose "Other indirect greenhouse gas emissions" (scope 3). The only items described in detail in scope 4 are final waste from waste-to-energy and waste treatment plants and energy emissions that are not included in items 1 to 7 (emissions from the entire final energy production chain, recorded for any use of fuel, electricity or steam).
- The emission factor applied for waste sorting and waste processing centres is 326 kg CO<sub>2</sub> eq./tonne for the incineration of household waste (excluding transport, which is outside the scope) and 128 kg CO<sub>2</sub> eq./tonne for the landfill disposal of hazardous industrial waste;
- Acetylene gas is used by many Group companies and subsidiaries. It was not referenced in the Carbon Database, and was added to the carbon account as follows: density 1.1 kg/m<sup>3</sup>, emission factor 3.38 kg.CO<sub>2</sub>/kg (based on stoichiometric ratios).
- calculation of uncertainty: as most emissions are due to the incineration of household waste, all these emissions depend directly on the household waste incineration emission factor. These values are not independent, as in previous years the uncertainties were added together.
- When calculating its direct greenhouse gas emissions, the CNIM Group includes the CO<sub>2</sub> from the vehicles owned, leased or hired by the Group and used within the context of its industrial and business activities.

On the next few pages you will find the table of correspondence between the forty-two questions contained in Law No. 2012-557 of April 24, 2012 relating to companies' social and environmental transparency obligations and the CNIM Group's CSR report for 2017.

Topic	Type of information provided by CNIM	With indicator	GRI/EFFAS correspondence	See section:
<b>A. EMPLOYMENT</b>				
1. Total workforce and breakdown of employees by gender and by geographical area	Indicator	Total average workforce and geographical breakdown of employees by gender and by category	LA1/LA13/S03-01	See 3.1.1.1
2. Recruitment and dismissal	Indicator	Turnover with breakdown of employees by age, gender and reason for departure	LA2/S01-01	See 3.1.1.2
3. Remuneration and changes in remuneration	Indicator			See 3.1.1.3
<b>B. ORGANIZATION OF WORK</b>				
1. Organization of working time	Text and indicator	Breakdown of contracts: full-time, part-time		See 3.1.2
2. Absenteeism	Indicator		LA7	See 3.1.2.3
<b>C. Labour relations</b>				
1. Organization of labour relations	Text and indicator	Percentage of salaried employees covered by a collective labour agreement	LA4	See 3.5.2
2. Summary of collective agreements	Text			See 3.5.3
<b>D. Health and Safety</b>				
1. Health and safety conditions in the workplace	Text			See 3.2
	Indicator	Percentage of workforce represented by an HS Committee	LA6/S09-02	See 3.2.1
	Indicator	Sum of expenditure on safety throughout the business	LA6/S09-02	See 3.2.3
2. Summary of agreements with labour unions or personnel representatives on health and safety at work	Text			See 3.5.3
3. Accidents at work, particularly frequency and severity, as well as work-related illness	Indicator	Frequency rate and severity of accidents at work; number of work-related illnesses	LA7/S04-02/S04-04	See 3.2.4
<b>E. Training</b>				
1. Training policies implemented	Text			See 3.3.1
2. Total number of training hours	Indicator	Total number of training hours, hours per employee, employee training rate	LA10/S02-02	See 3.3.2
	Indicator	Proportion of staff benefiting from regular appraisal and career development meetings.	LA12	See 3.3.3
<b>F. Equal treatment</b>				
1. Measures adopted to promote gender equality	Text and indicator	Proportion of women in the workforce	LA13/S10-01/S10-02	See 3.4.1
	Indicator	Median male/female salaries	LA14	
2. Measures to promote the employment and integration of disabled people	Text and indicator	Proportion of disabled workers and number of disabled workers hired during the year		See 3.4.2
3. Policy on combating discrimination	Text			See 3.4.2
<b>G. Promotion and observance of the provisions of the fundamental conventions of the International Labour Organization on:</b>				
1. respecting freedom of association and the right to collective bargaining	Text			See 3.5.1
2. the elimination of discrimination in respect of employment and occupation	Text			See 3.4.2
3. the elimination of forced or compulsory labour	Text			See 3.10
4. the effective abolition of child labour	Text			

Topic	Type of information provided by CNIM	With indicator	GRI/EFFAS correspondence	See section:
<b>A. General policy on the subject of the Environment</b>				
1. Organization of the company regarding environmental issues and the related assessment or certification measures	Text			See 3.6.1
	Indicator	No. of ISO 14 001-certified sites		See 3.2.1
	Indicator	Total amount of material fines due to breaches of environmental legislation	EN28	See 3.6.1
	Indicator	Total non-financial penalties due to breaches of environmental legislation	EN28	See 3.6.1
2. Training and information for employees on environmental protection	Text			See 3.6.2
3. Resources dedicated to the prevention of environmental risks and pollution	Text			See 3.7.6
4. Provisions and guarantees for environmental risks	Indicator			See 3.6.3
<b>B. Pollution</b>				
1. Measures to prevent, reduce or redress emissions in the air, water and ground	Text			See 3.6.1
2. Noise and any other forms of pollution specific to an activity	Text and indicator	Proportion of regulatory-compliant decibel recordings; number of complaints from those in the vicinity		See 3.7.1
<b>C. Circular economy: prevention and management of waste</b>				
1. Measures to prevent, recycle, reuse, recover value from, and eliminate waste	Text and indicator	Total weight of incoming and outgoing waste Proportion of waste usefully reprocessed	EN22/ E104-01	See 3.7.1
2. Policy on combating discrimination	Text			See 3.7.1.3
<b>D. Circular economy: sustainable use of resources</b>				
1. Water consumption and water supply based on local constraints	Indicator	Volume of water consumed, of which recycled	EN8/EN10/E2 8-02	See 3.7.3.1
2. Consumption of raw materials and measures taken to use them more efficiently	Text			See 3.7.3.2
3. Energy consumption, measures taken to improve energy efficiency, use of renewable energies	Text and indicator	Direct energy consumption, by primary energy source	EN3/EN4/EN5 /EN6/EN7/E01 -01	See 3.7.3.3 and 3.7.3.4
4. Land use	Text			See 3.7.7
<b>E. Climate change</b>				
1. Major sources of greenhouse gas emissions due to the company's activities, particularly through the use of the goods and services it produces	Indicator	Total direct or indirect emissions of greenhouse gases Emissions avoided	EN16/EN17/E 02-01	See 3.7.2.1
2. Adapting to the consequences of climate change	Text	Initiatives to reduce greenhouse gas emissions; reductions obtained		See 3.7.2.2
<b>F. Protection of biodiversity</b>				
1. Measures taken to conserve or develop biodiversity	Text			See 3.7.7

Topic	Type of information provided by CNIM	With indicator	GRI/EFFAS correspondence	See section:
<b>A. Territorial, economic and social impact of the company's activity:</b>				
1. in relation to employment and regional development	Text and indicator	Impact of the company's activity on the local economy	EC6	See 3.8.2
2. on neighbours and local residents	Text			See 3.8.6
<b>B. Relations with stakeholders such as employment associations, employment organizations, training establishments, etc.</b>				
1. Conditions for dialogue with the above organizations	Text			See 3.8.6
2. Partnership or Sponsorship actions	Text			See 3.8.6
<b>C. Subcontractors and suppliers</b>				
1. Taking social and environmental issues into account through purchasing policy	Text			See 3.10.2
2. Importance of subcontracting and consideration of social and environmental responsibility	Text and indicator	Group Purchasing		See 3.8.3
<b>D. Fair practices</b>				
1. Action taken to prevent corruption	Text and indicator	Number of employees trained in the organization's anti-corruption policies and procedures	S03	See 3.9
2. Measures adopted for consumer health and safety	Text	See chapter on action taken to reduce emissions into the air		See 3.7.2
3. Other action taken to promote human rights	Text			See 3.10

## 12 GROWTH OF THE GROUP'S AVERAGE TOTAL WORKFORCE

	2011	2012	2013	2014	2015	2016	2017
<b>Group workforce</b>	2,660	2,772	2,831	2,914	3,000	2,773	2,477

2017 saw the disposal of part of the business of Bertin Pharma and the acquisition of Exensor.

On a like-for-like basis, the Group's average total workforce increased from 2,354 employees in 2016 to 2,404 in 2017, a rise of 2.12%.