aperam

Sustainability Report 2022

Sustainable by Design
Made for Life

External Assurance

We declare this report with reference to Global Reporting Initiative 2021.

Material aspects and indicators are shown on p.13. Detailed Disclosures on Management Approach (DMA) can be found in the online supplement 'C'. The scope of the information and data in this report covers global operations from January to December 2021.

Aperam's production capacity is focused on:
> 6 production sites in Brazil (Timóteo), Belgium (Châtelet, Genk), and France (Gueugnon, Imphy, Isbergues/Recyco),
> 15 Steel Service Centers (SSC), part of our Services & Solutions segment,
> 11 transformation facilities: 5 in the Services & Solutions segment; Pont de Roide in the Stainless & Electrical Steel segment, BioEnergia in the Aperam Aperam Recycling & Renewables segment; and Rescal, Amilly, Imhua and ICS in Alloys & Specialties,
> 51 scrap yard sites in North America, Europe, Asia, Australia and South Africa, for the trading, processing and recycling of secondary raw materials within the Aperam Recycling (former ELG) segment,
> 15 sales offices for the Services & Solutions segment,
> Registered office: 24-26 Boulevard d'Avranches, L-1160 Luxembourg.

The report does not cover any joint venture operations or activities of or with partner organisations.
- Safety data covers Services & Solutions and Alloys & Specialties, as well as on-site contractors.
- Human resources data exclude contractors.
- Subject to the exclusions indicated below, environmental data covers all the main industrial sites, SSCs and corporate offices.

Environmental information is compiled locally and aggregated centrally. The CO_2 emissions data relates to Scopes 1 and 2, unless otherwise mentioned.
The following exclusions apply to the environmental data:
(1) Raw material data excludes packaging and miscellaneous parts ;
(2) Scope 3 indirect emissions (partial estimates).

This report represents our Communication on Progress relating to United Nations Global Compact (UNGC) membership (see Supplement 'A').

Caveat

On Dec. 27, 2021, Aperam completed the acquisition of ELG, a global leader in stainless steel and superalloys recycling, with the aim to further strengthen Aperam's competitiveness and Sustainability leadership position in the industry.

ELG is fully consolidated into the Aperam Group from that date as part of the new Recycling & Renewables Division, unless otherwise mentioned.

Independent Assurance Statement

The 'Made for Life' report is a component (the 'summary') of our complete sustainability reporting (the 'Report') for the year ending 31 December 2022

The Report is composed of five items: the 'Made for Life Report' and four Supplements – A, B, C and D. Our 2022 Report can be found on our website (www.aperam.com/sustainability), together with the four supplements. The summary report has been prepared "with reference to the GRI Standards".
The summary should be read with its accompanying Supplements to constitute the complete Report.

PricewaterhouseCoopers, Société Coopérative (PwC) has been engaged to carry out a limited assurance engagement under International Standard on Assurance Engagements ("ISAE") 3000 to issue an assurance report in respect of certain information disclosed in the "Made for Life" 2022 (the "Sustainability Report") as set out in the table of the Scope section (the "Selected Information Table") of the opinion (p. 69) in accordance with certain Assessment Criteria.
These Assessment Criteria have been derived from certain sections of the Global Reporting Initiative (« GRI ») framework and by applying additional methodology defined by company policies that management considers as relevant for the purpose of the Company's business and for the ultimate users of the "Made for life" 2022 (refer to Supplements Online for more details).

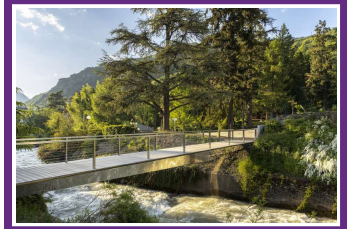
Selected performance data is marked in the Report with a '*':

Contents

About Aperam

Social: Our People

With safety as our top priority, Aperam aims to be a sustainable and profitable company with our efficient and passionate workforce as our main asset.



Environment: Our Planet

As part of an energy-intensive industry consuming metallic ores and other raw materials, Aperam takes environmental stewardship seriously.

Governance: Our Stakeholders

From the support of our subcontractors on-site to the strong partnerships built with our suppliers and customers and up to local infrastructures - our success is dependent on the communities we operate in. Our Corporate Governance is based on the highest standards and complies with the most rigorous business ethics. As a member of the ResponsibleSteel™ initiative, we are committed to taking stakeholder engagement and responsibility to a new level.

About this Report

GRI Index and Disclosures on Management Approach

Methodology Supplements: United Nations' Global Compact reference; Materiality Process at Aperam; GRI Index/Disclosures on Management Approach.

Country Supplements: For stakeholders and available in the local languages of our three main countries of operation (Belgium, Brazil, France) - to be released later.

About Aperam

Opening Words from our CEO

While 2022 started off promising, Russia's war with Ukraine changed everything. Not only has this war brought unbearable human suffering, it's also impacted the global economy, causing the biggest energy crisis in decades and peak inflation rates. In this context, Aperam has acted with great determination to cushion the impact of these challenges.

Putting human factors at the centre of our concerns has long been our credo, but in this context, it resonates even deeper. That's why we worked to fully integrate our former ELG-colleagues into the Aperam family and to ensure our approximately 10,700 highly committed employees worldwide have access to a stable future.

Considering the cascade of crises we've faced the last several years, business as usual now means being prepared for the unusual. At Aperam, this means having a strong ability to quickly adapt to the highly disruptive and volatile environment without losing focus on the long term challenges. In 2022, our teams were committed and focused on pursuing the design and deployment of a thoughtful roadmap to transform our processes and operations. This enabled us to respond quickly to the ultimatum poised by the energy transition, the climate crisis, inflation and societal challenges. It also serves the increasing needs of our customers for high quality and added-value products and solutions.

As a matter of fact, our social, environmental and societal responsibilities will never be pushed into the background. Aperam will always navigate the future with these three pillars as our compass, our strength and our pride.
While this Sustainability Report contains details about the steps we took in 2022 as part of our journey, here I'd like to note several highlights.

▶ Like always, Aperam puts people and their health and safety first.

That is why, even with our good Health & Safety results overall, with our LTFR at 2.4 and our TRIR at 7.1 (stable versus 2021), and the award granted by the ISSF on our JustCulture program, I cannot be satisfied with a year darkened by a fatality, one of a subcontractor performing roof maintenance in Brazil. As we consider our partners as our own personnel, we performed a full audit and review of all our processes for this type of external work to prevent such a tragedy from happening again.
I remain convinced that our roadmap, which is both strong and comprehensive, will bring us to the next level of Health & Safety performance. For instance, we work hard to create a company culture where we care for each other and learn from our mistakes - work that can be seen in the 2022 roll-out of a global training on the topic. Our commitment remains unchanged and we believe we can outperform the industry average. For this reason, we made H&S a hard target in the ESG-bond financing[1] concluded in February 2022.

Another challenge was to adapt to the low demand in the second semester in Europe, notably through economic unemployment at some of our plants, and, in South America, the closure of our Uruguay Tube unit. However, it was also during this period that we achieved the sound integration of our Aperam Recycling Division. This report demonstrates the extremely promising progress we made, with many of our new colleagues starting to see the benefits of cooperation, in particular on such topics as Health & Safety. We've also seen some 'cross pollination' happening, with former Aperam people joining the new Division and former ELG employees bringing fresh views to our steel business.
For the first time, in 2022, our annual Employee Climate Survey included our new Aperam Recycling colleagues. It also recorded a global response rate of 77%. This study is strategic as it guides many of our programs. For example, it confirmed some of our strengths, in particular our workforce's adherence to our H&S program as well as our past efforts to improve diversity, and this motivated us to go even further and include a specific focus on disability and several initiatives relating to mental health. Some areas for improvement were also highlighted. These included stress management, communications and learning. Although all the results are being analysed at unit- or department-level in order to tailor our actions to local needs, we're also strengthening our Group-level plans to continue to improve in these areas and stand as the responsible and attractive employer we aim to be.

▶ As such, we take any crisis as a supplementary reason to strengthen our environmental stewardship.

[1] Together with our decarbonization roadmap

During 2022, amid the energy crisis in Europe, we have accelerated our programmes aimed at reducing our specific energy consumption and CO_2 emissions.
We also adapted our organisation to give even greater coherence and visibility to those actions that look to minimise our environmental impact. This includes measures focused on reducing greenhouse gas emissions, but we also work on decreasing our impact on local biodiversity. As part of that, with the goal of boosting synergies, we appointed our Chief Technology & Sustainability Officer, as head of the new Recycling segment. His teams were already combining the responsibility over environmental management, industrial risks and the Energy/GHG action plan, including scrap optimization, together with Purchasing and a ResponsibleSteel Centre of Excellence. Now, with his supervision of our Recycling business, a more intertwined organisation has emerged - one capable of accelerating both innovation and the rollout of our plans.

Considering that the results of this organisational change will only become clear in the medium term, and taking into account the low level of activity in the second half of the year, the fact that our 2022 report confirms our superior GHG footprint is all the more impressive. In 2022, we recorded a 0.32*CO_2e/ton of crude steel[2], far from the sector's 0.9 sector's average established by the International Stainless Steel Forum. This good performance, together with our optimised use of steel scrap made possible by the tighter links woven with the former ELG, give us confidence in our ability to reach our 2030 (-30%) and 2050 (net zero) goals and to stand as a strong contributor to the global carbon neutrality (scopes 1+2) we strive for.

In parallel, our past actions have gained us the recognition and encouragement of the Carbon Disclosure Project (CDP), improved to an A- grade rating on the Climate Change questionnaire, and earned a B for the Water Assessment at our first attempt. This means a lot to us, as we aim to further reduce our natural resources usage and become progressively less dependent on local rivers. On the air emissions side, we also report a drastic reduction in the dust emission intensity, to the benefit of the communities around our plants, particularly around our Timoteo units.

We will continue in this direction to live up to the trust of our people, who confirmed in our last Employee Climate Survey that they see us as an environmentally responsible company.

▶ Along the same line, Aperam continues with its active ethics, stakeholders' engagement and corporate citizenship initiatives.

Maintaining strong partnerships with our business counterparts and communities is an integral part of how we do business as usual - something we continued to do in 2022. For example, in Europe, we continued our actions to promote both our industry and the regions we operate in with Open Days being held at some of our major plants. In Brazil, our Foundation continues to stimulate the economic development of local communities by providing education programs and training.
Unfortunately, these activities have also been impacted by the war in Ukraine. In light of the humanitarian crisis the war has caused, we strived to support the refugees around us, particularly in Poland, along with addressing the many effects the conflict has on our partners and stakeholders. We've also tightened our Ethics & Compliance due diligence in view of strengthened economic sanctions, regulations, export controls and broader ESG matters.

Speaking of a comprehensive approach to ESG, following the 2021 certification of our Stainless Europe's four main operations under the ResponsibleSteel™ framework, in 2022 our Timoteo unit underwent its ResponsibleSteel™ audit, which concluded with the official certification being granted in February 2023. As a result, Aperam is the first stainless producer to be certified in both Europe and the Americas. The thorough on-site inspection, which included exchanges with over 60 local stakeholders, involved considerable preparation work by our teams. But it was all worth it as we are all proud to have shown our current responsible practices and to have accepted the challenge to do even more.
Taking pride in our achievements and work is fantastic fuel for motivation and innovation - which we use to develop both customer-oriented solutions and sustainably-driven innovations. A perfect example of this is our recently announced Botanickel partnership. This venture aims to leverage our agricultural skills and set a new standard in the sustainable production of biosourced Nickel, using hyperaccumulator plants while developing a framework fully attentive to the climate, biotope and local communities.

Looking ahead, with approximately 25% of our workforce creating value from the renewable and recycling upstream market, including our FSC©-certified Brazilian forestry, Aperam is better prepared than ever to face any challenge, keep its commitment to responsibility, and deliver a life-lasting material that will help build the sustainable societies of the future.

Sincerely yours,
Tim di Maulo
Chief Executive Officer

[2] Scopes 1+2, including the sequestration effect of our Brazilian forests.

Company Profile

Aperam is a public limited company listed on the Luxembourg stock exchange and on Euronext Amsterdam, Brussels and Paris.

> 6 main plants

- **> 4 melting shops:** Timóteo (Brazil), Châtelet and Genk (Belgium), Imphy (France)
- **> 5 main cold rolling sites:** Timóteo (Brazil), Genk (Belgium), Gueugnon, Isbergues and Imphy (France)

> 1 FSC®-certified BioEnergia eucalyptus plantation and charcoal production facility (Brazil)

> 1 Recycling network (Worldwide)

> 1 Distribution network (Worldwide)

EUR millions unless otherwise stated [1]	2022	2021	2020	2019	2018
Crude Steel *('000 metric tons)*	***1,931***	*2,169*	*1,959*	*1,985*	*2,287*
Shipments *('000 metric tons)*	***2,309***	*1,819*	*1,677*	*1,786*	*1,972*
Revenues	***8,221***	**5,144**	**3,656**	**4,287**	**4,704**
Operating costs [2]	***6,418***	3,393	2,799	3,378	3,635
Employee wages & benefits	***675***	534	481	517	527
Payments to providers of capital [3]	***342***	249	146	240	205
Payments to government	***130***	136	80	37	75
Community investments	***0.7***	0.6	0.4	0.3	0.3
EBITDA	***1,076***	**1186**	**343**	**357**	**504**
Economic value retained	***655***	831	150	210	332
Direct economic value generated	***8,221***	5,144	3,656	4,287	4,704
Economic value distributed	***7,566***	**4,313**	**3,506**	**4,077**	**4,372**

1 Differences between "Global Aperam" and the sum of the different regions and segments (next page) are due to all operations other than those in clear, together with inter-segment elimination and/or non-operational items that are not segmented. For Full-Time Equivalent Employees (see next page), it is related to Headquarters and 'transversal functions' (HR, IT, etc.).

2 Operating costs include R&D costs of EUR 21 million for Aperam Group for 2022.

3 Payments to capital providers = Net Cash Interest and dividends paid to capital providers and shares repurchased through share buyback programmes during the year, in line with an amount of interest paid (net) of EUR (3) million, EUR 4 million, EUR 7 million, EUR 5 million and EUR 5 million, dividends paid of EUR 151 million, EUR 140 million, EUR 139 million, EUR 142 million and EUR 130 million, and shares repurchased for EUR 194 million, EUR 105 million, nil, EUR 93 million and EUR 70 million stated in the cash flow statements of the 2022, 2021, 2020, 2019, and 2018 Annual Reports respectively.

About Aperam

Our Offering

RECYCLING & RENEWABLES

Scrap is our key raw material, Charcoal our major energy

> ELG is a global leader in the trading, processing and recycling of scrap for the stainless steel industry & market leader in the recycling of high performance materials such as superalloys and titanium mainly for aerospace
> BioEnergia produces wood and charcoal from FSC certified eucalyptus forests (128,000 ha)
> Recyco recycles metal from dust, mud, residues, ashes, etc.

STAINLESS & ELECTRICAL

Amongst the largest producers of stainless steel globally

Europe:
> 2 Electric Arc Furnaces (EAF) use scrap as major input material
> Stainless steel flat product output

South America:
> 2 Blast Furnaces (BF) use iron ore and charcoal produced from own forests
> 2 EAF use recycled scrap
> Stainless flat products & electrical steel

SERVICES & SOLUTIONS

Aperam's distribution arm

> Services & Solutions (S&S) provides value added and customized solutions through further processing according to specific customer requirements. S&S core activities:
> Direct sales of Aperam products to end users
> Distribution of Aperam and third party material
> Transformation services, according to specific customer requirements

ALLOYS & SPECIALTIES

Top 3 producer of nickel alloys globally

> Aperam specializes in nickel alloys and specific stainless steels
> Our products take the form of bars, semis, cold-rolled strips, wire and wire rods, and plates, and are offered in a wide range of grades
> High value items that are often sold on a kg basis

Aperam Performance by Division GRI-201-1

Aspect	Indicator [1]	Unit	Stainless & Electrical Steel — Europe: Genk, Châtelet, Gueugnon, Isbergues, Precision	Stainless & Electrical Steel — South America: Timóteo	Services & Solutions — Worldwide: 14 service centers 5 transformation units 15 sales offices	Alloys & Specialties — Worldwide: Imphy, Amilly, Rescal Imhua (PRC), Indore - ICS (IN)	Recycling & Renewables — Worldwide: Aperam Recycling, Recyco, Bioenergia
People	Own Staff (End of Period)	FTE	2,771	2,262	1,510	1,204	2,055
Shipments	Shipments	kt	1,018	582	642	27	1,358
Economic Contribution	Revenues	m€	4,134	1,492	2,760	663	2,438
	Wages & Benefits		311	79	87	73	108
	Payments to Capital Providers [3]		156	188	26	0	1
	Community Investments		0.08	0.42	0.03	0.01	0.1
	Payments to Government		28	58	18	5	8
	EBITDA		393	398	93	53	86
	Economic Value Distributed		3,778	1,326	2,701	612	2,354

Aperam's CEO, Head of Strategy, CFO and Board of Directors' Members (BM), from left: Sandeep Jalan (BM), Ros Rivaz (BM), Lakshmi N. Mittal (Chairman), Vanisha Mittal Bhatia (Aperam Chief Strategy Officer), Tim di Maulo (Aperam CEO), Bernadette Baudier (BM), Aditya Mittal (BM), Roberte Kesteman (BM), Sud Sivaji (Aperam CFO), Alain Kinsch (BM)

All footnotes are the same available on the previous page.

About Aperam

Our Main Sites

Châtelet (Belgium)
Melt shop and hot-rolling mill

Genk (Belgium)
Melt shop, Cold-rolling and finishing

Timóteo (Brazil)
Melt shop, Cold-rolling and finishing

Isbergues (France)
Cold-rolling mill and finishing + Recyco

Gueugnon (France)
Cold-rolling mill and finishing facilities

Imphy (France)
Melt shop, Cold-rolling and finishing

Our Values

Leadership

By being a bold, creative and courageous market player, we will lead the way in promoting sustainable solutions.

Agility

While changing market conditions require us to move quickly and adapt, we must remain flexible enough to meet our customer's specific requirements.

Ingenuity

Our people are skilled, imaginative and innovative and have a passion for sharing their skills. This ingenuity leads to new ideas and new solutions.

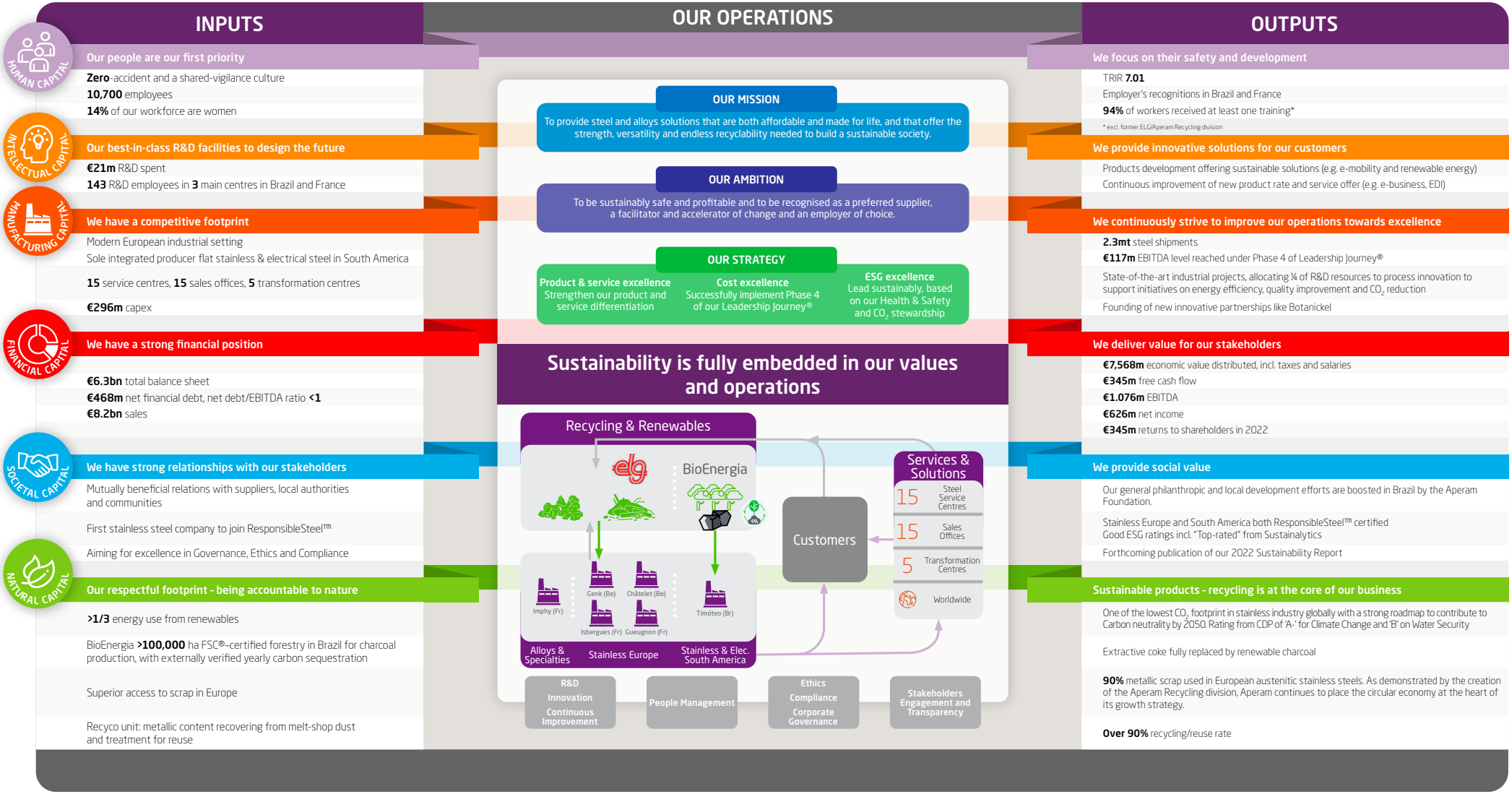
Site Certification

Division	Site by sub-segment	ISO 45001	ISO 14001	ISO 9001	IATF 50001	IATF 16949	Others
Stainless & Electrical Steel Europe	Châtelet	x	x	x			ResponsibleSteel TM
	Genk	x	x	x		x	ResponsibleSteel TM
	Gueugnon	x	x	x	x	x	ResponsibleSteel TM
	Isbergues	x	x	x	x	x	ResponsibleSteel TM
	Pont de Roide	x	x	x	x	x	
South America	Timoteo	x	x	x		x	ResponsibleSteel TM
Alloys & Specialties	Imphy	x	x	x		x	
	Amilly	x	x	x		x	
	Rescal	x	x	x			
	Imhua (PRC)	x		x		x	
	Indore (India)	x	x	x			
Services & Solutions	20 units, of which 5 Tubes plants.	14/20	11/20	20/20	4/20	5/20	1 SSC (Poland): SA8000
Recycling & Renewables	6 main yards out of 50 in Aperam Recycling.	3/6	3/6	4/6			1 ELG: Entsorgungsfachbetrieb
	Recyco	x	x				ResponsibleSteel TM
	BioEnergia	x	x				FSC® CoC & M

Other specific certificates and approvals can be found at https://www.aperam.com/documentation .

About Aperam

Our Business Model



Sustainability Strategy

In 2022, Aperam celebrated its first year after the purchase of the former ELG Scrap business network and continued its path towards Sustainability.
This path will be long as it is a continuous quest for efficiency together with responsibility, rooted in our values and practices and strengthened by a constant vigilance about the impacts we have and our active stakeholder engagement. It will also be made more difficult with uncertain economic context, energy hikes and raw material volatility.
This is why we consider it crucial to keep the long-term view, continue with our three-pillar sustainability roadmap in line with the Global Compact and Sustainable Development Goals and keep on challenging ourselves with solid external certification according to the ResponsibleSteel™ framework, reached for Aperam South America further to the 2022 audits.

> People and their health & safety will always come first.
Beyond the constant attention we give to Health & Safety, we also commit to shaping a work environment that encourages our employees to thrive and develop the innovative ideas that will propel our company to the forefront of our sector. We do this by engaging with our employees, for instance through our All-Employee Work Climate Surveys, and working together to find the right personalised training, operating mode and development opportunities.
This is not only to keep them motivated and performing, but also to nurture a sense of being a part of the Aperam family, which is all the more so important to truly welcome our former ELG colleagues and re-invent our future together.

> As to the environment, we know that our sector's responsibility is greater than most. Therefore Aperam intends on paving the way towards the most sustainable practices that transform steelmaking with solid roadmaps to further reduce our CO_2 and air emissions, as well as our energy and water intake by 2030, and contribute to carbon neutrality by 2050. With these initiatives, recognized by an A and B rating from the CDP respectively on Climate Change and Water, we aim to minimise our environmental impacts today while also adapting to the many challenges posed by climate change.
But while we continue with our environmental roadmap, we have also started to leverage the expertise of our new Aperam Recycling & Renewables division for further optimization in terms of scrap usage and development of other renewable sources of materials.

> Whether in our relations with our stakeholders or our corporate decision-making process, **our governance is guided by our high ethical standards**. All our stakeholders have legitimate needs.
As a signatory to the United Nations' Global Compact and supporter of the United Nations' Sustainable Development Goals (particularly those highlighted to the left), we aim to address these needs by being a fair, transparent and trustful partner to our customers, lenders and suppliers, we also pledge to act responsibly with authorities and local communities, proactively address concerns, and contribute to the general good

Sustainability Governance in 2022

➤ **Members of the Board of Directors**: in charge of the overall management of the Company, they decide on the direction taken based on proposals from the Leadership Team (LT, Aperam's Management Committee), a group of eight senior executives headed by our CEO, Mr. Timoteo Di Maulo. The Board of Directors has two committees, the Audit and Risk Management Committee and the Remuneration, Nomination and Corporate Governance Committee.
At the Board level, sustainability topics are covered on a quarterly basis within the Audit & Risk Management Committee, which is responsible for ensuring that all risks are appropriately addressed, and at Board level too.

➤ **CEO**: responsible for Aperam's sustainability performance and compliance.

➤ **LT reviews**: on top of H&S weekly and monthly meetings, we used to have quarterly slots on the environment completed with ESG meetings. The latter were involving at least the CEO and the CTO, and other Functions, depending on the topics covered and they happened regularly (monthly in 2021-2022). Starting 2023, a dedicated ESG slot will be added at the beginning of the monthly LT meetings in order to have all functions and divisions' systematically on board.

➤ **Chief Technical Officer**, Head of Sustainability, Health & Safety, Environment, Industrial Risk & Innovation and Purchasing: responsible for steering the Sustainability Strategy, based on discussions with the rest of the LT and other stakeholders.

Collaborating at sector-level through ResponsibleSteel™

In 2019, Aperam was the very first stainless steel company to join the newly established ResponsibleSteel™ association. This initiative represents a milestone for sustainability in our industry, defining the best practices into a framework to be used for external audits with the aim to give (end) customers confidence in a steel company's commitment to responsibility. We are confident that the ResponsibleSteel™ standards will soon be similarly recognized as it deserves to be and, in anticipation of this, we use its framework to better structure our approach to Sustainability.

In 2019, Aperam actively participated in the creation of the first site-specific standard, in cooperation with the association's other members, including steelmakers, NGOs specialised in environmental or social topics, suppliers from the extractive industry, and customers. In 2020, Aperam continued to participate in the building of the product-level standard while also preparing to start the certification process for its first sites in Europe. In 2021, we had four sites in Belgium and France certified as per this framework and we continued to discuss a product-level standard with more detailed requirements regarding responsible sourcing and GHG emissions. In 2022, we underwent the ResponsibleSteel™ audit at our Brazilian site of Timoteo, leading to the granting of the certification in February 2023 after the holiday season.

Embedding a Sustainability State-of-Mind into All Processes

Incorporating our sustainability roadmap into everyday decisions and ensuring perfect alignment across the organisation requires more than just awareness-raising actions. It also takes prioritisation and incentivization.

Since 2018, company-wide objectives have been cascaded into the individual objectives of all exempts across the organisation, starting by our CEO, whose first objective chapter is entitled "Health, Safety and Sustainability" and encompasses such topics as "Health" and "Sustainable Industry with a long term objective of zero impact on the environment". Other CEO objectives cover the topics of "Compliance and Company reputation" and includes business ethics, and "Diversity", which starts with a clear focus on gender.
Since 2019, these objectives have been incorporated into MyHR and, since 2020, for the 2021 exercise, we have introduced the categorisation of all our internal objectives according to our GRI analysis and subsequent 'material aspects' (see below and appendices).

In 2021, a new step was taken with the preparation of a revolving credit facility including two ESG-driven indicators. This Sustainability-Linked loan, finalised in February 2022, aims at leveraging Aperam's sustainability profile, as a borrower, by aligning the loan terms to our sustainability performance against predetermined indicators picked up to reflect our commitment and key focus, namely our H&S performance (using the TRIR indicator, see also page 15) and CO_2 improvements, both of which reviewed under limited assurance by an external party.
This means that reaching our objectives will trigger a reduction in our financing costs (1.5bp by indicator), but failing to do so will generate an increase in the same proportion. Any such "bonus" fostered by this framework will be entirely allocated to the financing of more projects in the area, meaning in relation with our people, Well-being and Human Rights, on the one hand, and on Climate Change mitigation, recycling and Environmental care, on the other.
This is a new token of our commitment to Sustainability.

Strategic directions

> In 2021, Aperam decided to reflect its strategic orientation towards a responsible usage of resources and full circularity by the conclusion of the acquisition of ELG, a global leader in stainless steel and superalloys recycling.
ELG is a global leader in collecting, trading, processing and recycling of stainless steel scrap and high performance alloys, and constitutes an integral part of the stainless steel and superalloys value chain, forming the link between industrial customers, local scrap handlers and mills & melt shops that purchase globally. With ~1,100 FTEs in 51 locations globally, Aperam Recycling continuously contributes to reducing the stream of metal waste: 1.4 million tonnes of recycled raw material were shipped in 2022 to be transformed into new products.
Investing in sustainable recycling will further improve Aperam's leading environmental footprint and support the company's CO_2 reduction targets. The acquisition shall enable

Aperam to improve its input mix and to expand into the supply of recycled raw materials.
The upstream value chain extension through the combination with ELG is a transformational addition to Aperam's business model. This will also be expressed in Aperam's operating segments. As from the 2022 financial statements onward, ELG has been reported, together with Recyco and ASB Recycling, as part of a new operating segment named "Recycling". This expresses the importance that the circular economy has to Aperam.

> In addition, after preliminary preparation works conducted in 2020, we launched in 2021 the certification of our first units under the ResponsibleSteel^{tm} framework. As a result, and after two auditing steps including an extensive one-site audit and over tens of exchanges with local stakeholders, in September 2021, we had five units, including four of our main European plants, granted the site-level certification as a "cluster" of site, thereby standing as the pioneers of our Stainless sector. Further the 2022 certification field works, with main audit phases in July and October, we received the official confirmation of Aperam South America ResponsibleSteel^{TM} certification that was publicly released in February 2023.
We thank all our teams for their commitment which made this pioneering achievement possible.!
This achievement evidences our strategy to position ourselves as the leader in the responsible production of stainless and alloy solutions. Indeed, considering the exacting standards set up by this framework, we firmly believe that it is the perfect structure to ensure continuous improvement in terms of sustainable practices and to provide to our customers the externally verified assurance that we walk our talk.
Going further, we expect to continue rolling out the best practices recommended by this certification across all our sites.

Working and Reporting on the Right Topics

Since 2013, we have used GRI standard principles (Global Reporting Initiative's sustainability reporting guidelines) to define our most material sustainability issues and their impact, based on both our business and our stakeholders' views, and have structured our reporting accordingly.
The matrix ranking all topics from minor to most critical is updated annually, and progressively enhanced for a greater relevance. See the main steps below:

> 2013 and 2014: materiality matrix based on our six major sites.

> 2015: update based on a survey of Aperam's employees.

> 2016: update on a broader scope to cover 11 major sites and 85% of our staff.

> 2017: systematic assessment of all the topics in the existing matrices with local authorities at each of our main sites. This resulted in the addition of a few new topics: "Urban Integration", "Industrial Risk" and "Noise".

> 2018: update on an identical scope and method and integration of key takeaways from our all-Employee Global Climate Survey.

> 2019: update based on the discussions held in the ResponsibleSteel™ forum, leading to the integration of information on decommissioning and biodiversity, even though these topics are not particularly relevant to our sites.

> 2020: update on an identical scope and method and integration of the analysis of our CTO and Head of Sustainability.

> 2021: update of the matrix was made based on the same 11 major sites, and methodology, complemented by the feedback of our CTO in charge of Sustainability. It was also cross-checked in view of the most recent Employee Global Survey, conducted in October 2021 and recording a 70% response rate on our workforce.

> **2022:** update of the matrix was made based on the usual 11 major sites. It was also cross-checked in view of our latest Employee Global Survey, conducted in October 2022 and recording a 77% response rate on our workforce.
More of a novelty, we also listened to the perspectives of our newly acquired ex-ELG units with the aim to ensure that our Sustainability issues are well in line with what is the new Aperam. As a result, we had three different former ELG perimeters to undergo the materiality assessment under the GRI logic and using the Aperam methodology.
The result of this exercise was the identification of the radioactivity alerts as a singular topic to the new Aperam Recycling units. Although the topic was not fully new to us, our steel plants being fully equipped with detection portals, we decided *not* to consider the topic as part of the existing "Pollution Prevention" issue and isolate it in a more product-oriented way, in line with the experience of our recycling units.

Beyond this sole add-in, no major change in our materiality exercise is to be reported in 2022. For full details on our final 'GRI Materiality' consolidated matrix and its variations, please see our online methodology appendices.

Our People

Our top priority is the health and safety of our people. As a core value, health and safety guides all our actions.
While we work on programmes to improve the safety, health and well-being of our employees, we also invest in employee development programmes.

Our business strategy heavily relies on the acquisition, development and retention of key technical competencies.

Health & Safety

Organisation

The year 2022 was marked by a return to normality after the Covid pandemic. Gradually, we went from a central coordination of actions towards a local governance, adapted to the environmental situation of our activities, with the possibility to restart our central coordination when needed.
We have therefore decided to end the central coordination of the COVID Guidance, leaving the local units to link up with local governmental rules, with possibility to restart our central coordination when needed.

2022 was also the year in which we integrated our colleagues of Aperam Recycling (former ELG) into our H&S Roadmap. We aligned practices, metrics and rituals with each other. The result becomes visible in the 2023 H&S Roadmap which is fully aligned with the Aperam approach, including very ambitious targets both on leading and lagging indicators for the new division.
We have also continued with the 2021 add-ins to our program, including the Just Culture roll-out and the new dedicated Health program, covering multiple initiatives from physical health over mental health and promotion of healthy lifestyle, all because we are convinced that motivated and healthy employees make the difference.
However, given our industrial environment, Safety will always be a key component of our approach towards H&S. In 2022 we decided to change our organisational structure from a model of facilitation and sharing towards a model of transversal steering and implementation.

This has resulted in the creation of H&S Divisional Lead functions, which are closely working together with their designated Division to implement the Global H&S Roadmap.

As a result, a company wide H&S 2022 Action plan has been established, detailing annual focus points for all sites. The plan consists of both lagging indicators - TRIR - and leading indicators which are composed of improvement actions all sites have to take on both Health and Safety related topics. Validation of the target achievement is being done via the H&S Divisional Leads in Q1 of the following year.

Voice

"In order to meet our ambitious 2026 goals and to be the company in which Health and Safety is a true Core Value, we need all of us to participate at all levels in the organisation.

Together we can and will make the difference."

Hans Vanhorebeek
Head of Aperam Health & Safety

Voices

"The year 2022 was a pivotal moment for Aperam, with the combined challenge to address the booming economy of the first half and a much lower second semester while integrating the former ELG employees within the Aperam family.

We had to find and/or develop the right talent to grow our business and develop innovative solutions in spite of the hikes. We also had to nurture a true sense of belonging for our Company that likes to see itself as a key link in the circular economy, with over 25% of its workforce delivering value from renewable or secondary material, when counting the new Aperam Recycling & Renewables Division together with our European meltshop teams.

Having this mission in mind is a strong lever for motivation for all our employees."

Head of IT and Communications

At a glance (GRI 403-1,5,9, GRI 404-1,3)

Indicator	Unit	2022	2021	2020	2019	2018
Employee	FTE	**10 736**	9 522	9 381	9 612	9 777
Joiners		819	623	393	514	665
Leavers		703	431	583	664	483
Turnover Rate	%	7.4	4.6	6.1	6.9	4.8
Women	% staff	**14.7**	**13.5**	**12.6**	**12.3**	**11.8**
	% exempts	22.8	22.4	21.4	20.4	20
Fatalities - All	#	**1**	0	0	0	1
Fatalities - Employees (1)		0	0	0	0	1
Fatalities - Contractors		1	0	0	0	0
TRIR - All	/1,000,000 hours	**7.01***	**6.98**	**5.69**	**6.39**	**n/a**
TRIR - Employees (1)		7.8*	7.59	6.60	6.54	n/a
TRIR - Contractors		5.24*	5.61	3.80	6.03	n/a
LTIFR - All		**2.45***	**2.22***	**1.52***	**1.7***	**1.4***
LTIFR - Employees (1)		2.89*	3*	1.58*	1.6*	1.4*
LTIFR - Contractors		1.48*	1.6*	1.39*	1.9*	1.6*
Severity Rate - All	/1,000 hours	**0.17***	**0.12**	**0.14**	**0.09***	**0.08***
Training Hours - Total (2)	hours/FTE	**27.3**	**30.8**	**19.6**	**35.5**	**34**
Total People Trained (2)	#	8 924	8 699	7 898	8 950	9 391
Absenteeism (2)	%	**3.2**	**2.7**	**3.4**	**2.7**	**2.3**
Employee satisfaction (3)	%	**75**	**83**	**n/a**	**n/a**	**86**

** Data with an asterisk received external assurance.*

3 GOOD HEALTH AND WELL-BEING

5 GENDER EQUALITY

(1) Including interim workers.
(2) Excluding ex-ELG units from Aperam Recycling.
(3) Employees that would recommend Aperam as a good employer - All employees.
Note: New Aperam Recycling & Renewables units (ex-ELG) incorporated as from 2022, except otherwise mentioned as (2), and in which case impacting the historical comparability

2022 Fatality

April 5th 2022 was marred by the fatal accident involving a subcontractor employee at our plant in Viracopos, Brazil. The accident occurred while the employee was working on a roof. We deeply regret this loss and our thoughts go to his relatives.

Even though we have procedures to mitigate the risks related to working at heights, this incident reminds us that our work to become a sustainable, safe company is far from finished. We remain committed to further controlling the risks present at our sites.

Safety Performance (GRI 403-2/3/9, 404-1) - Excluding the former ELG units of Aperam Recycling.

By Geography	Unit	Belgium	Brazil	France	Worldwide
Plants, Division	sites	Châtelet, Genk, ASB recycling from Stainless Europe	Timóteo, BioEnergia from Stainless & Electrical Steel South America	Imphy, Amilly, Rescal from Alloys; Gueugnon, Isbergues, Pont-de-Roide from Stainless Europe	Imhua (PRC), ICS (IN) from Alloys & Specialties Usti (CZ), Rodange (LU) from S&S Tubes
Service Centres		Genk (BeNeLux).	Campinas, Ribeirão Pires, Viracopos, Caxias do Sul	Isbergues	Germany, Italy, Poland, Iberica, USA, Argentina, Turkey, Uruguay
Main Offices		(Genk)	Belo Horizonte and São Paulo	Saint-Denis	Luxembourg HQ and Sales Offices(1)
LTFR - All	per 1 million hours worked	**4.46**	**0.15**	**4.74**	**0.75**
LTFR - Employees (2)		4.04	0.13	4.92	0.79
LTFR - Contractors		5.30	0.16	3.95	0.00
Severity rate - All	per 1 thousand hours worked	**0.49**	**0.02**	**0.31**	**0.04**
Severity - Employees (2)		0.45	0.00	0.33	0.04
Severity - Contractors		0.57	0.04	0.22	0.00
TRIR - All	per 1 million hours worked	**13.39**	**1.97**	**11.18**	**2.62**
TRIR - Employees (2)		13.80	1.59	11.26	2.36
TRIR - Contractors		12.59	2.45	10.85	7.58

(1) Canada, China, Czech Republic, Dubai, India, Japan, Korea, Mexico, Nordic, Russia, Switzerland, Thailand and the United Kingdom.
(2) Including Interim workers.

Understanding Our 2022 Performance

Looking back at our 2022 performance, we see a world of opposites.

On the one hand, April 5th 2022 was marred by a fatal accident involving a subcontractor employee at our plant in Viracopos, Brazil. A full and in-depth investigation took place and corrective actions have since been defined and established across all Aperam sites worldwide, including Aperam Recycling, ensuring that such a tragic event does not happen again.

On the other hand, looking at our lagging indicators from our historical perimeter, we clearly see an improvement over the year. Our 'Lost Time Injury Frequency Rate', which (LTIFR) measures time lost due to injuries, dropped from 2.2 in 2021 to 1.8 in 2022. Our TRIR (Total Recordable Injury Rate), which looks at the number of total recordable incidents and compares it to the number of total hours worked by all employees in a single year, went from 6.9 in 2021 to 5.9 in 2022, below our target of 6 for the year. In this case, a recordable incident is any work-related injury or illness that results in either death, loss of consciousness, days away from work, restricted work activity, transfer to another job, or medical treatment beyond first aid.

This improvement was achieved during the second half of the year, with clear lower incident rates at our sites. In fact, our Timoteo plant in Brazil set a record performance, going for more than a year without a lost time incident.

Within this same historical scope, our accident severity rate increased, from 0.12 in 2021 to 0.15 in 2022. This is mainly due to the lost days relating to the fatal accident and an increase in days lost in our Stainless Europe Division compared to similar accidents during prior years.

With the acquisition of the former ELG units, now called 'Aperam Recycling', our overall LTIF indicator ends 2022 at 2.4, while our TRIR comes to 7.1.

These results show that our decision to install strict H&S rituals, backed by a strict implementation of our standards and a focus on our culture and wellbeing, as our leading indicator set, is the right one to follow. Our 2023 TRIR target remains unchanged, at 5.5 for the new complete perimeter.

"Our commitment to the Health and Safety of all employees and stakeholders is a clear component of our brand promise "made for life". Our target is to become one of the best-in-class steel manufacturers in Health and Safety and ultimately a sustainable safe company."

Timoteo di Maulo
CEO of Aperam

Health and Safety Roadmap 2023

Based on our commitment to become one of the best-in-class steel manufacturers in Health and Safety and ultimately a sustainable safe company, we continue on our ambitious Health and Safety Roadmap. We keep focusing on People and their Personal Contribution, on Wellbeing as well as on Occupational Safety, on Standards and rules and Learning and Culture. All this aiming Aperam best-in-class, resulting in a TRIR lower than 3 by 2026 and so avoiding harm to our employees and stakeholders.

As a result, we came up with an updated paradigm on Health & Safety that should become and remain at the core of all that we will do on Health & Safety in the future. The paradigm is leading to 4 major pillars, which are:

Target

aim for best-in-class performance

2026 TRIR <3

1. **Just Culture:** A Just Culture inside our company, meeting the need for rigor in applying standards and the ability to fail safely
2. **No Repeat:** A "No repeat" policy, to build a learning organisation
3. **Workers' involvement:** The involvement of everyone. People are the solution
4. **Workers Wellbeing:** The physical and mental wellbeing of our people.

The key elements of our 2023 Safety Action plan, linked to the above paradigm, are:

- Focus on the implementation of our Life Saving Standards on Isolation, Functional Safety, Working at Height and Contractor Management to ensure a fail safe environment,
- Strengthening our Safety Culture via the roll-out of an Aperam wide Incident reporting, investigation and action tracking tool called Just Report,
- Ensure worker involvement in our approach via deployment of our Safe All Together training and the creation of mixed working groups consisting of employees, social partners and managerial line to work on risk reduction.

Wellbeing of our employees is the fourth key pillar of our new paradigm. A dedicated Health Roadmap 2022 - 2026 has been created which resulted in a detailed action plan 2023, containing the following key elements:

> A dedicated focus on Mental Health via the launch of a European Psychosocial Risk Assessment with our Worker Wellbeing as central concept and which reflects the perception of the employees (see also page 28).

> Awareness creation and training on Wellbeing for all our Management Layers

> Continuation of our effort to improve the status of our sanitary facilities and restrooms

> Continuation of our Ergonomic improvement plan both in operations and offices

Several initiatives are undergoing as part of this program, as is illustrated further.

■■■ In 2022, Aperam South America was very active on health-related projects. One of those projects focused on ergonomics and was based on an employee survey and a preliminary ergonomic evaluation of the entire Timóteo plant, together with our local offices (incl. Belo Horizonte and São Paulo). On top of verifying compliance with local regulations, the objective was to assess the needs and implement necessary measures to prevent improper ergonomics. In the end, 300 actions were recorded, which will help reduce or even eliminate possible occupational diseases and risks of accidents related to ergonomic issues. On a different note, the unit developed a specific program for employees in managerial roles, namely the Supervisors, Area Managers and Executive Managers.

The 'Taking Care of Those Who Take Care' program envisioned four goals: to support the physical and emotional health of managers; strengthen their bond with the Health Department; raise awareness about the importance of psychological safety; and support areas with more acute issues - all with the aim of stimulating our care actions and sentiment towards our teams for the benefit of everyone.

75% employees think that Aperam culture allows to learn from our errors

Stainless Steel Industry Safety Awards 2022

For awarding companies in the safety section, the jury looked for practical innovations that reduce the number of safety incidents in the workplace and/or develop transferable countermeasures to avoid specific injury types and develop both controls and workers skills / cultural mindsets to directly reduce the number of safety incidents.

Our Just Culture concept was recognised with a Gold Safety Award.

The Just Culture Standard has 2 main goals:

1. To value the positive more, to have a culture where the positive consequences outnumber the negative.
2. To ensure that people are treated fairly, without blaming and punishing them hastily - but remaining strict and clear about unacceptable behaviour - by providing a consistent impartial and objective approach when analysing events.

■■■ In our last Climate Survey (conducted at the end of 2022), a significant number of employees noted experiencing a high level of stress. Amongst one the responses defined (see also p. 28), the company came up with a new individualised solution called myCo@ch. Launched in April 2022, myCo@ch is an individual support program for employee wellbeing and health. Currently in a pilot phase, the app is available to all our employees in Belgium, France and Luxembourg.

The innovative app uses a blend of e- and personal coaching, presented via learning modules and video call sessions. It is designed to provide the user with the knowledge, techniques and tools they need to boost their physical and mental wellbeing and to promote professional and personal development.
The app is 100% online and available 24/7. It is also completely personalised, with the program based on the results of an initial assessment. All data and information is kept confidential. 380 active participants are already making use of the app, just 9 months since its launch!

Aperam Genk Mental Wellbeing Working Group.

■■■ European units are also active on the subject as can be evidenced in Genk.
For 1 year now, the members of the "mental wellbeing" working group of the Genk plant have been working together on various aspects of mental wellbeing and motivation. A first formally visible result is a formal "commitment" (vision) and its adoption at the committee for prevention and protection (CPP) at work on September 26th.
After the meeting, the commitment was signed by both working group members and CPP members. Meanwhile, everyone is aware of the many opportunities waiting for each employee to further develop mental wellbeing at our site.
The working group is composed of 17 members (see above) and they represent all the different populations in our organisation from Management up to Blue collars.

Voice

"From day one, the level of support we've received from our corporate partners has been great, and progress towards mutual objectives and goals has been ongoing. Our colleagues have made a concerted effort to understand our unique needs and integrate us seamlessly into their business process and operations. We have been impressed by their responsiveness, professionalism, and willingness to share resources and expertise.
Thanks to their support, we have been able to successfully navigate a period of significant change and still continue to deliver high-quality materials to our customers."

David McLaughlin
Global Head of HS&E, Aperam Recycling

A Highly Competent and Engaged Workforce

Diversity of Talent

Our Workforce at a Glance

At the end of December 2022, Aperam's workforce was made up of 10,736 employees (FTE), of which 11% are exempt and 65% blue collar employees (stable percentage compared to 2021). Our workforce was predominantly made of permanent and full-time employees - 97% each (GRI 2-7).
Our staff is mostly composed of employees based in Brazil (35%), France (23%) and Belgium (19%), these three countries representing 77% of our workforce.

See the Tables (1) and (2) further for more information.

Aperam Workforce (1) (GRI 2-7)

2022	Gender	Permanent	Fixed-Term	TOTAL	Full-Time	Part-Time
Blue Collars	Female	541	9	**550**	542	8
	Male	6,213	171	**6,384**	6,242	142
White Collars	Female	729	19	**748**	656	91
	Male	1,824	22	**1,846**	1,799	46
Exempts	Female	273	3	**276**	253	22
	Male	927	6	**933**	915	18
TOTAL	All	10,506	230	10,736	10,408	328
2021	Gender	**Permanent**	**Fixed-Term**	**TOTAL**	**Full-Time**	**Part-Time**
Blue Collars	Female	464	11	**475**	468	7
	Male	5,751	158	**5,909**	5,856	53
White Collars	Female	550	16	**566**	494	73
	Male	1,530	15	**1,545**	1,514	30
Exempts	Female	223	4	**227**	205	22
	Male	794	6	**800**	787	13
TOTAL	All	9,312	210	9,522	9,324	198

Aperam Workforce Aperam consolidated total of Full-Time Equivalent employees, at 31/12/2022 (GRI 2-7)

Understanding Our 2022 Figures

> During the year 2022, 819 FTEs joined Aperam (excluding the integration of the newly acquired ELG business, now Aperam Recycling (part of Aperam Recycling & Renewables), of which 23.8% were women, while in parallel 703 FTE left, only 13.2% of them being women. This leads us to an employee turnover rate of 7.4% (excluding ex-ELG employees) slightly above the 6.4% in average for the 2016-2021 period.

The higher number of leavers is related to the closing of our Montevideo Tubes plant in 2022 following the productivity investment for modern Tubes lines in Brazil, next to resignations and retirements.

> In 2022, as these past few years, the average age of Aperam employees (women like men) was 42 and average seniority within Aperam was 11 years .The age distribution is not too different too, with 26.2% of our staff over 50 and less than 4.5% below 25.

Aperam Workforce (2) (GRI 2-7)

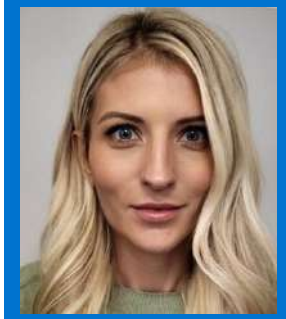
Indicator	Unit	2022	Average Age (y)	Average Seniority (y)	<25 yo	>50 yo	# Women
Total Employees	FTE	**10,736**	*42.3*	*11.8*	*5%*	*26%*	**1,573**
Blue Collars		**6,934**	*40.8*	*11.0*	*4%*	*14%*	**550**
Standard White Collars		**2,593**	*44.6*	*13.6*	*1%*	*8%*	**748**
Exempt White Collars		**1,209**	*46.2*	*12.5*	*0%*	*4%*	**276**
o/w "Top100" (Top10%)		**125**	*51.6*	n/a	*0%*	*57%*	**21**
Interim		**451**	*37.0*	*1.6*	*25%*	*15%*	*18*
Joiners		**819**	*40.0*	*0.1*	*12%*	*23%*	*195*
Leavers		**703**	*43.0*	*13.9*	*5%*	*35%*	*93*
Turnover Rate	%	7.4					
Average Workforce	FTE	**10,199**					
Headcount EoP	#	**10,848**					**1,618.0**

ELG's Integration into Aperam Recycling & Renewables

As of the end of December 2022, Aperam's workforce from the former ELG branch was 1,158 FTEs. These FTEs were located in 19 countries, including the United States (38%), Germany (20%) and the United Kingdom (11%). The smallest units employed just two FTEs, while the largest unit employed 445.
58% of these new colleagues are blue collar employees working in the scrapyards, while 34% are white collars and 8% exempt. Their average age is 45.

Furthermore, 18% of these employees are women, which is a higher overall rate than at Aperam. However, these female colleagues are predominantly white collar employees, with 16% being blue collars and 6% having a management role (exempts).

Admira, Senior Supply Chain Manager at Aperam Recycling (ELG Utica Alloys) in Herkimer, NY, USA.



Admira is a good example that equality among men and women can be easy and natural. As just a 21-year-old student from outside the industry, she set foot for the first time at ELG Utica Alloys in Herkimer, NY. Now, 14 years later, she is Production Control Manager.

Looking back, the former inventory clerk describes her former self as quiet and shy, but she rose above. *"I quickly learned that knowledge, experience and skill pay off, and it boosted my confidence"*, she explains. Her supervisor saw it the same way and rewarded her with a job on the Commercial Team and later as Production Control Manager.

ELG Utica Alloys is a business with some 10 locations worldwide, where superalloys scrap such as Nickel-base alloys, Cobalt alloys and Titanium are professionally recycled: precisely analysed, sorted and processed according to the requirements of the customers, mainly from the aerospace industry.
In this working environment, Admira never felt less valued or less respected because of her gender. Admira recounts, *"I was even offered better positions when I was a new mother. Especially in that regard, I feel that I was perceived as a valuable colleague rather than as a woman and a mother of 2 kids."* She says her boss, a family man himself, has always been understanding. But it is also her family's full support which enabled her to find a true work/life balance.
As Production Control Manager, Admira now oversees all aspects of ELG Utica Alloys New York inventory and logistics, working closely with Commercial and Operations to plan production and meet customer demand. She is also excited to be able to contribute and lead numerous initiatives at the Division level as well. *"As a beginner, it was hard for me to bring in new ideas , but I was convinced with facts and through my good preparation I finally earned my spurs."*

Admira started a new role as Senior Supply Chain Manager in September 2022.

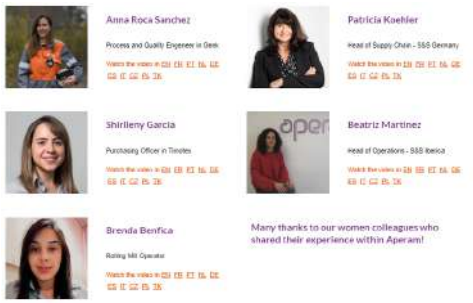
Tips to newcomers:
"As a young female coming into a male-dominated industry, I have learned that confidence comes with knowledge. So always be prepared and do your research. Show your ability to bring results to the table. Don't be afraid to ask questions and take initiative. In an industry that is constantly evolving it is essential to continue to evolve as an individual..."

Embracing Diversity - with a woman's touch

Since 2018, we have used a program inspired by the United Nations' Women Empowerment Principles to increase female representation across all levels of the Aperam community and to ensure our work environment allows our female colleagues to thrive and demonstrate the very best of their talents. The action plan is summarised by a specific Gender Equality & Diversity Charter with five main dimensions (our 2022 progress per chapter is laid out in the table on next page). The plan is regularly reviewed to integrate the input received from our all-employee climate surveys and other benchmarks.

> In 2018, our female employees had less favourable opinions regarding communication and career development. But our surveys from 2021 and 2022 show this is no longer the case, although significant gender-based differences do remain in some countries and plants (sometimes to the detriment of men). All figures must be fully analysed to fine tune local action plans.
> Because fighting stereotypes is a pillar of our action plan, we aim to have regular communications on the subject, both at the local and company levels. In March 2022, we had a global Aperam communication campaign celebrating International Women's Rights Day. Five Aperam employees from Belgium, Brazil, Spain and Germany recorded videos (sometimes with their colleagues, see below intranet picture and video extract) to speak about their experience working in a still too masculine industry.

Intranet page with all videos in many languages..



Extract of the video from Beatriz Martinez, S&S Iberica.

To illustrate the work being done to promote women at all levels and departments of Aperam, let's look at what's happening in France, Brazil and Italy:
■■■ In partnership with the French 'Elles bougent' association, Aperam created a group of 20 ambassadors from France and Belgium (see picture next page) from R&D, IT or production roles to reinforce gender diversity in the industrial and technological sectors. The ambassadors shared their passion through testimonies and mentored young women in their study and career choices. They also participated in events, where they answered questions and worked to inspire women to take the plunge into scientific and technical professions.

Status of Aperam's Gender Equality & Representation Roadmap

Leadership & Commitment
Improving Diversity & Inclusion is a key management target and it was reflected as such in our performance goals.

Health & Work Conditions
Aperam's working conditions should be safe and adapted for all employees. A specific gender focus is given in relation to restrooms, changing rooms, ergonomics and working clothes.

In 2022, several audits were done with members of the health circle (incl. staff representatives) across all sites to define gaps versus the Aperam Standard. An action plan had been put in place to solve all issues over max. 3 years. First concrete achievements in 2022. (example in Brazil, Inauguration of 15 restrooms for women and people with disabilities).

Equal Remuneration
Aperam is committed to providing equivalent remuneration based on the local market, for similar jobs and taking into account the performance, skills and relevant experience of the person doing the job.

In 2022, the gender pay gap decreased at 7.7pts (excluding Aperam Recycling) (versus, 7.9 in 2022 and 8.6 pts in 2021). We continue to watch closely all indicators to avoid any unfairness.

Equal Career Opportunities
Aperam is committed to providing equal career and development opportunities to all our employees. By monitoring the gender diversity of our talent development programs and succession plans, we ensure we continue to increase the number of women in management positions.

On top of keeping our Global Aperam Talent Management Program and monitoring our succession plans for leading positions, we also conduct a detailed analysis of the distribution of promotions and performance ratings: in 2022, 19.9% of women exceeded expectations vs 16.9% of men and 6.1% of women have been promoted vs. 2.9% of men.

Fight Against Stereotypes
A sustained focus on training and communication is required to get rid of any gender bias. Read our monthly "Career focus" within Aperam Newsletters.

In 2022, we continued our training to avoid gender bias, including any bias that might arise in the recruitment process. In particular, all white collar employees have been assigned a specific training module from MyHR, also specific training for HR and Managers recruiting without discrimination, prevention of sexism at work, Gamifying exercise on Diversity.

■■■ Aperam S&S Italy aims to increase the representation of women in the production areas of its Massalengo and Podenzano units. Over the last few years, they registered an uptake in the proportion of women on the shopfloor, from 2% in 2020 to 8% in early 2023!
The critical factor behind this success is the use of so-called 'hiring academies' - week-long training sessions for candidates with a high focus on health and safety. The academies also included 18 hours of passive training on the production lines: with candidates following one of our blue collars, who showed them the entire manufacturing process. The candidates were not supposed to do anything directly (being in a training phase), but only to learn more about the context and the kind of job they were applying for.
The local team is so proud of their first results that they decided to produce a specific video to celebrate the 2023 International Women's Rights Day!

Manuela, from Podenzano (IT) production area, claims:

'Women can easily work here'

Aperam 'Elles bougent' Ambassadors.

Voice

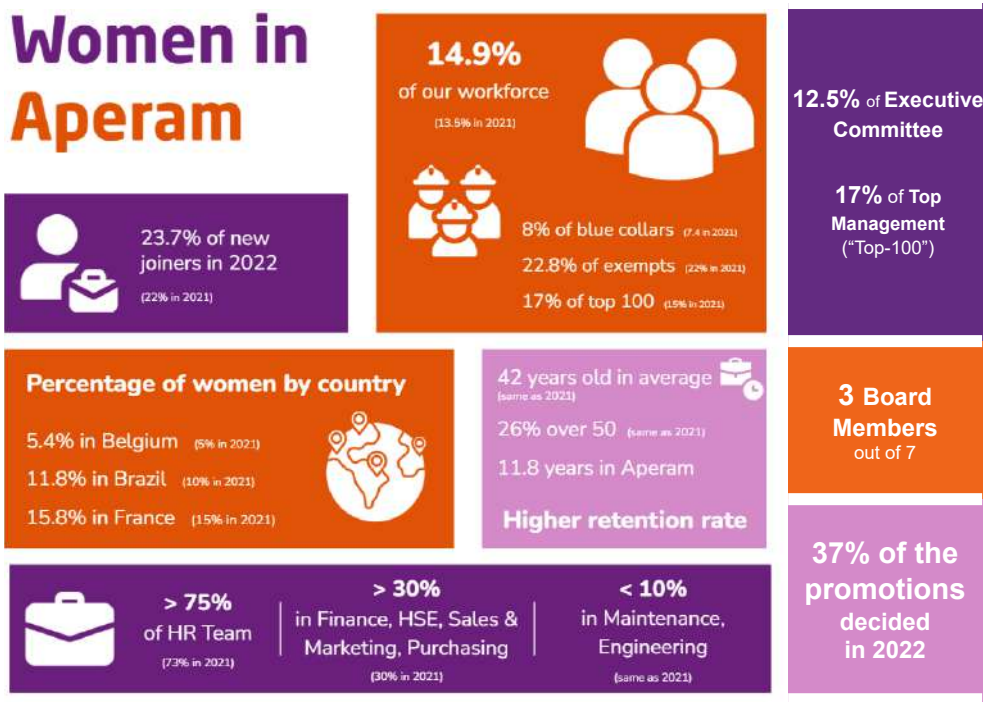
"The launch of this network of Aperam ambassadors should enable us to support the necessary change in our culture towards greater openness (diversity and inclusion), in addition to the missions carried out by the association.

It's really necessary to deconstruct all types of stereotypes, we all have the same capacities, jobs are not gendered! "

" 'Elles bougent' ambassadors' role is to be:
- informing, testifying, presenting our careers in the technological and industrial fields,
- encouraging vocations and participating in the information and career guidance of girls,
- contributing to deconstructing stereotypes linked to technical professions ,
- passing our passion and inspiring the strength to dare to choose a career path."

Margaux Roulet
Quality Engineer, Châtelet (Belgium)

Stéphanie Charre
R&D Technician, Isbergues (France)



■■■ Brazil went even further, designing a new extensive course specifically (228 hours of theoretical and practical training over four months!) to train local women as Steel Welding Operators. Part of our Inclusion & Diversity program, the program was a success, with around 100 registrations for 24 seats. In October 2022, the Aperam Acesita Foundation celebrated the first graduation ceremony for 12 Steel Welding Operator course female students.

Gisele Alexandre da Cunha Lima made Aperam history by being the first steel welder operator to be hired in Aperam South America. "*I found out about the welder steel operator course through my husband (also Aperam Employee). I realised then that I was qualified. When the opportunity arose to be interviewed by an area to compete for the vacancy, my heart throbbed with joy and beat faster when I received the news of the approval. It was a dream that was coming true. I just have to thank Aperam for giving women an equal opportunity to show that we are strong and can work in the industrial area.*"

Diversity in a Broader Sense

In last year's report, we highlighted our decision to expand our diversity program to include all kinds of diversity - not just gender. Consequently, a new position was created in Europe to tackle this subject (together with Mental Health and Employee Engagement). We also increased the number of questions about Diversity and Inclusion integrated within our Climate Survey and took the first steps to enlarge our action plan.

> We are happy to report that all the related survey questions were rated above 8/10, which is very good. We also can report an overall satisfaction rate of 7.5/10, with no significant deviation related to age, employee status or gender. Satisfaction is even higher in Brazil, where a full Inclusion & Diversity program was launched in 2020, with local 'Affinity Groups' providing the unit with ideas and energy.

> On the communication side, we celebrated Human Rights Day 2022 with a special focus on disability, highlighting both the many capabilities of people with disabilities and how we at Aperam can - and should - be better leveraging these capabilities.

A newsletter in 10 languages was dispatched to all Aperam employees, encouraging everyone to feel empowered to bring one's full self, pride and abilities to Aperam's success. The newsletter contained an e-Learning course and an awareness-raising quiz about people with disabilities. In parallel, specific guidelines were issued to avoid offensive vocabulary and to ensure company communications use inclusive language. See also the insert about the brilliant project by our Brazilian colleagues.

> As to the rest of the action plan, the new program also includes a multi-year calendar to raise awareness on all aspects of discrimination. We also rolled out a methodology to assess discrimination risks in the workplace and coordinated a global network of correspondents to share best practices and homogenise incident management. The plan also includes promoting different perspectives about leadership, resilience and success - all part of our ongoing fight against stereotypes.

Based on an initial risk assessment, performed in our three biggest countries of operations (Belgium, Brazil and France), we identified some priorities to be tackled in terms of awareness-raising. Our action plan now includes the global extension of our risk mapping and a focus on some specific moments in the career (hiring, promotion) and/or job status. 2023 will see the continuation of exchanges with our external partners to enrich this analysis and adjust our actions.

Also in store is the launch of a new routine, in the form of a 'Month of Diversity', to be held in March, starting with the Zero-Discrimination Day on March 1st...

Voice :

"In my life, I have seen many comments and behaviours that are biassed against people from minority groups.
Today, the Inclusion & Diversity Program is the company's great differential for me. I am very happy to work here and be leading the Aperam South America Race Affinity Group to advance Inclusion & Diversity inside as within our local communities."

Vanessa Marques
Aperam BioEnergia Environmental Coordinator

Timoteo's Professional qualification program for people with disabilities

The aim is to promote the inclusion of people with disabilities within Aperam with a qualification program. This tailor-made program consists of some 230 hours of theoretical learning and practical on the job training on the Timoteo site, and benefited 30 trainees in 2022.

"It was a challenging project with the objectives of fulfilling the quota for People with Disabilities in Aperam Timoteo and providing further social inclusion. A multidisciplinary team was created to successfully develop all the work.
This project opens our eyes to a new way of hiring and integrating people with disabilities and we hope it inspires other sites to follow the same path." says Cleonice Maria Alves, Continuous Improvement Analyst..
During 2022, 11 employees from this Program were confirmed with a permanent contract. Based on such a success, the project was easily recognized as the best amongst 9 projects as part of the Health, Safety and Environment category for the 2022 Continuous Improvement Challenge!

All data in FTE - GRI 405-1	2022			2021		
	Belgium	Brazil[3]	France	Belgium	Brazil	France
Total Employees	**2,030**	**4,061**	**2,482**	**1,913**	**3,579**	**2,426**
% Women	*5.3%*	*11.1%*	*15.9%*	*4.8%*	*8.4%*	*14.7%*
% Persons with a disability [1]	*1.3%*	*4.3%*	*4.7%*	*0.2%*	*4.0%*	*4.7%*
% LGBT+ people [2]	*n/a*	*n/a[4]*	*n/a*	*n/a*	*3.0%*	*n/a*
% Persons of colours [2]	*n/a*	*n/a[4]*	*n/a*	*n/a*	*63.3%*	*n/a*
Total Joiners	**175**	**338**	**265**	**66**	**208**	**48**
% Women	*9%*	*30%*	*22%*	*9%*	*15%*	*38%*
% Persons with a disability [1]	*n/a*	*0.6%*	*n/a*	*0%*	*9%*	*5%*

Herick, Commercial Controlling Manager São Paulo, Brazil.

Herick's Aperam story starts in 1999 when he took on a role as an apprentice. Following several years working on international projects outside Aperam, he returned to the company in 2017 as Demand Manager SAP South America – a role that saw him managing large teams and cross-unit projects.

Herick also spent some time in Europe, where he participated in the post-implementation of the warehouse management project in Genk (Belgium) – an initiative that he later helped replicate at our Timoteo plant.
In 2019, he became an evolution agent in the Evolve Program – Lean Office.

He currently serves as Commercial Controlling Executive Manager in São Paulo where, together with the Commercial Control team, he helps maximise profitability with current resources, in addition to reconciling the company's strategy with a commercial and financial vision to achieve short, medium and long-term goals.
"When I came back to Aperam I found a much more dynamic company," says Herick.
"I was happy for the opportunity to work in an environment that was conducive to collaboration and dedicated to diversity and inclusion – it was immediately rewarding."

Diversity is an important issue for Henrick. He serves as a member of the racial affinity group at Aperam South America and is a strong advocate for gender equality. *"Diversity is the key to a company's success,"* he says. *"Society is changing, and companies should strive to reflect that change, not only on the shopfloor, but also in the boardroom."*

Herick is currently working on a master's degree in global finance and, looking ahead, would like to continue developing and consolidating his knowledge in the field.

Tips to newcomers:
"Dedicate yourself to doing a good job. Always seek to develop professionally and be passionate about learning. The world is evolving faster and faster and we are challenged to keep up to date.
Don't be afraid to ask questions as that's how learning happens."

Footnote of left-hand table:
(1) According to local definitions/regulations.
(2) According to a 2021 survey from Aperam South America and BioEnergia where employees were invited to define themselves (or not), as part of the Brazilian Inclusion & Diversity program. 1988 responses were recorded, equivalent to a 60% response rate.
(3) Brazil Data (Industry + Bioenergia + S&S and Tubes).
(4) New survey to be done in 2023.
Persons of colour, as per the American labelling, being those defining themselves as "non-white".

Career & Development

Continuous digital transformation

Our HR Information System, MyHR, is supporting our objective to harmonise our HR practices and processes over Aperam. That's why we extend the functionalities to more and more employees, such as for our competencies reviews.
In 2023, the objective is to onboard people from Aperam Recycling, starting with the white collar exempts audience. Moreover in 2023, a new step will be reached with the deployment of an additional module in MyHR, focusing on internal job mobility and external recruitment (already planned for 2022 but delayed).

Competency Management

Our eight fundamental leadership competencies remain a pillar of our competency management. To go along with this foundation, we rely on specific business and technical skills that are critical to the future development of Aperam. Each year, the employees typically self-evaluate and are evaluated by their managers. All exempts participate in this process in MyHR, as well as a selection of non-exempts in Brazil and from 2022 all standard white collars and blue collars in our site of Châtelet which explains the jump of 76% from 977 to 1723 reviews. In addition to this, we also encourage through the MyHR platform the use of 180 degree feedback about competencies (stable in 2022 compared to 2021 which was the first year we introduced this new process). Assessing yearly an employee against these competencies allows us to define agreed development actions and help our people transform into their better self. In 2022, people have defined an average of 3.4 development goals per person (3.1 in 2021).

■■■ The "Bold Leadership" training for technical hierarchy (foremen, shift leaders and engineers) in Aperam Genk provides them with the necessary tools that they can use on the shopfloor in order to solve problems quickly and above all to make their teams function optimally. An example of such a tool is to learn how yearly evaluation or tasks/performance interviews can be managed in an efficient way, with the persons in our operational teams, based on the PPF techniques (Past Present Future).
Over 150 people were trained in 2022. The average score after evaluation of the satisfaction and the applicability with all our participants of the first sessions was historically high with 89.5%.

Job Mobility

Moving from one job to another is never an easy task: it requires agility and adaptability across the organisation. To support the internal mobility, the career details and aspirations are expressed by the employees during the mid-year review in MyHR. In addition, all open vacancies are published on the career portal which is a key tool to open up development opportunities. Later in 2023, the launching of the new recruitment module in MyHR should reinforce internal mobility and connect people to find new career opportunities.

Management by objectives

We believe in management by objectives and want to ensure that all employees receive clear goals. Performance Management via MyHR started with all Aperam exempts in 2018, before being extended to standard white collars progressively. Top Management of the company is highly involved in this process, as they define clear directions for the whole company with Organization goals set in MyHR that help the managers and their teams to define their own individual goals, fully aligned with the company goals. In 2023, we will also continue to integrate our Aperam Recycling division. Top 100 Aperam Recycling members should be fully embedded in the Aperam management by objectives process in MyHR before the year end.
We also have the possibility to ask for 180° feedback about our performance from other stakeholders in Aperam, especially for people working in platforms and project mode. To increase transparency and speed of the process, for the first year in 2022, the exempts were able to ask for feedback about their performance directly to any of their colleagues in MyHR without any validation of the request by their manager. Close to 30% of the exempts have used this possibility.

Performance Management in Aperam (excluding former ELG units) GRI 404-3

Indicator	unit	2022	2021	2020	2019	2018
Blue Collars	%	79	66	69	83	60
Standard White Collars		70	79	67	80	67
Exempts White Collars		97	99	99	97	98
Total Aperam		**79**	**73**	**72**	**84**	**68**
Exempts Reviews in MyHR	#	**1,117**	**1,051**	**1,005**	**1,002**	**927**
180° Feedback		520	566	427	498	432
180° Feedback on Competences		208	206	*n/a*	n/a	n/a
Non-Exempts Reviews in MyHR		**1,723**	**977**	**950**	**572**	**0**
Total Reviews in MyHR		2,840	2,028	1,955	**1,574**	927
Average Performance Goals		5.4	5.9	**5.8**	**5.6**	**7.3**
Average Development Goals		3.4	3.1	2.9	**2.7**	2.8

Employer's Integration

A systematic approach

To ensure that our new hirings are not only "onboarded" in optimal circumstances, but also go through a longer term induction and integration process, we build on what we have already put in place and launch new initiatives:

- During last year's report we mentioned the launch of an On-Boarding e-learning module covering H&S, Environment, Ethics & Compliance, IT, Performance and Competency Management and Leadership.
- A new approach involving the appointment of onboarding coaches has been started for managers joining Aperam. Usually the onboarding coach is a senior manager who can help the new joiner navigate in the organisation and identify his or her key stakeholders.
- With the support of an external consultant, an elaborate assessment was done with approx 15 managers who joined Aperam recently. The results of this survey were reviewed and discussed during a one day seminar by the Aperam Leadership Team. A debriefing session with the participants was organised in 2022. We hope the initiative will also lead to the creation of a Community of Aperam new joiners.

In 2022, after a stoppage due to the COVID crisis, we were able to resume the site visits in our main European sites for our local white collar exempt joiners. 53 newcomers had a great opportunity to discover our main plants and have a close contact with our core activities. Meeting colleagues from other sites and building a network outside of their area is always a plus when it comes to a successful onboarding.

A new Technical Talent Program

The program was launched in Genk, Belgium in 2022 and focused on attracting young graduate engineers and managing them as one community through their career at Aperam. Our Timoteo site in Brazil already had a similar program in place focused on young graduate engineers.
In the near future, we hope to extend this program to our French sites (starting with Imphy) and to our second industrial site in Belgium, Châtelet.

Welcoming Trainees and Apprentices

Aperam is always eager to attract youngsters' attention and communicate the vibrant passion of its teams. This is often done via the offering of training or apprenticeships, for instance:

- Aperam in Timoteo (Brazil) designed a specific exclusive development path for the 21 lucky 2-years trainees that joined in 2022, with visits to the country's units, tutoring, job rotations and individualised development.The 1st year focuses on Interface areas (Rotation in six months) and the 2nd year working in the end area – Innovation Project Development. See above the visual used for external communications

- Still in Brazil but in our Services & Solutions Division, Aperam Tubes Ribeirão Pires developed the Young Talents Program, which aims to retain, develop and train interns by offering the opportunity to complement their school education through professional experiences, projects and development, within Aperam's philosophy and culture. The interns have the opportunity to present their projects to the management, who gave feedback and suggestions for improvement.

- Aperam Recycling Germany has a yearly apprenticeship program focused on skills learning that help trainees prepare for their final exams. For example, we provide different training in self-organisation, basic science skills and waste incineration. The whole organisation program is presented during the welcome day, where they can also meet with old trainees for breakfast.

- Aperam Alloys Imphy has reintroduced visits to its workshop dedicated specifically to the work-study students to facilitate their integration and understanding of the issues. These visits took place through the EMA (École interne des Métiers et des Alliages) and helped create a bond of trust and talent retention.

Target

30 % Digital Learning rate by 2030

Right: 40 hours of training were offered to 36 operators from Aperam Tubos Viracopos (Brazil), so that they become autonomous on basic maintenance.

Learning & Training

Learning

Learning is an integral part of everyone's work and, to be "able to transform by learning" which is one of the 8 Aperam Leadership competencies, employees need qualitative and regular feedback from all stakeholders starting with the manager. That is why our Learning strategy is structured around continuous feedback in the first place, followed by training (traditional and increasingly digital) and internal mentoring and coaching.

Mentoring & Talent Management

The internal Aperam Mentorship Program has launched its 3rd wave in 2022.
Mentoring by experienced leaders remains one of our core tools to develop leadership skills. Besides the mentoring by LT members, we have developed since 2020 a program in which the mentors are mainly part of the Top 100 of Aperam and the mentees chosen among the most talented Aperam people. Our mentorship program is structured around Aperam's 8 leadership competencies. Communities of mentors and mentees have been created to exchange experience and best practices.
The program is well appreciated as shows our regular survey (at mid-mission 2022, 95% of the mentees estimated their mentoring mission was on the good way). After 32 pairs of mentor/mentee launched in 2022, around 30 new pairs will start in 2023. Our Leadership Team also actively participates in the program with mentees being mentored by them directly.
In addition to this initiative, 40 exempts identified as Talent had the opportunity in 2022 to participate in a special Top Leadership Program according to their roles.

Training

To pursue the objective of becoming a truly learning-oriented organisation, we are extending each year more the use of our own Learning Management System, which has been fully embedded within MyHR since February 2019. The platform is used to display, diffuse and manage our learning offer with a focus on digital content which we intend to create more and more internally within Functional Academies.

2022 Training Performance Indicators and Outlook

Training hours have increased at global level by 16% in 2022, back to a similar level before COVID-19. Looking at the digital learning hours, they increased by 17%, representing 18.7% of the total learning hours which is a stable ratio compared to 2021 (18,5%). However, we registered a significant increase of almost 230%, from 7 101 hours to 23 319 hours of the digital courses followed in our MyHR LMS, representing 34% of the total number of digital courses hours versus 13% in 2021.

- 43,513 e-learnings were completed, or an increase of 123% compared to 2021.
- Also, 6,092 unique learners have completed at least one course self-paced in MyHR compared to 3079 in 2021 (almost double), showing an important effort on completing the courses started.

> MyHR Learning is now open to all categories of employees. We expect that more and more sites will completely manage their training offer - including the face-to-face offer - in the tool, in order to get a single tool in terms of training management in all Aperam.
In 2022, Belgium is using MyHR Learning as their unique LMS and Services & Solutions has started the transition.
In addition, people coming originally from ELG, now Aperam Recycling, have started to get access as well in 2022:All exempts from Aperam Recycling (about 100 people) and about 60 white collar non-exempts from Utica USA. We have now a total of 10 090 employees accessing MyHR Learning (1237 exempts and 8853 non exempts).

Training Centre Maryse Bastié, Hayange - France, rey-de crécy atelier d'architecture © Valérie Trégan

2022 Training Follow-up GRI 404-1, 403-5. (excluding ex-ELG units unless otherwise mentioned)

Learning in Aperam	unit	2022	2021	2020	2019
Total Training Cost	k€	**6,430**	**3,929**	**3,190**	**4,627**
o/w Total Belgium		2,568	1,038	1,232	2,801
o/w Total Brazil		1,000	603	364	506
o/w Total France		2,596	2,155	1,493	1,135
Total RoW		199	133	100	185
Total Training Time	hours	***340,368***	***293,009***	***184,201***	***341,741***
o/w Total Belgium		*59,774*	*35,101*	*25,024*	*75,149*
o/w Total Brazil		*182,468*	*163,635*	*107,425*	*143,664*
o/w Total France		*61,424*	*69,365*	*38,055*	*79,257*
Total RoW		*33,672*	*24,908*	*13,697*	*43,671*
o/w Digital Learning		***63,613***	***54,334***	*29,873*	*14,767*
o/w MyHR Digital Learning Courses		***23,319***	***7,101***	*6,478*	*4,954*
Digital Courses Completed in MyHR	#	43,513	19,476	16,450	18,175
Health & Safety	% of total learning hours	38.7	43.2	45.0	54.0
Technical Skills		48.4	45.5	39.0	32.0
Soft Skills		1.5	6.5	8.5	8.0
Languages		2.8	3.3	3.8	5.0
Ethics & Compliance		8.7	1.4	3.7	1.0
Total Employees Trained		**8,924**	**8,699**	**7,898**	**8,950**
Employees accessing MyLearning	#	**10,026**	9,850	3,449	2,518
Exempt Employees (1)		1,233	1082	1077	1036
Non-exempt Employees (2)		8,793	8,768	2,372	1482

(1): Including 96 managers of Aperam Recycling
(2) Including 59 Utica USA employees of Aperam Recycling

> In terms of topics, H&S training is always a high priority, representing 38.7% of the total number of hours. Training on technical skills continues to increase in importance reaching 48.4%, as we are investing in Technical areas, such as Châtelet with the "Technocampus", a parity organisation for specialised technical training in the Charleroi region, or Brazil with the process and metallurgy of electrical steels. Ethics & Compliance training has significantly increased to 8.7%.

■■■ To illustrate the focus on technical training, let's turn to Aperam South America.
The Maintenance Academy project, as a pilot model in the Industry, aims to develop and retain critical Maintenance knowledge, mitigating the impacts on the business due to renewal and loss of professionals. The project has 3 fronts, Mapping and retention of this critical knowledge reverted into training of Maintenance professionals through digital and asynchronous pilot. To continue in 2023 : Definition of an on-the-job system to transfer knowledge, via tutoring (in practice), creation of learning spaces so that the operational team has the infrastructure to carry out the digital learning offered.

Voice

"The integration of Aperam Recycling (formerly ELG) not only involved organisational and cultural changes, but also the implementation and harmonisation of processes and IT tools.
Working within Aperam Recycling, I was able to get first hand experience with the many benefits offered by our global HR Information System, myHR.

Through this common platform, we can create global synergies and, for example, offer employees targeted and cost-effective training and education. We can also agree on and communicate goals, as well as moderate and document the continuous feedback process between managers and employees. In this way, we create a reliable database for employees, managers, management and shareholders that is updated daily and enables efficient and sustainable corporate decision making.

We are proud of what we have achieved so far and look forward to the next steps!"

Timo Kißmer
Global HR Specialist C&B and L&D, Aperam Recycling

One of Aperam Recycling's scrap yards (ELG Duisburg).

Jimmy, Manager Cold Rolling Plant, Genk, Belgium.

With a PhD in Materials Engineering, Jimmy began his career at Aperam working in the commercial department – a role that saw him travelling to many of Aperam's export destinations, including many Asian countries but also Canada and South Africa.
Building on the broad experience he gained in this role, he soon moved to the Genk production site, first as a member of the executive committee and now as the Manager of the Cold Rolling Plant. *"During my career I have been able to be a part of some great accomplishments, including starting new production lines and developing strong relationships with customers,"* says Jimmy. "*The fact that there are still many satisfied employees and people who have confidence in me is also an important accomplishment."*
These words highlight Jimmy's love for working with people. *"What makes me happy in my work is first and foremost people – both customers and employees,"* he says.

According to Jimmy, people are the key to productivity and business success. *"Everyone can buy machines, but the people who operate them, plan their maintenance and oversee production are what make a thriving and strong company,"* he adds.
Speaking of people, Jimmy stresses the important role that diversity and inclusion play in a company's success – and the importance of being able to work with and manage employees from many different backgrounds. *"Diversity cannot exist without inclusiveness, and that means paying attention to differences, respecting them and integrating them into a company's operations,"* he says. *"By embracing diversity, you also encourage creativity, which can lead to innovation and long term development."*

For Aperam as a company, Jimmy only sees advantages in continuing to become more diverse. *"We want to be the most sustainable steel producer in the world, become carbon-neutral, and be even healthier and safer,"* he concludes. "*In my opinion, all of this requires having a diverse workforce of employees who all feel included in the Aperam family."*

Tips to newcomers:
"If you take the initiative, you can build a great career within Aperam.
- Don't be blind to the problems that come your way, try to tackle them directly.
- And finally, listen to your heart, try to discover what makes you personally happy in your job and let that influence your career choices.

This is not always easy and it takes time, so be sure to take the time needed".

The impact of ResponsibleSteel™

"Becoming ResponsibleSteel™ isn't the finish line - it's an important first step to further increasing our responsibility, for the environment, for the communities in which we work and for all the people working at Aperam."

Pedro Góes Monteiro
Executive Manager of Compensation & Labor Relations,
Aperam South America Human Resources

Quality of life at Work

Employee Engagement & Communications

Direct and regular engagement with our teams has always been an important part of Aperam's Leadership style. It is also something that we check regularly within our routines and surveys, both within MyHR, and via our Global All-Employees Climate Survey.
Regarding Employee Surveys, the last one was announced in October and implemented in November, 2022 and, for the first time, to all employees including our colleagues from ELG and all blue collars including in China and India. The results have been extensively used since then to adjust action plans at local and central levels. For the first time, all managers had direct access to the results of their teams. A high participation rate : 77% ! See next page for more information.
Regarding local engagement modes, they can take very various shapes, from quarterly info sessions gathering all employees in our main offices or smaller S&S units, down to large meetings repeated several times to allow the shift workers to participate in turns in some of our main units.

■■■ In France, a new agreement negotiated at the end of 2021 and applicable as of January 1, 2022 was signed with all the social partners. This agreement integrates a special focus on: the prevention of psychosocial risks ; teleworking ; the prevention of professional risk factors and mental health ; and of all forms of harassment.
The additional resources and tools associated with this new agreement include specific budgets to improve working conditions, both in terms of ergonomics and social facilities and a system of end-of-career adjustments to take into account any exposure to hardship factors. Finally, the deployment of two surveys on psychosocial risks is also planned during the 4-year period of the agreement, in addition to the company-wide employee climate survey. One of the measures is a specific set of conditions allowing people to benefit from adjusted working time (part-time), allowing them to leave the company earlier, before the normal retirement date, and to receive additional days depending on their exposure to risk factors. Another one promotes home office.
In 2022, some 25 people applied to this progressive early retirement system and more than 100 entered into home office agreements.

Take-aways from 2022 All-Employee Climate Survey

> At a global level, all genders together, our strong point remains the attention we give to Health & Safety. Many initiatives have been deployed this year across the sites, such as the Ergonomical & Sanitary Action Plans or the development Towards a Learning Culture on Errors. 78% of employees feel that they are given the opportunity to actively propose and participate in Health & Safety initiatives and 85% employees feel empowered to stop work or tasks if any unsafe conditions are detected.

Other strengths are:

- **Client focus**: The Climate Survey also reflects our strong customer focus and our commitment to quality: more than 8.1 out of 10 of you believe Aperam actively tries to understand external customers' requirements and expectations.
- **Career and Development** - See page 25: Aperam is a company that values people. To invest in your future, and since 80% of employees want to acquire new skills to further develop their career, Aperam will keep increasing its broad learning offer: roll out the MyHR Learning Platform to all employees, new Business Learning Academies, active use of Coaching and Mentorship as development tools.
- **Diversity** - the 3 new questions on diversity have a score higher than 8/10. See page 20 and following

> Our main developments points are :

- **Mental Resilience and stress management:** see page 17 and Alexandra's quote
- **Communications**, including open and honest communication: Our main focus remains on two-way communication by direct managers. This means managers should spend time on communicating and listening: 68% of employees think that Management generally understands the problems they face on their jobs and 82% think that the immediate manager is available and accessible when they want to talk or need help.
- **Career perspective and development:** We are still facing challenges to find internal candidates for many roles. We will start a new campaign to promote the Aperam Career Portal and the local job boards (only 74% of employees say they are aware of other job positions at Aperam).
- **Performance management**: Almost 40% of employees believe that their management should use non-financial ways of recognizing their work more often.
  In line with benchmarks we also see that around 40% of employees believe that their pay is not at the riht level. Aperam has already implemented different practices to increase clarity on its remuneration systems, this includes training of management employees on the Compensation Policy, communication of personal Hay grades (that are the basis for job evaluations and salary benchmarking), bonus brochures and regular updates on bonus performance, etc.

In order to financially recognize our talents' performance and value, Aperam aligns its Compensation & Benefits policies by comparing them with the practices on the market. We will continue to provide more clarity on our remuneration and job evaluation systems.Non-financial recognition is mainly a concern in Europe where managers' training will focus on recognizing good efforts, giving regular feedback and celebrating successes.

> For the next climate surveys, we aim for a participation rate of 80% (77% in 2021 and 2022) while keeping the sustainable engagement score higher than 8/10 (7.8 /10 in 2022).

Target

80 %

Participation & Sustainable engagement rates

Voice:

"The primary aim of our Climate Survey is to measure and understand our people's level of engagement and the improvement actions that can be taken. The annual survey takes place during the last quarter, which lets us evaluate the year's overall performance and identify any new points that need attention.

Many actions have already been implemented, and new ones will come following our 2022 survey. For example, in 2023 we will, for the first time, conduct a specific survey about mental health and well-being at work. Covering all Aperam employees in Europe, this survey will help us implement actions to even better identify, prevent, act and react!"

Alexandra Arblay
Manager, Health, Diversity and Inclusion and Employee Engagement
Aperam Europe

Elodie, Production Consumables Manager, Pont de Roide, France.

Elodie first joined Aperam as a sales assistant at our Pont de Roide, France plant – a position that saw her working not only in customer relations, but also collecting and analysing sales forecasts.
"*From day one, my job involved industry, technology and multilingualism, along with opportunities to work with internal and external contacts,*" says Elodie.

Although Elodie briefly left Aperam after five years in the sales department, the company's culture was always top of mind. "*Aperam gave me every opportunity to fully integrate into the company, both through access to technical training to improve my sales pitch and through a range of teambuilding activities like a running club,*" she says.

That's why, in 2016, she re-joined the company, this time as a management assistant, a role that saw her overseeing a wide range of tasks, including travel coordination, internal communications, event organisation, and social activity planning. *"I loved being able to do a little bit of everything, all of which helped build team cohesion and enhance the quality of life-at-work for everyone,"* adds Elodie.

In 2019, Elodie jumped at the opportunity to retrain as a production consumables manager. *"It was a challenge to fit in as a female in an all-male team, especially since most of my team members only knew me as a secretary,*" she recalls. Despite this challenge, Elodie says she had no problem quickly integrating with her new team. *"I think it';s perfectly possible to combine life as a woman and a mother while developing your career at Aperam,"* she says.

Elodie's embracing of new challenges has inspired other women to follow suit. In fact, a female colleague has already joined the department as a manager in the rolling sector.

Tips to newcomers:
"Don't be afraid to impose your own style, have faith in yourself and constantly nourish yourself with the knowledge of the people around you."

New work patterns/Work Life balance

To improve the local Professional/Personal life balance, some units can be very innovative.
■■■ In March 2021, further an extensive study on the home office adaptation in times of lock-down, an ad-hoc organisation was formalised for our main office site of Saint-Denis, integrating rotations between home office and physical attendance as the future permanent routine.
> While reducing the surface rent, this new way of working allows more agility, and gives more flexibility to employees to organise their lifetime. The new organisation is based on a minimum of two days of home office and pays special attention to the enhancement of teamwork. Specific accompanying measures have also been defined to ensure the prevention of isolation, develop exchange times between colleagues and management, and provide material support for an optimal home office experience.
> After several months of implementation, a questionnaire was shared with the teams at the end of 2021, which showed that the workspaces meet the needs of employees by alternating physical presence and homeworking, and also allow for times of conviviality with the development of informal events such as environmental challenges, sportive events or video game night.
Due to the 2021 COVID developments that led to necessary adaptation, we really saw the full effect implementation in 2022. According to the Climate Survey and direct feedback of concerned employees, there is a good overall satisfaction with the operation and the support methods. In addition, the home office has been confirmed in the new Quality of Life and Working Conditions agreement in France, in force since January 1, 2022, where more than 100 employees have signed up for this scheme.

The impact of ResponsibleSteel™

"This was really a project that was carried out during the year, which brought us enormous knowledge regarding sustainability, people, society, human rights.
I am happy to have participated to leave this legacy for Aperam."

Paulo Dias Soares
Aperam South America Improvement Program Analyst

2022 Recognitions

Employee care is a long-term priority for Aperam!
> In Europe, for the sixth year in a row, Aperam was ranked amongst the best employers (4th in 2022) within Heavy Industry and Materials by French Capital Magazine.

> In Brazil, Aperam BioEnergia achieved the third championship of the "Incredible Places to Work" 2022 award among the Agribusiness companies. In the Steel & Mining sector, Aperam South America was rated second in a consistent result, the same since 2019.
The "Incredible Places to Work" award considers the results of the annual FIA Employee Experience (FEEx) survey, which establishes indices for organisational climate, people management, leadership, and CEO popularity and management.

Our Planet

Our plants use immense energy and hazardous substances to transform recycled and raw materials into the precise blend of Alloys required by our clients. In turn, these Alloys can be used to make affordable, long-lasting and sustainable products, including energy-efficient buildings and low emission vehicles.

Although Aperam is an industry leader in sustainability, our new 2030 milestones for energy, CO_2, air and water, show our commitment to minimise our impact on the environment - and on our neighbours. We are proud of our state-of-the-art CO_2 footprint and of our action plan to reduce it further and contribute to global carbon neutrality, with a net zero footprint (scopes 1+2) by 2050.

Our Vision and Organisation

Organisation

During 2022, amid the energy crisis in Europe, we have accelerated our programmes aiming to reduce our specific energy consumption and CO_2 emissions. We adapted our organisation for a greater coherence to our actions to mitigate our environmental impacts, particularly those arising from Greenhouse Gas emissions. As part of that, the position of Chief Sustainability Officer has been created within the CTO organisation, with responsibility for environmental management, industrial risks and the Energy/GHG action plan.

> At the end of 2022, a portfolio of over 100 projects contributing to our 2030 Greenhouse Gas emission reduction plan (-30% GHG scopes 1-2 and -11% energy consumption - base 2015) was monitored in close collaboration between local operations and the CTO team.
- Each production site has one or two engineers dedicated to the feasibility studies of energy/CO_2 projects, from the idea to the preparation of the investment file. When accepted, the implementation is carried out under the guidance of the local engineering department, with possible support, in terms of resources, from the CTO team. All the engineers exchange on a monthly basis about the ongoing projects in order to ensure knowledge sharing and swift implementation of proven techniques in all the group's plants.
- The governance of the management of this project portfolio is based on monthly steering committees in each plant, the main purpose of which is to ensure that the objectives and priorities are perfectly aligned between the various stakeholders.

> In terms of environmental management, the partially centralised organisation aims to promote collaboration between the various managers from different locations and to optimise investments by giving priority to the projects that allow the greatest progress to be made within the framework of a multi-year plan.

Main 2022 evolutions

> 2022 is the year of the integration of our new Aperam Recycling division. While this integration is adding CO_2e emissions on our Scope 1+2 emissions (16.7kt of CO_2e in 2022), Aperam is keen to keep its original target set for 2030 and 2050. 2022 was also the year in which we organised our first Sustainable Development Week (see p. 44), further deployed our biodiversity program (see p. 43), and showed important progress on the group dust emissions (see p. 37). All this while continuing to work towards our other 2030 and long-term objectives and promoting the virtues of the circular economy.

> During 2022, we decided in addition to our climate change report to CDP to add the water security report. We earned a “B” rating for the first year and see this rating as a recognition of all the efforts our teams are doing to improve the use of the water resource.

Voices

“While integrating the new recycling business, the CO2 objective for 2030 remains the same. This is a strong message demonstrating our commitment to reduce to its maximum our scope 1+2 CO2 emissions.

Regarding scope 3, a first assessment of our scope 3.1 is disclosed in this report. It is part of the SBTi-compliant roadmap that we build for Aperam Scope 1+2+3 emissions towards 2030 and 2050.”

Laurent Piranda
Head of Environment & Industrial Risks

78% of employees consider **Aperam environmentally responsible**

*Data highlighted with a star have received external assurance.

Voices

The clock is ticking to preserve our Planet as an environment where mankind and nature are able to prosper for many generations to come. Aperam is committed to play its societal role to contribute to this worldwide challenge. We know that we make a product which will play an essential role in this future world, thanks to its lifetime and its endless recyclability, but also thanks to the way we produce it.

We are on a clear roadmap as a company, taking many small and big steps towards a leading role in the circular economy of the future. And we will continue to innovate and find new ways to further and faster reduce our scopes 1, 2 and 3 CO_2 footprints, and minimise our global environmental impact.

Bernard Hallemans
Aperam Chief Technology & Sustainability Officer

Our Environmental Performance

GRI 305-4, 305-7, 302-1, 302-3, 303-2, 303-3.

Indicator	Unit	2030 targets	2022[4]	2021	2020	2015
Energy: Elec + Nat. Gas + LPG	GJ/tcs[1]	6.9 (-11% vs 2015)	8.0*	7.8*	7.7	7.8
Energy: All	GJ/tcs[1]	n/a[2]	13.2*	13.2*	13.3	12.0
CO_2 sequestration	ktCO_2e	n/a	(412)*[5]	(467)*	n/a	n/a
GHG emissions (net) [3] (B")	tCO_2e/tcs[1]	0.30	0.32*	0.34*	n/a	0.54
Dust emissions (exhaustive)	t	n/a	210*	327*	298	521
	g/tcs[1]	75.7 (-70% vs 2015)	107*	155*	152	252
Recycled Input in Production	%	n/a	29.1	28.2	25.4	30
Wastes to landfill	kt	Zero Waste for Landfill i.e. 100% Reused/Recycled	108.5	110.7	87.6	103
Hazardous Wastes			30.0	32.3	25.04	36
Non-Hazardous Wastes			78.5	78.3	62.55	67
Reuse Rate	%		92.4	92.9	94	93.5
Water Intake	million m^3	n/a	21.1*	21.7*	22.8	22.1*
	m^3/tcs[1]	6.1 (-40% vs. 2015)	10.8*	10.0*	11.8	10.2
Water Recycling	%	n/a	96.02	95.8	95.3	95.4
Water Discharge	million m^3	n/a	16	17	16	15
Suspended Solids in Water	t	n/a	225	307	146	204
Metal Discharge in Water	t	n/a	7	7	9	6

*(1) Ton of crude steel, 'all tons', i.e. including 'purchased tons' - **For more information, see Supplement D - Methodological Appendix**.*
(2) 2030 objective scope limited to electricity, LPG and natural gas only.
(3) GHG emissions net of CO_2 removals (sequestration) operated by our Brazilian forestry.
(4) Including Aperam Recycling, the new Segment within the Aperam recycling & Renewables, which was built upon the recently acquired ELG business.
(5) For 2022, calculated based on a carbon stock computed in light of the updated native forestry categorisation (based upon more advanced satellite imagery) and the latest (2022) updates of the reference database (United States Geographical Survey, USGS).

> In parallel, we continued to report monthly to the management and to review, upgrade and complement our main indicators, allowing us to react quickly if one is off track. This was also done taking into consideration the new requirements of the EU taxonomy (see p. 36). To enhance our global efficiency, particular attention was also provided in the development of information systems both to optimise our performance monitoring consolidation process (and integrate the new Recycling units) and also to efficiently report incidents and anomalies. The benefits of this work will only be fully apparent in the course of 2023.

Incentivization for Further Progress

For a few years now, the CO_2 performance has also been incorporated into the individual objectives of the management, ensuring a focus at the highest level of the organisation.
Other incentivization initiatives are not excluded as Aperam's management is convinced that water for example is very precious to protect. We launched during 2022 an internal study to review the impact of climate change on the water resource, and this is followed in 2023 by a large project on climate change risk.

Industrial Footprint

Energy and CO_2

A Key Responsibility

The steel sector is one of the world's biggest greenhouse gases emitters. This is the result of both the industrial equipment it uses, which is designed to reach temperatures of over 1600 °C to melt iron ore or scrap, and the chemical necessity of adding carbon to iron ore in order to produce steel.

Despite operating in this heavy industry, Aperam maintains a best-in-class carbon footprint, the result of three key factors. First, our European electric arc furnaces predominantly use scrap metal instead of mined raw materials (see p. 39). Second, on top of operating energy efficiently, we also use a low-carbon energy mix (see p. 35). Last but not least, and this is really unique in our sector, Aperam can also be considered an agricultural company, operating over 100,000 ha of FSC®-certified forests in Brazil.
We use our forests to produce our own charcoal, which we then use as input in our steelmaking process as a natural and renewable substitute for fossil fuels (coal based coke). Unlike many of our global competitors, this allows us to entirely eradicate the use of extractive coke in our blast furnaces and makes our steel more sustainable.

Forests and Carbon Offset

From the careful genetic selection of the sapling to planting, maintenance and harvesting, our forest is continuously cultivated and maintained according to best practices in sustainable forestry. We manage this forest as a precious asset, ensuring the protection of biodiversity and respect to the environment, and we regularly win awards for these practices.

- The cultivated forest is managed in a way that increases the density of the wood per hectare. This is thanks to the species we plant, which are more efficient (less water and fertiliser needs, enhanced resilience to pests) and more dense than the species previously planted. This change was made based on the genetic improvement of our research and development laboratory.
- Our saplings are recognized for their quality in Brazil.
- The native (non cultivated) forest is managed in a way that respects the natural species and biodiversity (including pollinators). To do so, we replant where needed.
- As fire is a risk, we actively track and fight any possible fire using viewpoints, camera monitoring, drones, and other technologies.

> After harvest, BioEnergia sends the trees to kilns, where they are turned into charcoal (biomass), known as "bio-coal" locally. This forest is factually carbon negative, meaning it acts as a carbon sink. Our parcels stock CO_2 in the cultivated areas, in the trees and in the soil where leaves degrade into humus. The same can be said for the native forest areas, which are conserved in accordance with local regulations and to the benefit of local biodiversity.
> The annual carbon sink improvement of our forest depends on the planting strategy rollet out 5-8 years ago. Therefore, the carbon sink is not stable year-on-year. Until we achieve our 'cruising speed' in terms of density and carbon capture, some years may even see a decrease in the carbon sink. That being said, we are happy to confirm that our forest management brought a carbon offset of 412 kt in 2022, which is less than the 467 kt offset in 2021, the result of the lower planting done half a decade ago.

Aperam BioEnergia 's carbonization unit with the 100,000 ha of FSC®-certified forest in the background (Minas Gerais, Brazil).

Refining an Already Best-in-Class CO_2 Performance

Since 2017, our CO_2 footprint intensity has been constantly at the vanguard, well below the industry standard, with the latest WorldStainless's average being at 0.88 tCO_2e/tcs in 2019, according to the Association's 2021 General Meeting. While we record a best-in-class performance, maintaining it requires constant efforts and 2022 saw the launch of substantial works for the next phase of our decarbonization (see next pages).

> On top of the energy pillar of our program (see p. 35), we are investigating other strategies. As part of this, we now yearly assess both the emissions and the sequestration achieved by our exceptional forestry management (see above), as well as those linked to our conservation program (Oìkos). While it impacts our Scope 1 emissions "(a)" - mostly from methane (CH_4) emissions during the wood carbonization process - this new methodology allows us to report massive carbon captures in "(c)", thus bringing a complete view of our impact, now consolidated in absolute value in "(B) Scope 1+2 net".

As a result, we report the following detailed figures, in absolute terms as well as in intensity.

GHG emissions (GRI 305-1; 305-2; 305-4)

Absolute values and intensities, by scope	GRI	Unit	Target 2030	2022 Full Scope	2022 2021 scope
(a) Scope 1 - Non-Biogenic (absolute value)	305-1	$ktCO_2e$	n/a	807*	796
Scope 1 - Biogenic (absolute value)	305-1	$ktCO_2e$	n/a	945*	945
Scope 2 (absolute value) location based	305-2	ktCO2e	n/a	243*	238
(b) Scope 2 (absolute value) market based	305-2	ktCO2e	n/a	217*	212
(A) Scope 1+2 gross (absolute value: a+b)	n/a	$ktCO_2e$	n/a	1025	1008
(c) Sequestration (absolute value)	n/a	$ktCO_2e$	n/a	(412)*	(412)
(B) Scope 1+2 net (absolute: a+b+c)	**n/a**	**$ktCO_2e$**	**n/a**	**613**	**596**
(A') Scope 1+2 gross intensity (own tcs): (A)/tcs	305-4	tCO_2e/tcs	0.37	0.53*	0.52
(A'') Scope 1+2 gross intensity (all tons): (A)/tcs	305-4	tCO_2e/tcs	0.37	0.53*	0.52
(B') Scope 1+2 net intensity (own tcs): (B)/tcs	n/a	tCO_2e/tcs	0.30	0.32*	0.31
(B'') Scope 1+2 net intensity (all tons): (B)/tcs	**n/a**	**tCO_2e/tcs**	**0.30**	**0.32***	**0.31**

*Data having received external assurance.

Besides, the variation in the volumes (mostly slabs) purchased from the market to further transform them and increase our sales can have a significant impact on our metrics. So, last year, we decided to avoid distorting our ratios by adjusting the emissions "as if" we had melted ourselves these tons (adding fictive emissions) in the numerator and not only considering our "own" tons of crude steel ("own tcs") but "*all* tons" (i.e "own + purchased") in the denominator. We believe this methodology gives a fairer view in so far as our performance is more comparable year on year - and also in view of competitors'. Again, we present both fractions (B' and B''), for the sake of full transparency, but **the one reflecting our performance will be the B''** ("net CO_2e intensity - all tons"). For more information on methodologies, please check the Appendix D.

> Using our *"all tons"* methodology (line B''), **our 2022 emissions are 10% lower than in 2021** on the same scope, i.e without Aperam Recycling. This is mostly due to two reasons:

- On scope 1, we continued the installation of CH_4 burners on Bioenergia carbonization units and proved their 100% efficiency, thus reducing drastically our methane emissions ;
- On scope 2, almost 15% of the improvement comes from better grid emission factors in addition to the benefit of an increased on-site green energy production (see our achievements in Belgium, page 35).

Overall, in 2022, our Brazilian forest management is bringing a partial offset of our local emissions and the impact is also significant at Group level : **using our indicator B'' corresponding to the CO_2e footprint of Aperam (full scope), we report a 0.32 tCO_2e/tcs.**

As our most impactful projects have not started, Aperam is on track to achieve its CO_2e 2030 objective of -30% vs. 2015, which stands at 0.30 tCO_2e/tcs taking into account all our new methodological updates introduced last year (check the Appendix D).

CO_2

0.32 tCO_2e/tcs

Leading footprint in Stainless

Our 2030/2050 Targets and Roadmap

Despite the integration of the Recycling division and the inclusion of new emissions from 2021 (eg. biogenic methane out of our charcoal kilns), we maintain our ambitious 2030 target unchanged (gross scopes 1 and 2). At iso-methodology, it represents an improvement much more ambitious than the 30% announced initially (base 2015).

Our net intensity target is very close to our current result and we should do better. But, taking into account the variation of the forest carbon offset and the evolution of the volume of production, we remain cautious. As soon as we will disclose an objective including scope 3, we will reassess our objectives as we now believe we might go faster on our de-fossilisation roadmap.

In the meantime, we continued our efforts, during 2022, to get on speed our projects on :

- Energy Efficiency, incl. Heat Recovery.
- Investments on high efficiency ladle burners at meltshops.
- Ongoing $HECO_2$ project with other industrials (electrification of heating and carbon capture in the Meltshop).
- Carbon-free fuel/energy, incl. NG substitution, Solar and Wind.
- CH_4 emission reduction from our charcoal kilns (burners).
- Variable speed drives and oxy combustion.

Although there is a long way to go, we are on track to achieve our 2030 and 2050 objectives.

Scope 3 and total carbon footprint

Reporting on Scope 1+2 is key, as our primary responsibility remains to minimise the impact of our own process, but considering the full picture is also paramount for the decarbonisation of the economy. A total CO_2 footprint aggregates a company's emissions (scopes 1+2) with those emitted upstream of the process (called "scope 3a"[3], it covers all production input, from raw materials to travel and computers) and the downstream footprint ("scope 3b").

> For stainless products, the weight of the CO_2 emissions related to upstream processes, particularly those linked to the extraction and refining of primary raw materials (scope 3.1, category "purchased goods and services") is paramount. That is why, for our sector, the most pertinent comparison shall rely on a footprint scope 1+2+3a.

As an example, even if our energy-intensive Recyco unit acts as a recycled material supplier, it is an *internal* supplier, therefore its CO_2 emissions are consolidated within our (Scope 1+2) footprint - not in our Scope 3. The same now applies to our Recycling segment.

> For 2022, we report a global scope 3a at a level of 3.83 $MtCO_2e$/ton, of which the scope 3.1 is 3.35 $MtCO_2e$. Our global Scope 3a intensity reaches a level of 1.985 tCO_2e/ton. Without sequestration, the global Aperam footprint (scope 1+2+3a) is 2.5 tCO_2e/tcs - and with sequestration, it stands at 2.3 tCO_2e/tcs.

> Our (scope 1+2) footprint is already best-in-class but considering our high usage of stainless steel scrap in Europe and the fact that we use no extractive coke in Brazil, our raw materials footprint is much lower than the sector's average: according to our certified Environmental Product Declarations (EPD), i.e. using normative emission factors, our scope 3a emissions (upstream, from cradle to site entrance) could range from 1.29 tCO_2e/ton (304 products) to 1.68 tCO_2e/ton (K41 KARA) for the products made in Europe and this is a preliminary estimate. **We evaluate[4] that the CO_2e emissions per ton for stainless steel made of extractive raw materials is up to five times higher than ours.**

To improve our estimate, our teams are striving to collect more specific data in relation to the raw materials purchased from our main suppliers.

> A first plan is already established to reduce Aperam's scope 3a by a double digit percentage by 2030. This is seen as a starting point and more will be developed to achieve our 2050 target. Our average nickel input footprint is clearly below that of Nickel Pig Iron (almost 60 tCO_2e/t of Laterite - matte via NPI -, according to the IEA, May 2021), but we are continuing our efforts with our suppliers to further decrease this impact.

While developing technologies to increase the supply of environmentally friendly nickel with our Botanickel joint venture company (see p. 46), we are actively working with our suppliers who are responsible for over 70% of our scope 3.1 emissions. This is a long journey since our suppliers also need to find out their total CO_2 emissions to be able to provide a robust roadmap with objectives for 2030 and 2050.

In 2022, our estimated scope 3.1 was 3.35 $MtCO_2e$, representing 87.4 % of our scope 3a.

[3] All emissions (scopes 1+2+3) related to the production inputs used by our activity, including consumables, assets and the related transportation (8 categories of products and services) before they enter our sites. Scope 3b refers to the downstream emissions, including the transportation to the user and energy consumption during the product's usage.

[4] Aperam estimates & calculation, ISSF data, CRU.

The girders of the Brides les Bains footbridge are made of Aperam 304L stainless steel, with a Uginox polished mirror reflecting the eddies and movements of the water. The footbridge thus changes with the seasons and the weather, and allows for discrete integration into this alpine environment.
Footbridge of Bride les Bains, France - Nu Architect © Cyrille Lallement, Aperam 304L Uginox Meca 8ND®

Voices

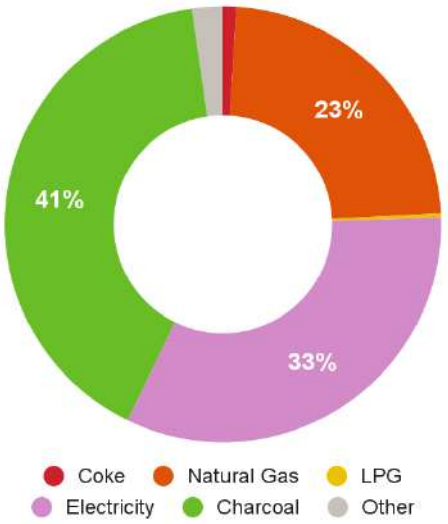
"At Aperam, we are committed to concrete results, implementing more than 100 actions aimed at increasing our energy efficiency, recovering waste heat and replacing our fossil fuels with low carbon or renewable energies.
We are on track to achieve a reduction of our CO_2e emissions per ton by 30% in 2030 compared to 2015, with the ultimate goal to achieve carbon neutrality at group level before 2050, after taking into account sequestration efforts such as those carried out in a masterful way in our forests in Brazil.

In parallel, biodiversity clearly plays a major role in our economies and our lives in general, as the epidemics recalled. As many of the solutions to mitigate Climate Change or its effects will come from natural environments and the services they provide, biodiversity promotion is part of our plan too! See our efforts p. 43."

Carlo Morettin
Chief Sustainability Officer

Aperam 2022 Energy Split (%)

GRI 302-3



Inauguration of Genk solar park in May 2022.

Energy

50% Renewable energy

2022 performance

+2% vs. 2021

Mix Effect

Our energy intensity depends on the metallurgical blend we produce, as not all metals melt at the same temperature. Furthermore, when we "sophisticate" our products during downstream operations, such as when we give them a bright surface finish or transform them into tubes, wires or tiny precision strips, we use more energy than what is used to produce semi-products. However, the volume of initial crude steel remains unchanged, which impacts ratios and apparent performance displayed in terms of energy intensity...

This means that comparisons are only valid between similar products!

Energy Mix and 2022 Performance

Despite ongoing efforts, Aperams reports 13.2 GJ/tcs or 3.7 MWh/tcs (including purchased tons, see Supplements for details on our methodology (GRI 302-3, 302-4)) which represents a 0.75% deterioration in energy efficiency over 2021.

Nevertheless, we remain on track to achieve our 2030 target of an 11% reduction in energy use (base 2015). In 2022, the energy efficiency has been impacted by the integration of Aperam Recycling division and by the decrease of the production.

The lower production volumes coupled with mix effects and several technical issues in some plants led to hide the benefit of actions implemented in 2022 to improve our energy efficiency (e.g. Electric Arc Furnaces, reheating and annealing furnaces efficiency, LED lighting,...).

> On the energy mix side, ours remains a subject of pride, with 41% coming from charcoal biomass (see aside, +4 pts last year - taking into account the share of our electricity generated from renewable sources). As for electricity, in 2022, our global carbon footprint decreased in our main countries of operation. In addition to lowering the emission factor of our electricity suppliers, several other actions have also had a positive effect (even if it is partial in 2022). These include major solar panel projects (30 MWp in Belgium).

■■■ In Belgium, where our biggest European steel plants are located, we have a major programme to turn to solar energy.

> The 50,000 panels installed in Genk (left) started providing green electricity to the site at the beginning of 2022. Almost 20 GWh were produced during the year, covering nearly 5% of the site's electricity needs. We are investigating how to increase this capacity. We are also installing LED lighting, which helps save an additional 6000 MWh annually.

Windmill and photovoltaïc panels at the Genk (including the parking area).

> A similar project was implemented at our Châtelet plant. At the end of 2021, we investigated how to best turn its roofs into a solar panel park. After an intensive study, suitable locations for the solar panels were identified, based on stability and sunlight. The study resulted in a photovoltaic project with more than 15,000 panels installed on a total surface of 4.5 Ha. The complete project results in an installed capacity of 6.9 MWp and an expected annual production of 6,300 MWh of green electricity .

The first green MWh were produced on July 1st, 2022, with production reaching 2860 MWh by the end of the year.

Almost 100% of the energy produced is consumed locally, on our site, which means injection into the public high-voltage grid shall be exceptional. This allows us to reduce our CO_2 emissions by approximately 1,000t/year. The related production of green electricity corresponds to the average electricity consumption of 1,750 Blegian households. On top of this, to accelerate the greening of our vehicle fleet, 100 additional charging stations will be installed in 2023.

Photovoltaïc panels on Châtelet roofs.

The EU Taxonomy: Aperam' Climate Change Mitigation Activities

Aperam's steel operations and, due to analogical rationale and usual business practices[5], our alloys and specialties business all fall under Economic Union Taxonomy regulation's sectors 3.9 - Manufacture of iron and steel and 5.9-Material recovery from non-hazardous waste (covering the activities of Aperam Recycling).

> In 2022, we conducted a thorough analysis that included verifying our main units' compliance with relevant substantial criteria. The specific criteria used were direct GHG emissions generated by our steelmaking units' production of hot metal, calculated according to the methodology used for EU-ETS benchmarks. In order to include EU Taxonomy results in our Annual Report, which was published on March 28 2023, we used 2021 data as the 2022 data had not yet been verified. The applicable criteria for Aperam Recycling activities was the 2022 rate for the weight of converting the separately collected non-hazardous waste into secondary raw materials.

We also analysed our main units' alignment with the EU Taxonomy Do-Not-Significantly-Harm (DNSH) criteria and Minimum Safeguards, based on 2022 information and any operational incident reported.

As pre-announced within our Annual Report's Taxonomy section, we can now confirm, based on 2022 verified direct GHG emissions, that that Aperam's activities that are aligned with the EU Taxonomy represent 81% of 2022 turnover, 76% of 2022 OpEx, and 61% of 2022 CapEX of the Aperam Group. Our 2022 verified GHG emissions had a plus or minus 10% gap compared to the initial assumption (2021 emissions). This means the margin of error is quite negligible compared to the margin of manoeuvre to the "Mitigation" GHG thresholds, which stand between 25% and 95% higher, depending on the unit considered. This also means our internal methodology based on (Y-1) data provided reliable information.

> In the end, the final results with respect to our Group's EU Taxonomy alignment are fully in line with the results of our preliminary analysis disclosed as part of our Annual Report (including table in Appendix I of the Annual Report, p. 107) and based on 2021 verified data.

2022 Group Activity[(1)]	EU Taxonomy Eligible	EU Taxonomy Aligned	EU Taxonomy Not Aligned
Turnover	100%	81%	19%
Capital Expenditures	85%	61%	39%
Operating Expenditures	94%	76%	24%

(1) Based on 2022 verified CO_2e information.

[5] In the absence of a unique definition of steel and ferro-alloys, our analysis is based on the proximity of classification between Alloys and Stainless Steel activities, both being covered by the EUROFER association under one single "stainless & specialty steel" category next to "steel" and considered by the regulator as being subject to the same rules and norms, in particular the National permit procedures, the European Union's Emission Trading System (ETS) and the EU Best Available Techniques (BAT) for Iron and Steel Production. For more, see 2022 Annual Report, p. 104.

The summary table (left) is fully updated and the detailed information is now communicated on our website under the Taxonomy sub-section.

> All our main units used as reference for this analysis, along with the Timóteo plant in Brazil, operate in compliance with their applicable regulation and Aperam's internal standards. Yet the lack of alignment between the requirements defined under the rules of EU Taxonomy (in particular the EU BAT) and those applicable under Brazilian law currently prevents us from confirming our Brazilian operations' compliance to the DNSH Pollution Prevention and Control in 2022. This explains why we cannot report alignment with the EU Taxonomy criteria on this perimeter and why we disclosed a total share of our activity being aligned for 61% to 81%, depending on the financial criteria selected.

> That being said, we are proud to announce that our Brazilian unit is on the right path to ensuring compliance with BAT, a commitment that, when reached, will allow full alignment per EU Taxonomy standards. A first milestone was reached when the unit became ResponsibleSteel™ certified in early 2023, after the full audit process undergone in 2022.

> Please also refer to the Annual Report, section EU Taxonomy, for more information on our methodology.

The Impact of ResponsibleSteel™

"Being ResponsibleSteel™ certified means embarking on a journey that does not set limits and that encourages us to increasingly seek cleaner, more innovative technologies with less environmental impact."

Susana de Castro Alves Moreira
Aperam South America Environmental Engineer

Air Emissions

Local air quality is an important issue for our operations. Our Environmental Policy commits us to a long-term approach to environmental performance and, according to our Stakeholder engagement, dust (particulate matter) stands amongst our most important material issues. In addition to dust, we also produce other air emissions, in particular NOx and SOx, reported for Europe only (see left-hand side).

Because this issue is so important to the local communities around us, Aperam has committed to going beyond what is required by current regulations. Diffused dust is measured periodically to evaluate the leakages and identify areas for improvement. Furthermore, dust falls are also a relevant additional indicator, as it directly reflects the nuisances caused to local populations. But this last metric is impacted by external factors such as wind or alternative sources of pollution (agriculture, traffic, etc.), rendering the interpretation subject to debate. As such, we mostly report ducted dust emissions.
With the aim to change mindsets, improve the reliability of our measurements and ensure that progress is continuous, we have set up an action plan with global Aperam targets. We also started to conduct more frequent measurements and develop more precise methodologies for the assessment of our impacts (See Supplement D). As our previous goal has been achieved (-40% in 2021 in intensity, from 2015 benchmark), in 2020 we announced a new target of a -70% decrease of our ducted dust emission intensity by 2030 (compared to 2015). This objective is to be reached while also reducing diffused (non-ducted) dust. For 2022, the objective is achieved thanks to important changes done in our Timóteo facility, where we added a continuous surveillance system and a capability to do onsite measurements.

Ducting and Controlling Dust Emissions

Our dust emission improvement plans focus on either containing, ducting, or collecting the dust (in Europe, the collected dust is sent back to Recyco for recycling).

> Our “exhaustive” indicator, which provides a good assessment of our impact over the full year based on all the measurements done (not only those reported to the authorities as per our permits ie. two per year and chimney in Brazil), shows a total Group emissions of 107 g/tcs, compared to 155 g/tcs last year GRI-305-7.
> This result is well reflecting the action plans in our Timóteo facility. For the three European meltshops, we have strong improvement programs in place including revised maintenance plans and the set up of more ducting and treatment capacity (like in Imphy, with the EAF 4th hole ducting project). The Timóteo plant being the main contributor to the ducted dust emissions, we launched an engineering study in 2021 to clarify what are the best investments needed to bring our emissions at target in 2030. We took the first actions during 2022 and see already promising results. In the meanwhile, the team is committed to ensure a perfect management of our dedusting assets.

Air emissions

107 g/tcs 2022 dust emissions

Multi-year roadmap

NOx/SOx emissions (Europe only) GRI-305-7

Emissions	Unit	2022	2021	2020	2019
NOx	t	830	830	544	763
SOx	t	54	59	45	37
NOx	g/tcs	426	371	279	381
SOx	g/tcs	28	28	23	18

Noise and Vibrations

Our plants, while being compliant in terms of noise emissions, are continually working to improve any “sound nuisances” perceived around the properties. They are running regular campaigns or are placing sonometers close to the neighbouring houses to identify where the Aperam’s activities have an impact on the global noise environment. In general, any change is an opportunity to improve our impact on people and on the environment.

As an example of this commitment, we would like to highlight the participation of Aperam to a European project called “SILENCE” in collaboration with two Universities, Scuola Superiore Sant'Anna de Pisa (Italy) et Deusto de Bilbao (Espagne), one laboratory and a carbon steel producer.
The project “SILENCE” aims to reduce acoustic emissions impact on steelwork and surrounding communities through the installation of real-time acoustic sensors, coupling modern process monitoring techniques with a KPI’s metric approach. Artificial intelligence tools and machine learning-based analyses application will assess the acoustic performance of the different processes correlating them with process data and meteorological conditions.
The final aim is to give online information and advice to the operators who could act to mitigate the acoustic emissions level. Moreover, strategies will be adopted for suitable training to improve operators’ acoustic sensitiveness. The SILENCE systems will be tested in two plants located in different morphological areas producing carbon and stainless steel, one of which is Aperam Châtelet.

Eucalyptus and Water

Like all vegetation, eucalyptus requires water and nutrients to grow and survive. However, the forests at our unit in Brazil (BioEnergia) are grown using carefully selected saplings which require less water and nutrients and are thus particularly well suited to the unique environmental conditions of Vale do Jequitinhonha, our only unit in a regular hydric stress. Thanks to our state-of-the-art R&D, we will continue working on plant selection to further adapt their water needs and pest resistance.

For more information, visit: aperam.com/sustainability/environment/bioenergia/

Water

At Aperam, our commitment to clean water is an everyday topic and a responsibility to our local stakeholders : this is reflected in the way we monitor our water intake and the quality of our disposal in line with our permits. We aim to intake less water by reducing our consumption and increasing the amount of recycled water we use, which is currently 96%.

> After a global audit program on the water intake at our main sites in 2021, we had to delay the second wave of this water auditing program to 2023-2024 to give priority to our energy management since the situation changed with the energy crisis fostered by the war in Europe. However, during 2022, we launched an assessment on the water scarcity risk at our main sites and a thorough climate change assessment of all our locations (see p. 42).

> One of our main challenges in water intake management is the adaptation of the water use to the level of production. In 2022, we faced periods with lower production levels, due to high competition from imports and energy prices, and we could not optimise the level of our water intake according to the reduced needs (see below). Nevertheless, this is not jeopardising our commitment to achieve the 2030 goal of 6.1 m^3/t.

Water Intakes Trends

After a continuous reduction between 2012 and 2015, we have since then observed a period of stabilisation, particularly in terms of intensity. Here are the detailed results for 2022 :

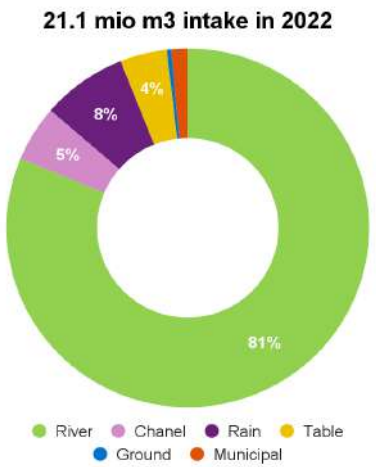
- Total intake in absolute value for 2022 was down by 5% over 2021, but -9% vs. 2015.
- Intakes in intensity (including purchased tons) was up by 8% in 2022 compared to 2021, but +6% vs. 2015.
- 96% of our intakes came from closed circuits (i.e. recycled water), meaning that less than 4% of our water is extracted from the environment.
- Of the 4% of water that we do extract, 81% comes from rivers and 8% from collected rain (GRI 303-3 - see full detail in the graph to the right).
- Most of the water withdrawn is given back to the river after treatment. In 2022 we had a 22% gap between water intake and discharge to the environment.

■■■ Some of our stakeholders complain in relation to the water usage around our BioEnergia forestry, in Minas Gerais (Brazil). We know and regularly meet the local groups concerned, mostly farmers. Their stand is sometimes echoed by media or activists, but it is backed only by partial studies, sometimes involving members of renowned Universities but not conducted and reviewed by the Universities themselves.
Truly, it is quite complex to isolate root causes for drought and rivers' lower levels, with seasonal variations and climate change effects. So, taking the matter seriously, we collected studies from four different State Universities, all confirming that water availability around our plantations is fairly good, compared to other local forests and even more so, compared to some neighbouring areas used by traditional agriculture (pastoralism). This subject is also scrutinised on a yearly basis by external auditors, who do engage with the complaint holders, as part of our FSC© certification.
In 2022, their last conclusions confirmed that they could not find any ground for such allegations against Aperam BioEnergia.
However, we remain committed to engage with our neighbours, discuss any problem and further improve our saplings and practices (see p.37 and 43). Indeed, BioEnergia now only plants during the rainy days -and not during 'the (whole) rainy seasons'-, which triggers quite complicated logistics and scheduling. But we are ready to do our best and will continue to improve! The related total water intake in 2022 was 310.10^3.m^3 i.e. -3% vs. 2021 (GRI-303-3).

Water Disposal Quality

We treat our effluents and monitor our discharge into rivers in line with our permits in terms of volumes, pH, temperature, particles of suspended solids, and metals in water and swiftly react in liaison with Authorities in case of anomaly.

2022 Intake by source (m^3 and %)



2022 Disposal Details

- Total discharge: 16.4 mio m^3 (+2.2% from 2021 excl. Aperam Recycling)
- Metal discharged: 7.04 kg/tcs (-6.0% from 2021)
- Suspended solids: 225.5 g/tcs (-26.5% from 2021).

Water

96% Recycling rate

-40% target 2030

Consumption intensity vs. 2015

GRI 303-3, GRI 303-4, GRI 303-5.

The Impact of ResponsibleSteel™

"We were challenged to think about how we need to manage natural resources in a different way.
Thinking about the lives of people who depend on the river, for example, in neighbouring communities, in nearby cities, and in the future of this river, where we capture the water we use in our production."

Hebert Barros Malaquias
Aperam South America Executive Utilities Manager (Timoteo)

Waste & Recycling

We greatly value our recycling performance. An example of our commitment towards recycling is our Recyco unit, that recovers the metallic content from the melting shop dust. We also produce metals that are endlessly reusable and we use a large amount of recycled materials in our production process. Our acquisition of ELG, now incorporated in our Recycling division, is accelerating our roadmap to become a zero-waste (for landfill) company GRI 306-1.

Recycling of Metallurgy By-products

In 2022, our production of waste decreased by over 6 % versus 2021 due to a reduction of our activity, with 7.3% of our by-products being sent to the landfill, the remainder being reused, recycled or stored for future recycling (see graph, below). Our waste recovery ratio stands at 93% i.e +0.3 pts compared to the 2015-2018 average GRI 301-2.

Less than 8% of our wastes are classified as hazardous. While more than 90% of total wastes are already recycled or re-used, some of our by-products, such as acids or specific treatment mud, are waiting for viable technical solutions. Engineers, R&D and a few external partners are studying the technical solutions to neutralise such wastes. As a consequence, in 2023, we are planning to start a second phase of acid regeneration in Genk to further reduce our acid wastes (see last year's report).

Aperam Recycling yard in Germany.

2022 Residues

7.3% landfilled

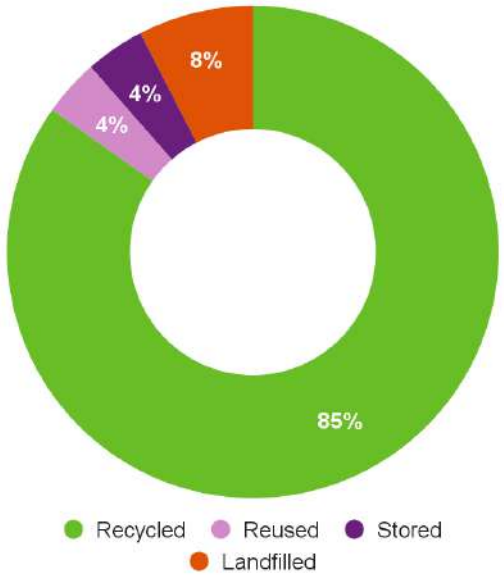
Hazardous < 7.5%

of which

94% reused or recycled

2022 Residues Split (%)

GRI 306-3, GRI 306-4, GRI 306-5.



Genk acid regeneration unit.

Metallurgy as a Recycling Channel

In 2022, 29% of all our material (GRI 301-2, including wooden pallets, refractories, consumables, etc., total input of 4.7 million tons) came from recycled sources. We usually focus on metal scrap, but many other items also come from recycled sources: electrodes, wooden pallets, acids, etc.

> In terms of scrap, we collect our own internal process scraps at each of our units and, after careful sorting, we send them back to our melt shops, usually via railways. We also purchase important quantities of scrap from external providers, all of which must meet specific qualitative specifications (eg. in terms of nickel or chromium content - but also in terms of radioactivity- see next page). The granularity of this scrap is also important as the density of the volume allows us to optimise the loading rate of our own tools within our process.
Contrary to what can be imagined, stainless scraps are predominantly composed of end-of-life scrap. Scrap traceability is complicated due to the blending that takes place at the largest providers to meet the demands by grade and the collection/deliveries that are organised in batches. This End-of-Life predominance also explains why the countries with more recently developed economies do not have a significant and well structured scrap market as it exists in Europe and in North America, for instance.

> On average in 2022, Aperam's products, including those made in Brazil where the scrap market is still almost nonexistent, contain 66% (according to the ISO 14021 standard) of metallic scrap.
This consolidated figure integrates the excellent performance of the stainless steel melt at our Stainless Europe sites, which is reaching 86% (according to the same standard) on average in 2022, with some of our Austenitics from Genk recording rates over 91%.

Voice

"Thanks to the acquisition of ELG, we can increase our scrap ratio by producing special blends for grades that have constraints for elements like copper, cobalt, phosphorus, as well as for grades in which the final Nickel content is far above or below the proportion in normal stainless austenitic scrap.

This allows us to align our innovation programs for better scrap sorting at our own mill sites, our customers' sites and at Aperam Recycling sites. The ultimate result will be better scrap quality, especially for high alloyed grades."

Guido Moermans,
Head of Raw Materials Valorisation

Aperam Châtelet "Scrap ratio optimization" team on the site's scrap yard.

> Located on the Isbergues platform, our Recyco subsidiary is an incredibly versatile operation that can transform a multitude of different (dangerous) wastes into intermediates that are being used as Nickel, Molybdenum and Chromium raw materials for our Belgian steel plants. These wastes can have a multitude of origins, like for example the recycling of household batteries, catalysts from production of vegetable oil, or residues of the coating industry. Other more familiar wastes are the dust from our own operations that are being transformed into blocks as well.
As every waste is different and needs a "personalised" way of handling, Recyco operations are quite complex, but also have a great potential to replace more and more of the primary metallic raw materials we use today.

Radioactivity alarms

In spite of their positive environmental contributions, the trading and processing of secondary material also poses a challenge to our Aperam Recycling segment: the detection of radioactively contaminated substances that could enter the recycling cycle, for example through medical or technical equipment that would not have been disposed of properly.

> According to Aperam Recycling "Radiation Guidelines", employees at scrap yards are to be regularly trained on the subject by our internal Radioactivity Detection Officers, so that only products with radiation exposure below the natural ambient levels are delivered to our customers - an essential securing measure for the safety of our employees too.
Our yards are equipped with stationary detection systems for incoming and outgoing material. Additionally, our cranes are equipped with grapple detectors to further enhance the probability of detection of small parts. All these detection systems are inspected and maintained by an external company once a year.

Radioactivity Monitoring (#)	2022	2021	2020	2019
Dedicated Internal Audits (Prevention)	**4**	5	3	1
Internal Alerts - reported by the units	**180**	264	272	303
External Alerts - reported by the customers	**3**	11	16	11

> In 2022, 3 external alerts only were recorded, all in the second semester, a significant improvement versus our historical levels. While the reduction in 2022 alarms was impacted by lower scrap volumes, it is also noted that the 3 external alarms were all a result of very low levels of radiation activity. As a fundamental principle of nuclear physics, it must be accepted that even with up-to-date Radiation Detection Equipment, a 100 % guarantee of detecting any and all radioactive particles in the material cannot be achieved.
At our own yards, no major defects or shutdowns due to radiation alarms were reported.

Other Initiatives

Industrial Risk

Risk prevention programme

> In the previous report, we presented the consolidation of our industrial risk prevention programme based on:

- Mitigating the outstanding risks
- Identification of new potential risks
- Prevention of the risk occurrence
- Strengthening of the risk governance

This year, we would like to highlight some 2022 initiatives about one of the main potential risks in our cold rolling mill process : the acid hazard.

■■■ All along the year, various Aperam plants hosted local firefighting teams for training and exercises on specific risks, particularly the chemical risks.
At Gueugnon; in October 2022, 12 local firefighters from all the Saône-et-Loire department came for a special exercise around the hydrofluoric acid storage issue. These exercises aimed to work on the usage and the set up of specific equipment and procedures. The Aperam fire brigade members and part of the Aperam workers participated in order to share their knowledge about this risk.
At Isbergues, the exercise took place on March 24, 2022. Combining the internal firefighters and the local firefighters, the chain was quickly put in place to manage a hydrofluoric acid fluid generating risky vapours in the direction of the South, with the risk to affect the local Research Center and other entities present on the platform. Immediately, all external authorities were alerted and a press briefing was organised. The responsiveness of the entire rescue and decision-making chain of the Isbergues platform made it possible to manage the event in the best safety and security conditions.

> In 2022, we can notice several concrete achievements in terms of risk prevention and among them, let's highlight the following:

- Isbergues: the implementation of a new acids transport pipelines on our LC2i line
- Gueugnon: the building of new acid pipe for chlorhydric acid was taken into account as part of the last prevention and risk control devices (double skins and leakage detection system)
- Imphy: a dedicated risk assessment (based on HAZard and OPerability analysis methodology, HAZOP) on the pickling line led to a solid list of preventive actions about leakage prevention, mixing risk prevention…

Above: Teams in action at Gueugnon.

Below, left and right: Exercise at Isbergues.

Remediation and decommissioning

During 2022, we continued to clean our former Firminy site and found an agreement with local administrations to have them finalise the remediation with additional Aperam fundings, so that the site can host new industrial activity in the coming years.
About the remediation of the L'Ardoise site, closed in 2005, we are strictly monitoring the residual pollutions and, as part of that, our water discharge monitoring ensures that there is no deviation related to the leaching of pollutants into the rainwater.

Climate-Change Risk assessment

> In 2022, we continued with our approach to integrate the physical Climate-related risks into our Industrial Risk framework.
Indeed, based on a first TCFD-inspired pilot exercise launched in 2022 on a few sites, we have gained in maturity to launch a global screening covering all our industrial locations (more than 90 sites) and the 20 locations of the main suppliers in terms of critical goods or raw materials.
This screening done for a complete list of chronic and extreme hazards (in line with the EU Taxonomy) relies on two scenarii suggested by the IPCC (SSP2-4.5 and SSP5-8.5). Based on these results, a drill-down is realised on the most important climatic hazards taking into account some 80 processes for Aperam. Following the ISO 14090:2019 and ISO 14091:2021 standards (both related to climate change and risk assessment) and the TCFD requirements, our dedicated multi-year project is divided into several steps.
At the end of the exercise, the two timescales 2030 and 2050 will have been analysed for risks as much as for the adaptation plans, and for the whole group.

> In parallel, a specific working group with senior members of the organisation is working on the governance and the transitional risks, in line with the TCFD recommendations, with a clear mandate from Aperam's LT. At Board level, topics related to Climate Change are being covered by the Audit & Risk Committee.

Transportation Impact

Freight Transportation

> In 2022, we began to implement the ESG criteria in the selection of carriers as well as all other suppliers. For road carriers, this includes the training of all drivers to eco-driving, the investment of trucks in alternative fuels (LNG, Bio-fuels, Hydrogen, Electrical) and for the biggest ones the ISO 14,001 certification.
We aim to reduce air shipments to the most and Aperam Stainless Europe shipped less than 100 tons by plane in 2022. In comparison, in 2017, Aperam Stainless Europe shipped more than 1,000 tons of stainless coils by plane, mostly to the United States and China. In the Alloys division, the air shipments remained stable at 487 tons in 2022 vs. 527 in 2021.
> The considerable increase in energy costs, which started with the war in Ukraine, the limitations imposed by rail ports and the closure of some of them especially in Eastern Europe, conjugated with the production drop in the second half of the year penalised the efforts undertaken in 2021 to shift shipments of finished products from road to multimodal or rail mode. In 2022, we shipped only 20 085 tons in 325 wagons from Isbergues vs. 30 909 tons in 487 wagons in 2021. From Genk, the shipments by multimodal transports represented 129 kt in 2022 vs. 173 kt in 2021. In Gueugnon, multimodal transports are limited to the UK and represent only 1215 tons in 2022.

We will pursue our efforts in 2023 to increase our rail transport share, as the gap between rail and road transport prices reduces and as new rail motorways and rail ports open or increase their capacities.

Transportation Impact (estimates[1], excluding maritime)

(Excl Aperam Recycling)		2022		2021		2020	
Indicator	**Unit**	**Brazil**	**Europe**	**Brazil**	**Europe**	**Brazil**	**Europe**
Rail traffic	% shipments (except Maritime)	**5,4**	**42,8**	11,6	**44.4**	**16.2**	**45,2**
Road traffic		**94,6**	**46.9**	88,4	**45.3**	**83.8**	**51,4**
River/Other traffic		**0**	**6.7**	0.0	**6.6**	0.0	**0,4**
Short sea		**0**	**3.6**	0.0	**3.6**	0.0	**3,0**
Trucks loading	%	**90,8**	**84,8**	**92,1**	**81.7**	**92,8**	**82.3**

(1) Estimation based on major plants, all European Service Centres and most of the Alloys division's transports.

Aperam Genk internal parking area, covered with solar panels in 2022 and equipped with electrical car chargers, as part of the project building Belgium's biggest solar farm (p.35)

Biodiversity

In response to growing concerns of our stakeholders, as well as in view of the strong consensus appearing on the intertwined issues of Climate Change and Biodiversity, we decided to set up solid and systematic biodiversity plans at our main plants. We built a company-wide procedure that defines the basis for a minimum, systematic biodiversity monitoring, even in areas where the issue is not considered as manifest. Based on the Global Reporting Initiative and ResponsibleSteel™ frameworks, this approach entails a preliminary identification of local, vulnerable or invasive species, their natural habitats, and of the possible disturbances that changes in our operations (artificialisation, lightning at night, etc.) could cause. The goal is to combine this baseline with a proactive plan to be set up in cooperation with local experts such as regional or municipal authorities or NGOs.
In 2022, we added in our monthly dashboard new indicators on Biodiversity to track the progress of the site's implementation of our global program ensuring a continuous improvement.

Aperam BioEnergia nursery in Minas Gerais (Brazil)

BioEnergia Harvesting in progress.

River in the native parts of the forestry.

Maintaining biodiversity in a monoculture in our BioEnergia forestry

As mentioned before, Aperam generates its own charcoal from BioEnergia's forests to fuel Brazilian blast furnaces and produce pig iron, eliminating the use of polluting, extractive coke.
This subsidiary is the only Aperam unit with a strong historical Fauna Monitoring Programme in place to scrupulously monitor local diversity in the Jequitinhonha Valley of Minas Gerais (Brazil) and the sole entity operating in protected areas or areas of high biodiversity value GRI 304-1.

However, as BioEnergia's forestry is a monoculture, we need to address the general public's concerns on its potential negative impacts.

1- BioEnergia's forestry has been planted for decades and is **in no way contributing to deforestation**, which is a valid concern from environmental organisations. All the land used to be a large, mostly infertile, and little-used territory that the Brazilian government decided to dedicate to profitable activity back in the 1970s.

2- Our trees are almost sterile and cannot multiply outside of cultivated parcels and disturb the local ecosystem and flora. Thus, they cannot be considered an invasive species. In addition, Aperam BioEnergia maintains vast native forest areas (almost a third of our surface, well beyond the 20% required by Brazilian law) as **a reserve of local biodiversity**, protects them from possible fires and diseases, monitors their development level, and occasionally replants the land with local species.

3- Aperam's forestry management systematically avoids the use of chemical fertilisers and pesticides that concentrate into the soil and water and follows the best practices.
Our forestry is increasing the volume of CO_2e stored on a yearly basis, making it a "**carbon sink**". After harvest, the leaves and twigs are allowed to degrade naturally into humus, aerating and enriching the soil with nutrients, keeping humidity, and stimulating underground biodiversity - see also page 32-33.

4- Eucalyptus requires water and nutrients to grow and survive, but the biological efficiency of the wood is higher compared to other agricultural cultivations. Studies demonstrate that eucalyptus consumes the same amount of water as native forests. BioEnergia's genetic improvement technology has adapted the trees to the dry local conditions, depriving the plants of pivoting roots that can reach water tables, contributing to the **preservation of soil extracts and water resources**.

5- We take our responsibility seriously and **work closely with external experts to continually improve our practices**.
We established partnerships with several organisations dedicated to forest management in Brazil. These partnerships allow BioEnergia to benchmark its practices and ensure that it adheres to the highest standards. Additionally, the forests are FSC®-certified, and BioEnergia is also certified under ISO 14001.
We won several awards for our innovative forest management practices, including the III Best Environmental Practices Award of the State of Minas Gerais in 2019 and the Brazil Ministry's SEMAD Recommend Seal in 2021 for our programs promoting an ecologically balanced environment.

Looking forward to 2023 and beyond, BioEnergia remains committed to upholding the highest standards in sustainable forest management and continuing to work alongside our valued partners to improve and innovate our practices.

Raising Awareness

Our Oikós Environmental Education Centre in Brazil

Located in Timóteo, the Oikós Environmental Education Center is a 989 hectare piece of Atlantic forest, which houses numerous springs and species of fauna and flora. It hosts several activities, including visits for scholars. Training courses are also offered to the community, with a focus on the recovery of springs and degraded areas, through a partnership between the Foundation and the National Rural Learning Service - Senar. With a list of courses aimed at professional training and social promotion, this initiative also offers classes for Multipurpose Forest Workers on topics such as the recovery of degraded and altered areas.
More than 60,000 visitors from different age groups have passed through Oikós to raise awareness of this rare biodiversity riches - and it also acts as a carbon sink, as evidenced by our calculations!

Introducing mascots as a way to raise awareness on biodiversity

In October 2022, we held our first Sustainable Development Week to reinforce Aperam's ambition to combat climate change and address biodiversity.
Biodiversity loss is a pressing environmental issue with an estimated one million species at risk of extinction. Aperam encourages all its employees to take action and protect biodiversity by promoting sustainable practices, conserving natural habitats, and reducing its carbon footprint. Through Sustainable Development Weeks and ongoing efforts, we aimed to inspire everyone to prioritise biodiversity in their sustainability efforts.
> Daily newsletters raised awareness about the biodiversity surrounding eight of Aperam's main plants and highlighted specific initiatives, such as implementing beehives (Isbergues, Châtelet, Gueugnon and Pont-de-Roide), resorting to differentiated mowing (Pont-de-Roide) or installing birds nests houses (Genk), all of which are ways to preserve biodiversity.
Employees expressed what biodiversity meant to them through videos.
> Also, fun quizzes were included every day to test our collective knowledge on the mascot chosen by each plant.

The eight main Aperam plants in France, Belgium, and Brazil are tackling biodiversity as a key topic, making the best possible efforts to nurture the environment in general and to protect a particular species or element of biodiversity in their local environment they selected as their mascot to epitomise their commitment. Local actions are planned in partnership with local associations to build stronger plans and continue to raise awareness across the year.
A specific graphical design is also planned for the next release of our Entrance posters.
Preserving Biodiversity is fully integrated in Aperam's CSR program!

The mascots elected by our plants to epitomise their Biodiversity program.

EcoTree & Aperam Saint-Denis

The office site in Saint-Denis, France, has established a partnership with EcoTree. EcoTree is a nature-based B-corp organisation with forests across Europe, that allows you to commit to reforestation and biodiversity.

> In 2020, Aperam Saint-Denis' Social Committee already signed with this labelled organisation on three biodiversity operations, among which the sustainable management of 70 chestnut trees in the forest of Pont de Buis.
> In 2022, in order to raise awareness and involve the Saint-Denis employees in this campaign, they were asked to choose the next project Aperam will be committing to for the coming 2 years. They chose to contribute to the restoration of a 5,000m² wetland in France. Wetlands are key ecosystems of which 80% have disappeared in France since the beginning of the 20th century (and over 50% in Europe). They form a special ecosystem that is home to 40% of the world's animals and plants and also help prevent soil erosion and flooding.

"*During this initiative, the employees of Saint-Denis showed great maturity by expressing a less traditional investment choice by preferring the rehabilitation of a wetland to the reforestation of a burnt forest area. The partnership is for two years and will be closely monitored.*" says Bruno Pellerin, treasurer of the CSE Saint-Denis.

Collaborative efforts on the ‘Ecolonomy’ project

In 2021, the Isbergues site of Aperam has embarked on an innovative "Ecolonomy" project aimed at transforming the industrial platform and meeting future environmental challenges while improving the quality of life for employees. The project has received widespread support from employees, local management, and stakeholders, with several companies located at the site already joining the initiative. The “AGIR” group (which means “act” in French), made up of Aperam employees, was created in 2022 to advance the Ecolonomy project, with more than 20 members involved. The project seeks to involve local partnerships.

■■■ An example of an action carried out in partnership with other organisations is the revegetation project at Recyco with the support of an external consultancy, and the association Canopé Reforestation.
As a result of the 2022 preparation plan, 700 trees were planted in January 2023 with the combined aim to create a natural barrier to limit dust emissions outside the plant and of course to promote biodiversity as part of the ‘Ecolonomy project’. The planted trees are of several local species adapted to the soil and weather conditions of Isbergues.

> Other initiatives under the same ‘Ecolonomy’ project include conducting ‘Climate Fresk’ awareness workshops (a serious collaborative game to learn about Climate change, its mechanics and consequences) with the site-level executive committee members of Imphy and Isbergues, and renovating the Isbergues Research Center.
To coordinate the projects, an internal project manager was assigned and 2 hours per week were granted to the members of the AGIR team for them to actively work on the project.
> Plans for 2023 are to continue greening the site and to study the mobility of the platform.


Tree planting by Aperam employees in Isbergues

Voice

“The transformation of our industry must be holistic and take into account the 9 planetary limits identified by the global scientific community, climate change being of course one of them. Biodiversity integrity, land-system change or biogeochemical flows (N,P) are other important limits, some of which have already been crossed.

Fully aware of these limits imposed by the laws of physics, without denigrating our needs and technical constraints, I’m firmly convinced that Aperam is moving in the right direction by integrating these limits in our future developments, at different scales, from the production site level (Ecolonomy project) up to the development of an innovative bio-based Ni production chain (Botanickel).

As the Executive Manager of Botanickel, I’m strongly committed to developing the business in line with these impositions because I am convinced that it is the best way to ensure a sustainable and profitable activity for Aperam in the long-term.The Botanickel’s commitments clearly reflect this desire for inclusive development.”

Aurélien Buteri

Executive Manager of Botanickel,
Environment. Project manager in the Aperam CTO Sustainable team.

Botanickel
By Aperam & Econick

Using plants to extract nickel from soil and then turning that nickel into stainless steel may sound like science fiction, but that's exactly what Botanickel is doing.

Aperam, a leading global producer of stainless steel, together with Econick, a spin-off of France's University of Lorraine that specialises in the phytoextraction sciences, have formed a new joint venture. Called Botanickel, the company seeks to become a world leader in the responsible and sustainable production of biosourced nickel for the stainless steel industry.
To accomplish this goal, the company is leveraging the incredible power of hyperaccumulator plants.

Botanical Power in Action

Hyperaccumulator plants are unique in that they can grow in specific metalliferous soils that are often inhospitable for cultivating traditional crops. These plants have developed the ability to safely accumulate extraordinarily high amounts of heavy metals in their aerial parts, including cobalt, cadmium, manganese, zinc, and of course nickel.

Taking Sustainable Stainless steel to a Whole New Level

With nickel being a key raw material in the production of stainless steel, Botanickel will leverage the plant's hyperaccumulator capabilities, to extract the metal from the soil. The native plants will be cropped in soils that are naturally rich in nickel and allowed to grow to full maturity. Once harvested, the plants are dried and their energy is recovered and used by local communities. Nickel is then concentrated and transferred to Recyco, Aperam's European recycling unit initially dedicated to recovering and treating the metallic content from melting shop dusts. Botanickel's process also generates by-products that can be used as high value fertilizers, exemplifying its commitment to the circular economy.

"We aim to set the global standard in the sustainable production of biosourced nickel, with a value chain spanning from the plants in the ground to the stainless steel used in a plethora of products and solutions. More so, we want to do this with respect for the climate, the environment, and the local communities we operate in".

Tim di Maulo, CEO Aperam

"Over the years and by working with leading experts from around the world, Econick has accumulated a high level of expertise in the cultivation and treatment of nickel-hyperaccumulator plants. The benefit of our close collaboration with Aperam is it ensures we will significantly contribute to the switch towards a new, eco-designed mode of producing metals at large scale and in the long-term".

Claire Hazotte, PhD in Chemistry, Manager – Econick

Our Commitments

Respecting the environment, reducing carbon emissions, supporting the circular economy, and empowering local communities – Botanickel takes sustainable stainless to a whole new level.

Reference

A pioneer in using plants to extract nickel, Botanickel aims to become a reference in the production of biosourced nickel and, in doing so, bring an unprecedented level of circularity and sustainability to the production of stainless steel.

Co-development

Involving local communities across the entire value chain is at the heart of Botanickel's strategy. We will develop opportunities in research, education, training, employment and energy production that are aligned with local priorities.

Biodiversity

Native hyperaccumulator plants, cultivated in accordance with the principles of agroecology, will improve soils that are naturally inhospitable to common crops while also preserving the local environment and protecting biodiversity.

Climate

Driven by an urgent need to reduce global greenhouse gas (GHG) emissions, Botanickel will have the potential to massively reduce the CO_2 emissions associated with the production of ferronickel and thus Aperam's stainless steels (Scope 3).

Interacting with our Stakeholders

We aim to achieve best practices in governance and apply the strongest business ethics. These are the keys to building trust with our customers, our employees and the communities we work in, to protecting our market position and licence to operate, and ensuring our ability to thrive.
Our strong customer focus, with innovation and R&D being key pillars, is a testament to the fact that we are good at listening and able to find the right solutions - a pattern we repeat in our social dialogues and stakeholder engagement.

Sustainably Profitable

2022 Financial Performance

> While the first half of 2022 saw a continuation of 2021's 'post-pandemic' economic revival, this was cut short by Russia's sudden invasion of Ukraine. The war has had far-reaching impacts, causing energy and raw material costs to skyrocket and disrupting supply chains. Despite these adverse circumstances and the significant cost increases our business faced, Aperam successfully maintained its production levels and continued to serve its customers consistently and without interruption.

> As a result, 2022 was a particularly asymmetrical year, with Aperam's having its most profitable half-year since its creation, with an EBITDA of €712 million in H1 while only recording for the second half €364 million, the result of destocking and record imports from Asia.
Thanks to a combination of cost reductions, growth and mix improvements under Phase 4 of our Leadership Journey®, we are adapting our footprint to defend our cost leadership in Europe : this is done by targeting volumes and expertise at the most efficient lines and almost doubling Capex (reaching €296 million in 2022 compared to €152 million in 2021).
> In 2022, we strengthened our circular economy strategy with the creation of Aperam Recycling & Renewables. Our fourth operating segment is based on the newly acquired ELG Recycling business and includes the Recyco and BioEnergia sub-segments. Per our ESG roadmap and general strategy, this allows us to complete our production chain, starting with the collection of scrap and production of sustainable charcoal as our own sustainable raw material sources. Subsequent links in the value chain are represented by other steel processing segments.

ESG monitoring as part of all our processes

Because we truly believe in sustainability, we do not define success using financial criteria only but by using a number of lagging and leading key performance indicators that ensure we are responsibly moving in the right direction in many dimensions.

> On the Human Resources side, Health & Safety has long been our first individual performance target and an important aspect in our people's annual evaluations. In addition to our other ESG indicators, which are allocated individually, our Performance Share Unit Plan (PSU) includes the following indicators, altogether for a total weight of 20% : reduction in Total Recordable Incident Rate (TRIR) reduction; percentage of women amongst the Top-1000 employees (both for 5% each); and the completion of our CO_2e emissions' reduction targets for the remaining 10% - see more details p. 89 of 2022 Annual Report.

> On the financial side, we have been using an internal CO_2 price since 2016, along with a qualitative assessment of all investment projects on 5 dimensions of Sustainability (Health & Safety, Customer impact, Social impact, GHG, and a last environmental dimension depending on the project). By crediting low-carbon investments with a bonus and penalising others, it encourages project holders to rework initial designs to mitigate negative impacts.
New in 2022, Aperam entered into a Revolving Credit Financing and a Term Loan (see p. 38, Annual Report), both of which are linked to two strategic sustainability commitments : first, to become a best-in-class stainless steel manufacturer in terms of Health & Safety by consistently exceeding the ISSF industrial average in terms of TRIR (standing at 7.01 in 2022, see p. 15) and, second, to maintain Aperam's leadership in low carbon steel making and de-fossilisation (reflected by a decrease in CO_2e intensity).
While not reaching our goals will result in more expensive financing, achieving them will mean a discount in the interest rate we agreed to allocate to financing more sustainability actions.

2022 Open Day at Aperam Châtelet.

At a glance GRI 2, 204-1, GRI 413-1

Indicator	Unit	2022	2021	2020	2019
Customer Satisfaction: Alloys	Rate on 10	n/a	9.15	n/a	8.8
Customer Satisfaction: Stainless		7.0 - 7.8(2)	7.9 (1)	8,0(1)	n/a
Innovation (R&D spent)	€m	21	18	16	20
Lobbying Expenses - Europe		0.57	0.64	0.87	0.20
Lobbying Expenses - Brazil		0.32	0.45	0.12	0.22
New products in sales - Stainless(3)	Index base 2019 or 2020	76	69	58	100
New products in sales - Electrical Steels(4)		247	261	92	100
New products in sales - Special Carbon		154	69	131	100
New products in sales - Alloys		554	168	100	n/a
Fraud Allegations Reported	#	**22**	**13**	**12**	**12**
- Forensic Cases Founded		2	4	4	1
-- Significant Cases(5)		0	0	0	0
Ethical Allegations Reported(6)		**54**	**10**	**4**	**0**
- Ethical Cases Founded		15	2	4	0
-- Significant Cases(5)		0	0	0	0
Local Purchase at Main Sites(7)	%	**41**	**45**	**51**	**50**
Stakeholder Engagement at Main Sites	%	**100**	**100**	**100**	**100**

(1): Europe, (2): Specific European countries.,
(3): European and Brazilian production together. (4): Electrical Steels Grain Oriented and Non Grain Oriented produced in Brazil.
(5): Following review by the Audit & Risk Management Committee.
(6): Human Rights including Health & Safety, Environment, Data privacy and other topics that can be reported through the whistleblowing hotline after scope extension in 2019-2020.
(7): Includes centrally sourced energy.

> Another major achievement of 2022 was the (on-site) external audit of our Timoteo plant under the ResponsibleSteel™ scheme.
This confirmed our intent to address the full spectrum of business responsibility and challenge our existing practices, ultimately leading to our certification in early 2023.

Long-term Strategy

Efficiency as an Employer's Responsibility

> With our European downstream operations tailored to market conditions, we are able to capture opportunities for a sustainable future. This adaptation involved reducing our tools from 29 to 17, but also, when necessary, responsible headcount reductions (see previous reports and above). According to analysts, Aperam achieved an impressive turnaround in its first decade and is ready to seize the opportunities arising from the long-term growth perspectives of our markets. This responsible strategy and its efficient delivery explain the regular awards we receive from financial and ESG analysts (see previous page).
In 2021, with the acquisition of ELG (see p. 10), we open a new chapter of Aperam's history.

> Overall, in 2022, we channeled €675 million in salaries and €130 million in taxes to local economies, compared to a respective €535 and €136 million last year (GRI 201-1).
We also play an important role through our expenses. In particular, in the locations where our largest sites are placed, in Belgium, France and Brazil, the local economy development is also part of our strategy. In 2022, our non-energy local spend portion increased to 55% (compared to 51% in 2021), however, our overall local spend incl. energy (sourced centrally) decreased due to the high contribution of Energy prices developments (GRI 204-1).

Relocation of Tubes manufacturing operations from Uruguay to Brazil

The technological development of manufacturing systems, the increase in freight rates, the lack of proximity of customers and raw materials with respect to other locations, as well as the increase in the labour cost compared to other countries in the region, had severely damaged the competitiveness of our South American Tubes business located in Uruguay (Montevideo). As a result, we have decided to concentrate its business units in fewer locations to gain efficiency, moving our operations from Uruguay (Montevideo) to Brazil (Viracopos) where most of our automotive customers are located, also investing in the most modern lines in the tube business.

Unfortunately it led to the loss of 180 jobs in Montevideo, while new jobs were created in Brazil (total net result for our South American Tubes business amounted to -109 jobs, the same in FTE). Aperam acted in line with all our obligations under the local labour law. Our employees in Montevideo also had the opportunity to apply for jobs in Brazil.

Social climate and Social Relations

In 2022, we kept our strong involvement in the social dialogue with all the stakeholders, sharing and explaining the complexity of our context, especially in Europe where we faced a strong modification of our economical and business situation during the second part of the year.

> We had constructive and numerous exchanges with the trade unions and the local working councils in order to find the best way to responsibly adapt our organisations to the variation of the level of activity, especially in Isbergues, Genk and Châtelet.
> Our involvement in the social dialogue is embodied in France by the contractualization of our social policy with the trade unions with the implementation of three major new national agreements in 2022 on diversity, the quality of life at work and health insurance. Specific measures were taken to deal with the impact of inflation on lower salaries.

> We continued to share with the employee representative in the EWC (European Works Council), the implementation of our key European projects as the review of our "European Footprint" or the ramp up of the BUL4 in Genk, and the impacts of the energy crisis and the Ukraine war on our industry.
In 2022, we held our 4 regular meetings with our EWC (select committee meetings and plenary sessions), and had an additional extraordinary meeting in august for the restricted committee to exchange with the senior management on the specificity of our business context considering the surge in energy prices and the evolution of demand.

Voice

"2022 was a year with two very different periods in Europe, with a radical change of context that led to in-depth exchanges at local and European level to share Aperam's situation and actions.

In a constructive social dialogue, we have sought the appropriate balance to maintain our medium and long-term actions by investing in skills and our footprint to prepare for the future and manage the necessary short-term adaptations with temporary actions. "

Florian de Gélis
Head of Human Resources France,
Employee Relations in the European Work Council

> As usual we “variabilized” our labour costs in Europe in line with decreasing production volumes in the second half of 2022. As a result, the 2022 temporary unemployment rate was less than 7% of the 2020 levels in 2022 in France (mainly in Isbergues, which corresponds to less than 1% of the annual country workforce) but still 30% in Belgium (corresponding to 3.4% of the annual workforce) - and zero in Brazil (see table below).

Employee Survey

75% believe strongly in the goals and objectives of Aperam

> The climate survey 2022 demonstrates the proximity and the quality of the social climate within Aperam, with 79% of our employees recommending Aperam as a good place to work and 82% considering that their immediate leader is accessible and available when they want to talk or need help.
See also in the table below the favorability to the questions from the “sustainable engagement”.

Social Climate

Indicator	Unit	Group 2022	Group 2021	Group 2020	Belgium 2022	Belgium 2021	Belgium 2020	France 2022	France 2021	France 2020	Brazil 2022	Brazil 2021	Brazil 2020
Temporary Unemployment(1)	FTE	n/a	n/a	n/a	69	35	227	15	32	221	0	6	77
Employee Sustainable Engagement(2)	%	78	83	n/a	74	72	nc	71	70	nc	85	88	nc
Absenteeism	%	3.2	2.7	3.4	5.5	5.2	4.8	4.2	3.4	5.1	1.5	1.6	1.5

(1) number of hours divided by local annual legal reference (in hours)
(2) % of "favorability" for pilar sustainable engagement

The Impact of ResponsibleSteel™

“Aperam already used to orient its management in line with the 3 pillars of sustainability, however the ResponsibleSteel™ framework offered us some learnings and reflections that enabled us to improve our processes and activities, like the way we manage our environment but also our greatest asset, our people!”

Many Maria Moreira
Aperam South America, Improvement Program Analyst

Our Employers’ Impact GRI 2, 201-1, 204-1, GRI 413-1I

Aspect	Local Contribution	Unit	Belgium	Brazil	France	WorldWide
Scope	Plants/Division	sites	Châtelet, Genk from Stainless Europe	Timóteo, Stainless & Electrical Steel South America ; BioEnergia of Recycling & Renewables	Imphy, Amilly, Rescal from Alloys ; Gueugnon, Isbergues, Pont-de-Roide from Stainless Europe ; Recyco	Imhua (PRC), ICS (IN) from Alloys & Specialties Usti (CZ), Rodange (LU) from S&S Tubes
	Service Centres		Genk (BeNeLux).	Campinas, Ribeirão Pires, Viracopos, Caxias do Sul .	Isbergues, Lésignan.	Germany, Italy, Poland, Iberica, USA, Argentina.
	Scrap yards		Zutendaal	/	Saint Romain, Limay, Colomiers	USA, Germany, UK, Spain,... (4)
	Main Offices		(Genk)	Belo Horizonte and São Paulo	Saint-Denis	Luxembourg HQ and Sales Offices(1)
People	**Own Staff (End of Period)**	FTE	2,030	3,816	2,492	2,398
	o/w Blue Collars		*1,309*	*2,847*	*1,422*	1,356
Local Economic Contribution	Forex rate (BRL)	€	n/a	5.4	n/a	n/a
	Wages & Benefits	EUR million	191.6	101.1	213.4	168.9
	Community Investments		0.04	0.51	0.06	0.09
	Payments to Government		14.6	62.9	21.6	30.9
	Economic Value Distributed		3,676.2	1,435.4	2,802.9	346.5
	CAPEX		95.8	110.5	65.0	24.6
	Total Tax Contribution(2)		72.1	96.6	108.8	n/a
	Local spent of main sites(3)	%	37.6%	27.3%	57.5%	n/a

(1) Canada, China, Czech Republic, Dubai, India, Japan, Korea, Mexico, Nordic, Russia, Switzerland, Thailand and the United Kingdom.
(2): Sum of all the amounts levied with respect to Corporate tax, other taxes (taxes on assets, environmental tax,etc.), including social contributions (employer and employee share), the latter being also included within Employee Wages & Benefits (GRI-201-1)"
(3): % of Local spent of main sites (Châtelet, Genk, Timoteo, Imphy, Gueugnon, Isbergues, Pont-de-Roide) excluding Raw Materials, with local spent defined as paid to suppliers respectively from Belgium, in Vale do Aço (Minas Gerais), and France. (GRI-204-1)
(4) and entities with less than 50 persons in: the Netherlands, Taiwan, China, Japan, South Africa, Canada, Russia, Australia, Italy, Singapore, Czech republic, India, ordered as per quantity of employees.

Responsibility in the Value Chain

Overall Supply Chain CSR Risk Assessment Methodology

In 2022, Aperam went further on the deployment of the latest version of its Responsible Purchasing Policy (2020). This policy is to be read in conjunction with our Code of Business Conduct, which suppliers are also informed about, and our general purchasing conditions that highlight our principles and our expectations towards our suppliers. These documents will be henceforth referred to collectively as 'our policy'.

Our policy requires suppliers to participate in regular assessments and to diligently inform us in the event of significant incidents, for instance one impacting local communities or the environment. Our policy also clearly establishes that working with supply chains that do not comply with our high ethical standards is not aligned with our practices. For instance, we remain attentive to our purchases involving the PRC province of Xinjiang to avoid benefiting in any way from the forced labour imposed on the Uyghurs. In the end, when our due diligence concludes that a situation deviates from our standards and is not likely to be remediated and improved, and/or our demands in terms of information or monitoring remain insufficiently addressed, the business relationship will be either suspended or terminated.

In 2021, we informed all our raw and non-raw material suppliers about this new policy. But proper implementation also requires continuous training. As of the end of 2021, 100% of our sourcing buyers completed training modules 'Conflict Minerals' and 'Protecting Human Rights'. Starting in 2022, the Responsible Purchasing training, which includes elements pertaining to the ResponsibleSteel™ standards, is obligatory to all buyers and is requested once a year. As of today, 95% of the non-raw material and 100% of raw material buyers have been trained.

Risks Amongst Raw Material Suppliers

> In 2022, we assessed 97 suppliers and continued our analysis concerning CO_2 emissions. We have simplified the questionnaire in order to better understand our suppliers and raise awareness about the importance of the Science-Based Target initiative (SBTi). Although doing so postponed our analysis, it allowed us to have a more precise and mature conclusion.
Only one risk was identified this year. It was related to the fact that a new potential supplier with whom we started testing material declined to answer our ESG questionnaire or to supply information about potential labour rights risk. No active business was developed with them.

Risk Amongst Freight Suppliers

> Last year we continued to adhere to such new international transport regulations as the Transport European Package, which came into force in February 2022. We terminated the contract with one carrier for violation of safety rules during product loading and securing, and we decided to migrate the business we did with two other carriers following justice actions being filed in their countries for violations of local laws related to employment. Other investigations with suppliers considered at risk from the ESG perspective were resolved (see also freight transport impact, page 44).

- One company had to be sensitised to Health & Safety and was requested to systematically apply all safety rules after flagrant ignorance was observed
- A second company was challenged for Human Rights issues after being suspected by the justice authorities of its home country. The case has been sorted, and the supplier was finally confirmed after presenting a complete and detailed action plan
- The other three suppliers were requested to submit action plans.

Their performance is supervised with deep scrutiny and subject to requests for continuous improvement as part of our process

Risks within Non-Raw Materials

> Following the implementation of our 360º supplier assessment process in 2020-2021, during which all critical suppliers were assessed in two waves in one single year (2021) in order to proof test the evaluation method. A new cycle was launched in 2022, to reassess suppliers that had been assessed relatively to their 2020 performance, along with any new suppliers that joined the list. The objective was to confirm the high level performance of those suppliers who earned a Grade A in their previous assessment and to ensure those with lower grades improved their performance levels (considering that 100% of the action plans generated in the previous assessments have since been implemented).

> Overall, 11% of the suppliers improved their scores in comparison to 2020, raising their SPI (Supplier Performance Index), while three suppliers saw their scores deteriorate. For these cases, a deep analysis is ongoing to understand the reasons, identify and mitigate risks, and define actions to raise their scores again. The same analysis and action plan are being applied to the 19% of suppliers who obtained a B score.

This year, 15% of the suppliers did not complete the full evaluation process prior to this disclosure. However, we continue to work to obtain 100% responses and to fully analyse the results and map the risks on this scope.

Supply Chain Risk Assessment

Supply Chain follow-up	Year	Universe covered (#)	Not assessed	Scope analysed (#)	Risks identified in terms of:			Suppliers presenting risks		
					Health & Safety	Other Human Rights & Ethics	Environ-ment	Total #	o/w recurring (>2 ans)	o/w New
Raw Mats	2018[1]	95	13	**82**	2	2	4	**8**	n/a	n/a
	2019	96	19	**77**	2	3	2	**7**	n/a	n/a
	2020[1]	86	21	**65**	2	2	2	**6**	0	0
	2021	106	44	**62**	1	1	1	**1**	0	1
	2022	**97**	**25**	**72**	**1**	**1**	**1**	**1**	**1**	**0**
Non-Raw Mats (main sites' suppliers + transport)	2018[1]	116	0	**116**	9	5	8	**22**	n/a	n/a
	2019	194	0	**194**	13	9	7	**29**	n/a	n/a
	2020	242	0	**242**	6	21	10	**37**	0	2
	2021	239	0	**239**	7	12	8	**27**	1	0
	2022	**114**	**17**	**97**	**5**	**4**	**4**	**13**	**0**	**0**
Total	2018[1]	**211**	13	**198**	11	6	12	**29**	n/a	n/a
	2019	**290**	19	**271**	15	13	9	**37**	n/a	n/a
	2020[1]	**328**	21	**307**	8	23	12	**43**	0	2
	2021	**345**	44	**301**	8	13	9	**28**	1	1
	2022	**211**	**42**	**169**	**6**	**5**	**5**	**14**	**1**	**0**

> Furthermore, in 2022, an improvement to the questionnaire was implemented in order to understand whether our suppliers evaluate themselves through a professional ESG rating agency. 45% answered positively.
This indicator is important and will be followed from now on, as Aperam also confirms its ESG engagement via some rating agencies score and encourages its suppliers to continuously improve on their ESG topics. Another example is the incentive we make in terms of equality and diversity, which has contributed to 60% of our suppliers declaring having implemented gender diversity policies and programs.

The Impact of ResponsibleSteel™

"The Sustainability or ESG concept is a fundamental pillar to ensuring that the steel produced by Aperam is 100% sustainable and responsible.
Our role is to involve and motivate our suppliers to be aligned with our commitments".

Márcio Siqueira da Silva
Raw Material Manager - Brazil

[1] *Update and follow-up of previous year's assessment for Sourcing.*

■■■ Even when dealing with global and reputational firms in our own and well-regulated countries of operations Aperam remains attentive to media coverage and suspicions of pollution or human rights issues.
> As reported in the previous report, in 2021, a risk was identified in Belgium, while we were actively testing new by-product suppliers. After the identification of a media coverage highlighting a suspicion of contamination, a due diligence was carried out. As they did not fully discard the risk and the suspected occurrence, Aperam's decision was to put the trial on hold. In 2022, the Flemish region temporarily suspended the operations of the supplier's unit until they implemented actions aligned with the regulations and paid the fines. Once done, the unit reopened and the supplier provided legal documentation proving the respect of the rules about polluting substances.

> In 2022, Aperam identified two issues with raw material suppliers. As a consequence, we stopped our relations with one extractive company operating in Guatemala, which was reported having environmental litigations as well as issues with the local population.
We also put a contract under suspension with one other supplier in Mexico, considering its operations were stopped by the authorities in relation to environmental issues. This contract was only reopened when the company could prove it was aligned with the regulations.

Risks and Compliance

Risk Monitoring

A Strong Process in Place

Our Risk management process is regularly assessed to ensure it is applying the best-in-class practices. With the support of Global Assurance Risk Management function, a top-down (in Q1-Q2) and a bottom-up (Q4) risk assessment is performed with all stakeholders (Business, platforms and Corporate functions) in order to identify, assess, mitigate and monitor all risks with a review of the mitigation action plans for all key risks. The process encompasses all possible areas, from taxes to natural disasters, including Cybersecurity risks and compliance risks with details on fraud, corruption, money-laundering, economic sanctions. Each risk is assessed in terms of likelihood and impact on financial or non financial criteria.

> This mapping is reviewed by the risk owners until the Leadership Team level. All key risks at group level are consolidated into a Global Risk Matrix, which is validated by the Audit and Risk Management Committee and are disclosed in the Aperam Annual Financial Report (GRI 3-3).

> In 2022, we extended our Risk management process to Aperam Recycling units. We also further improved it through a close follow up of the mitigation action plans for the key risks from our Global Risk Matrix. Based on Ad hoc Approval by the CEO, Global Assurance performed an independent monitoring on the follow up of the implementation of the mitigation action plans on Cyber security risk and also reported it on quarterly basis to Aperam LT and its Board's Audit & Risk Management Committee.

Ethics & Compliance GRI 205-2 to 3, 406-1.

Indicator	Unit	2022	2022 Belgium	2022 Brazil	2022 France	2021	2021 Belgium	2021 Brazil	2021 France	2020
Fraud allegations reported	#	**22**	**2**	**15**	**0**	**13**	**2**	**9**	**0**	12
- Forensic cases founded		**2**	1	1	0	4	1	2	0	4
-- *significant cases*		**0**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Ethical allegations reported(1)		**54**	**0**	**48**	**1**	**10**	**0**	**10**	**0**	**4**
- Ethical cases founded		**15**	0	13	0	2	0	2	0	4
-- *significant cases*		**0**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Other allegations(2) reported(1)		**9**	**0**	**6**	**1**	**2**	**0**	**2**	**0**	**0**
- Other cases founded		**1**	0	0	0	1	0	1	0	0
-- significant cases		**0**	0	0	0	0	0	0	0	0
Training Rate on Ethics	%	**65**	**66**	**74**	**47**	78	N/A	N/A	N/A	52
o/w White Collars		70	81	82	51	78	N/A	N/A	N/A	52
o/w Blue Collars		47	36	65	32	N/A	N/A	N/A	N/A	N/A

(1) *Including through the whistleblowing hotline after scope extension in 2020*
(2) *Environment, Cybersecurity/Data privacy*

Palais de Justice de Strasbourg - France, Garcés.De Seta.Bonet Arquitectes & Serra-Vives-Cartagena ©jm.bannwarth@drone-images-alsace.com, Aperam 304 with Uginox Top

> The fraud allegations reported through our whistleblowing hotline and other reporting mechanisms are related to misconduct such as thefts, corruption & bribery or conflicts of interests and no significant cases were reported in the year.
The 2022 Fraud allegations (like the previous years) concerned potential or real events where Aperam was the victim of fraudulent behaviours. None of them were to the detriment of other companies.

> All non fraud allegations, such as Human Rights (which cover Health & Safety, Harassment or Discrimination) are reported in the table to the left, within "Ethical", while Environment or Cybersecurity/Data Privacy are categorised as "Others". We see most of the cases reported in Brazil and Rest of the World, in particular the newly integrated perimeter of Aperam Recycling (ex-ELG).
The increase of the number of cases reported is mainly due to the extensive communication made about the possible use of the hotline for non fraud related cases such as discrimination or harassment, but also to the extension of the Aperam scope within the ELG integration. We also started to collect and report on the allegations raised by other means than the hotline (eg: email to Compliance or to management). On the other hand the percentage of founded cases remains stable (GRI 2-26).
All cases were shared with the Audit and Risk Management Committee, which reported appropriately to the Board of Directors. Communications to ensure all employees in Aperam can use this channel are being continued.

> In addition to these investigations, our Global Assurance Department performed 46 audits or advisory services in 2022, with strong focus on Recycling Activities. These provide a full review of our small and medium entities, high risk processes or emerging risks. Since 2018, the team has covered some sustainability-related topics such as Health & Safety and environmental issues. In 2022, our internal auditors performed a specific study on Water management and participated in the preparation of the ResponsibleSteel™ certification in Brazil and in the preparation of its Surveillance audit in Europe.

Rolling Out our Compliance Framework

Mission and Organisation

> In 2022, our Compliance Framework further advanced our risk mitigation efforts. Highlights include:

- Roll out of all Aperam policies at all former ELG units, including, for example (but not limited to) our Code of Business conduct, Anti corruption and money laundering policy, Prevention of misconduct and whistleblowing policy, No gift policy, Insider dealing regulations etc…
- Extension of the whistleblowing hotline scope to all new Aperam recycling units
- Start of the project of third party due diligence screening automation with the compliance screening automation of Brazilian suppliers as a first step (European suppliers and customers worldwide will follow)
- In depth screening of all Russian business partners, including UBO verification, in view of the evolution of the sanctions in order to ensure that we do not trade with sanctioned entities and individuals.
- Strong due diligence in place to ensure that no trading took place in 2022 with entities from OFAC- and EU-sanctioned countries, nor with any of the entities targeted by OFAC and EU targeted sectoral sanctions.
- An in-depth Compliance Risk assessment with input from all concerned business leaders. This resulted in detailed risk matrices covering all compliance topics and included an evaluation of country/activity-specific compliance risks.

Technical Expertise, Audit and Continuous Improvement

Regarding continuous improvement, 2022 saw several in-depth projects related to the automatization and improvement of some of the routines embedded in our People Management system.

> First, thanks to the implementation of an automatic refresh function, all our mandatory declarations, such as Aperam Insiders' personal data and the Compliance Certificate, were automatically updated and refreshed. This allows for a more efficient analysis and follow up by the Compliance Team, resulting in:

- 98% completion of the compliance certificate
- 92% achievement on the conflict of interests declaration

> Second, this same automatic refresh feature allowed us to auto update all our Aperam Insiders' personal data, ensuring an "Insider register" that not only complies with Luxembourgish regulations, but is also extremely effective.

Voice

"Any organisation, as well as Aperam, that conducts business outside its own territory, cooperating with international entities, is exposed to the risk of non-compliance with international sanctions requirements.

Especially at the present time, when along with the war in Ukraine, economic sanctions were imposed on Russia and Belarus, we are facing challenges related to limiting exports to these countries and relocating their business activities to other places in the world.

A proper, effective and meticulous procedure aimed at minimising the risk of non-compliance in our business activities with the requirements of international sanctions is a complex process of verifying our current and future contractors.

Detailed sanctions verification consists in collecting information on: the ownership structure, real beneficiaries, negative information available in the public domain and direct checking of companies and their owners as individuals on official published sanction lists.

We are convinced that the above-mentioned activities, despite the fact that they represent a significant amount of work, are necessary to ensure compliance with applicable regulations and to demonstrate a high level of business ethics."

Aneta Sabaturska-Kopek
Chief Finance & HR Officer,
Aperam Stainless Services & Solutions Poland

Alignment & Behaviours

In terms of alignment, we continued with the roll-out of the routines started in 2017, including the annual "compliance certificate" that summarises the year's actions for key leaders and site managers and the declaration of potential conflicts of interests for all exempts.

Aperam's induction training also ensures that joiners are quickly informed of the company's key policies, with refreshing sessions happening on a regular basis.
For instance, the 2022 mandatory compliance training pack included information on:

- Code of Business Conduct
- Promoting Diversity and avoiding discrimination
- Data Protection Regulation
- Protection of company information
- Fraud awareness

> Regarding the training rates, in 2022, the code of conduct training has been rolled out for blue collars within all Aperam units and will be continued in 2023 in order to ensure that all Aperam employees will have followed the Code of conduct training by the end of 2023. At the end of 2022, the training sessions achieved over 78% participation for white collars and 50% for blue collars - GRI 2- 23.

Communications

Regular awareness-raising initiatives are crucial to fully embed compliance into our culture, mindset and processes. Our communication schedule aims to cover all our topics in just a couple of years, focusing on a few topics every year. In 20221, the following company-wide communication initiatives were organised:

> As with the last four years, Aperam once again celebrated International Fraud Awareness Week. The goal of this initiative is to raise awareness about various fraud prevention and compliance topics and ensure a new, shared vigilance happens at all levels of the organisation.
From 21st to the 25th of November, four live sessions were organised with the participation of the Top 100 team members from Aperam recycling, who was the target audience of this year's edition. 79 participants from 18 countries joined the live sessions (70% participation rate).
The live events were complemented by daily group communications including short movies, quiz questions, a fraud case explained inspired by real cases that occurred at Aperam, and links to our Corporate policies that were sent every morning of the week to all Aperam email holders. These films covered such important compliance topics as:

- The rights of the whistleblowers
- The fraud triangle
- Phishing
- Confidentiality
- Insider dealings
- Conflicts of interests and how to deal with confidential and sensitive information.

> The last company-wide initiative, led by the Sustainability team and with the support of the Compliance, Corporate Inclusion & Diversity Working Group, and Human Resources teams, covered a completely different topic related to our Code of Conduct and Human Rights policies: the fight against discrimination in relation to Disability (see p. 21)

> Finally, we continue sending our key policies to our business partners. In 2022, all active suppliers received the yearly notice of our No-Gift policy, which stands as a key element of our Anti-Corruption procedure (GRI 205-2), and earlier in the year, a letter inviting them to support our stand for corporate responsibility, starting with human rights and health & safety.

Compliance at Aperam South America

In light of the risks posed by operating in different regions around the world, Aperam remains conscious of local practices not meeting our company standards. We operate under the principle of respecting the stricter of the two standards between local and our global company standards.
For example, after two years of being impacted by the pandemic, on top of rolling out our corporate action plan, the Brazil team resumed its proximity training on the shopfloor, which really can help all employees from Aperam South America and BioEnergia memorise our rules and guidance. Such face-to-face training sessions (see picture with Lorena below) and awareness-raising events are organised on several topics, including handling sensitive information, and benefit not only our scrapyard and warehouse personnel, but also our subcontractors. During Anti-Fraud Week, eight sessions were organised, half of which were held live. These sessions covered our Anti-Corruption and Anti-Money Laundering policies and procedures. With this action, 54 people from the Engineering, Sourcing and Financial departments and 75 from the Purchasing, Commercial and Foundation received first-hand training using real-life cases.
To complete the training, regular information is sent via various means. For example, we distributed stickers to put on computers (see picture of Erick, below) and displayed banners along our internal alleys. On the same note, a short version of the Code of Conduct was also added to the H&S booklet, which is distributed to our internal and external workers. As it is mandatory to have the booklet in one's uniform pocket during their shift, it really adds proximity to the shop floor workers! One could even say that our ethical guidelines are physically close to their heart!

Erick with a sticker.

Lorena at the end of a training session.

Voice

"Before the acquisition by Aperam, ELG already had a robust Compliance Management System to provide rules and guard rails for all actions and business decisions, sharpen Compliance awareness and effectively prevent, detect, and mitigate all relevant Compliance risks.

During the integration into the Aperam Compliance Program, the now Aperam Recycling segment has fully adopted Aperam's Code of Business Conduct as well as further Compliance Guidelines and hereby further strengthened its practices by optimising the Supplier Due Diligence process and introducing the Conflict of Interest as well as the Compliance Certificate yearly declarations."

Alexander Kehl
Aperam Recycling Head of Legal & Group Compliance Officer

Global Data Privacy and Cybersecurity

Cybersecurity

Cyberattacks and data breaches are two of the fastest growing risks for companies everywhere, and Aperam is no exception.
That's why we implemented a Cybersecurity Strategy based on 4 pillars:

1. Because our first line of defence against cybercrime is our employees, user awareness is the first pillar of the Aperam Cybersecurity Strategy. To train our employees about this threat, we sent 90,000+ phishing simulation emails in local languages.

We also provided multiple short courses with videos and quizzes via our MyLearning Cyber Academy. Having showed positive results in terms of awareness raising, these initiatives will continue in 2023

2. A second pillar focuses on the timely resolution of security vulnerabilities identified by the regular scanning of IT resources within the internal network and by conducting penetration tests on our websites, which are accessible from the internet.

3. Our third pillar sees Aperam raising new defences to further protect its assets and information. This includes introducing the latest technologies, like multifactor authentication and profounded monitoring tools, to detect and alert any unusual behaviour within our IT environment.

4. As backup, Aperam is revamping and testing its disaster recovery plans and business continuity strategies to ensure critical business processes are quickly restored in the event of a cyberattack.

In addition, an enhanced IT security communication channel has been established within Aperam, accompanied by an improved cybersecurity dashboard to support and assist Aperam management as part of their risk matrix assessment related to cybersecurity and data protection.

Global Data Privacy at Aperam

As an international company with global systems and teams located both in and outside of Europe, Aperam not only enforces the European General Data Protection Regulation (GDPR), but also addresses local regulations with international data flows and processings. As such, Aperam's Data Protection team is supported by a trained network of local data protection correspondents at site level.
A Data Protection Committee is also in place to review the Data Protection department's roadmap, ongoing actions and exchanges with the authorities. The Group is submitted to the National authority of Luxembourg, the CNPD, as its Lead Supervisory Authority.

Voice

"In a global context marked by international collaboration and innovation upheld by technology, we are putting an emphasis on the protection of personal data. By creating an effective data protection culture in Aperam, we aim at giving everyone of us the keys to ensure secure and compliant personal data processing, wherever we are located.
This is the core of my mission as the newly appointed Aperam Data Privacy Officer."

Julia Eisenmann
Company Secretary and Data Privacy Officer

Aperam also sees compliance with the GDPR as an opportunity to rethink its day-to-day activities and customer relationships, beyond the protection of all its stakeholders' privacy.

Relationship with Authorities

In principle, Aperam only engages in policy debates with governments and policymakers on topics that are of concern to its business.
In particular, our Code of Conduct stipulates very clearly that Aperam shall never subsidise any public body, civil servant, member of a political party or union. We also respect best practices in anti-corruption and promote a fair and competitive marketplace without the use of undue influence.
Our expenses in the context of public affairs and trade defence are detailed below, and include all relevant costs borne by Aperam, including the share of the fees paid to National steel making associations that relate to public affairs activities as well as Eurofer.

Lobbying expenses

Indicator	Unit	2022	2021	2020	2019	2018
Expenses - Europe	€m	0.57	0.64	0.87	0.20	0.38
Expenses - Brazil		0.32	0.45	0.12	0.22	0.17

European Carbon Markets

In 2022, only our European operations (which represent 50% of our Scope 1 emissions) were subject to CO_2 emission regulations (in the form of allowances or quotas), and there is no sign that a comparable system will be established in Brazil in the near future.
Based on current assumptions and ETS rules, we do not anticipate an overall shortage of free allowances before the late-2020s

Carbon markets and competition

The EU aims to achieve climate-neutrality by 2050, in line with the EU's commitment to global climate action under the Paris Agreement and the European Green Deal. We fully agree and support this EU target. This objective will translate into new regulations and incentives to invest in the transition (see also Taxonomy p. 36), reduce energy consumption and force all industrial players to adapt their processes accordingly.

As part of the European Green Deal, it is expected in particular that the EU will adopt new and ambitious legislations addressing GHG emissions, circularity, waste management, sustainability, energy, and industrial emissions.

Whilst these new legislations will certainly require the steel industry to adapt and make significant investments, they also represent an opportunity to accelerate the transition to a circular, low CO_2 business model of which Aperam wants to be a frontrunner.
It will be important in this context that the European ambition on sustainability and decarbonization goes hand in hand with appropriate measures to promote and defend a global level playing field, in order to ensure that the European industry is not put at a competitive disadvantage versus imports from countries that do not have equivalent goals and ambitions.

Trade Defense Update

For a long time, Aperam has been closely working with steel industry associations and other local trade associations, especially in Europe and South America, to promote the preservation and development of a level playing field for all market participants.
More and more, this work has also been driven by environmental concerns.
This activity has been particularly intense since 2018 and remains so today, due to the prolonged impact of U.S. protectionist measures (Section 232), the need to secure our markets from a growing number of unfair international trade practices (dumping, various forms of government subsidies, circumvention, etc.), and an increasingly difficult economic environment.

> In Europe, these issues have always been addressed within Eurofer, the European trade association, both during the periodic meetings dedicated to the steel industry's trade problems (External Committee) and, more specifically, within the forums dedicated to the subsector (Stainless Steel Working Group).

In 2022, Aperam intervened through Eurofer in the following files:
- European safeguard measures on steel products
- Anti-subsidies investigation (against India and Indonesia) concerning imports of certain cold rolled stainless steel sheets and coils
- An anti-circumvention investigation against imports of stainless steel hot rolled products from Turkey, made from Indonesian stainless steel slabs
- A dispute at the World Trade Organisation (WTO) against Indonesian export restrictions on raw materials used in stainless steel production, which unfairly restricts international producers' access to raw materials for steel production, particularly nickel.

> In Brazil, Aperam and IaBR (Brazilian Association of Steel Producers) are regularly supporting the Brazilian Authorities for Trade Defence to monitor unfair trade practices.
In 2022, Aperam participated in the following sole case:
- Anti-subsidy investigation on Stainless Steel Flat concerning imports of 304 Cold Rolled (Indonesia).

Stakeholder Relationships

Aperam sites are encouraged to regularly engage with local stakeholders, as doing so is consistent with our values and management best practices and also very important to our employees, who are also often our neighbours. As a fact, this is reflected in our Climate Surveys, the most recent of which record 76% of employees that state they are proud of the company's contribution to the community, with higher scores in Brazil.
In 2021, we formalised our approach in a formal External Stakeholders Engagement Policy, and keep on trying to improve, with an internal management tool to be deployed in 2023-24.

> In Brazil, we have a Foundation that is supporting local communities with "social impact investing" with particular attention on such topics as culture, sustainability, employability and local development. Called the Aperam Acesita Foundation, the organisation operates in Timoteo and the Jequitinhonha Valley, where our forestry is located (see page 60).

Pont-de-Roide welcomed a group of schoolgirls from the Albert-Jacquard College in Lure.

Genk's Junior Day, including a welding test, a fire-extinguishing exercise, a chance to measure the hardness level of tap water,.

Teams & families celebrating Genk's 60th Anniversary.

Queuing for Aperam Châtelet Open Day.

> In Europe, our community actions used to be less structured and more opportunistic, often modelling along the lines of a National or Regional event, like the "Weeks of the Industry" (see hereafter), or like the October Pink events (against breast cancer), for instance those held yearly in Gueugnon. They can also be very dynamic with family days in big sites, like the traditional Family or Junior Days (like the one gathering the 17-year-old children of our Aperam Genk employees), or more modest versions but equally impactful at our smallest sites (eg. in Amilly in 2022), together with local fairs, "green days" and Christmas events.

In 2022, we initiated a new and more proactive approach as the ResponsibleSteel™ framework requests, with the aim to develop a more systematic and cohesive engagement and development plan in cooperation with local players. We rolled out a pilot, fully embedded into our risk analysis to become a truly operational tool and combined together with guidelines in terms of charitable contributions tailored to the needs of our regions. For instance, the regions that are recognized by the authorities as in need of re-industrialization will benefit from a higher budget, for actions fully aligned with Aperam's values. As part of that, special attention is allocated to marginalised groups such as unemployed women or migrants.
We also decided to use existing reporting tools and expand their coverage to help us structure better our Stakeholder Engagement. In the meantime, we are also starting to disclose our charitable contributions (see table next page and online pages for our main plants for the information by site).
■■■ Our Isbergues platform is a clear example of active local engagement. Not only has the management of the Isbergues platform met with the main association representing local residents (EQVIR) every quarter since 2014, the unit developed special communication tools ("Bulletin de la plateforme d'Isbergues") to inform all stakeholders about what's going on with the several entities (not all Aperam) located within the boundaries of the former XIX century steel plant.They also contribute to the local life through participation to local sportive events and associations.

In 2022, we have a few highlights to report:
> Late November was Industry Week in France. It was the opportunity to talk about Aperam and to attract young candidates. On the Isbergues platform, doors were opened to local school children to promote our industry and we reached out to candidates during a regional forum to present our job openings. We are eager to exchange with professionals and to encourage vocations while breaking down preconceived ideas about industry. Likewise, our "Precision" unit from Pont-de-Roide opened its doors to a group of youngsters in partnership with the association "Elles bougent" (see page 19) to promote technical careers amongst girls and women.
> Almost at the same time, Aperam Châtelet plant opened its doors to welcome 1,200 employees, contractors, local officials and family members. This year's Open Day included guided tours of our operations together with a number of social activities, food trucks and special entertainment for kids. A video summary recorded the event.
> The year 2022 was also marked with 60 years of stainless steel in Genk and 10 years of Aperam on the clock: it was time to celebrate. Aperam Genk organised 2 family days in June for employees and families. In total, almost 2,000 people visited the Aperam Village, built on purpose for the occasion to bring together high quality street food, refreshing drinks, live music. The party also provided access to the "Open Air Museum" workshops of Bokrijk, where one could bake bread or work on leather.

Stakeholder Engagement, the Aperam Way

✓ Official Stakeholder Engagement policy
✓ Group Sustainability report in English
✓ Country supplements in local languages
✓ Entrance Posters and site-specific web pages with key Social & Environmental indicators (right)
✓ Ongoing Environmental monitoring
✓ Stakeholder dialogue directly by sites or via our Acesita Foundation, structuration in progress
✓ Development programs via our Brazilian Foundation and pilots in Stainless Europe
✓ Grievance mechanisms incl. online contact forms
✓ Human Rights/Discrimination risk assessments
✓ Biodiversity partnerships in progress
✓ Monitoring tool in preparation

(All public documentation available at www.aperam.com)

S&S Poland 's team ready for the challenge.

Above: Open Day in October 2022 at Amilly (Alloys & Specialties)..

Employee Survey

76% are proud of Aperam's contribution to the Community

Solidarity with the Ukrainian people

Aperam and its employees showed solidarity with the Ukrainian population.

- Donation: combining those channelled via the immediate Polish S&S unit initiative, with those sent to the special Aperam account and the personal donations made directly to associations, more than 50,000€ were collected in 2022
- Group-level donations will be made in 2023 to reflect our employees' commitment.
- Support provided in Isbergues (4 families were provided with a housing by Aperam and also with Christmas gifts)

■■■ Launched at the end of 2018, France's 'Territory of Industry' initiative aimed to revitalize industry, especially in areas that have experienced significant deindustrialization. The initiative targeted four axes: recruit, innovate, attract projects and simplify. To implement the plan the initiative combined the forces of cities and industrial companies.

Each Territory of Industry had a local project committee, led by an elected-industrial pair whose primary role was to establish stronger links between local authorities, manufacturers, state services and consular chambers. In other words, to build an ecosystem. Our Imphy unit was the industrial member of the team leading the Nevers-Val-de-Loire territory and proved instrumental in building the overall plan, two actions of which were very emblematic of the pooling of our efforts:

- a real estate offer to attract new projects to the area
- attracting and recruiting people from other regions in our local plants

In 2022, the Minister of Industry came to see the success of the Territory of Industry initiative in Nièvre first hand. The Imphy team is proud to have played a role in restoring the image of industry in the area, highlighting how our business is both modern and innovative. Proof of our success can be seen in the fact that Imphy and the Nevers-Val-de-Loire was named one of the nine Territory of Industry initiatives (out of an initial 148) that will continue on to a new three-year cycle . Called 'Industrial Rebound', this cycle aims to support the transformation of the automotive sector, develop projects around hydrogen, and promote the innovation potential of our territory.

Voice

"We can be proud to have helped restore the image of our industry and showed the general public that our business is modern and innovative.

I'm excited that our work will continue during a new three-year cycle!"

Jean-Christophe Trontin
Imphy Plant Manager

Community Investments (Donations)

Donations in k€ by Unit(1)	2022	2021	2020	2019
Aperam in Belgium - All units	31.1	16.7	5.8	9.1
Aperam in Brazil - All units	510.6	424.3	482.2	378.4
Aperam in France - All units	62.6	57.5	32.5	36.8

(1) Excluding donations in kind.

Aperam Acesita Foundation

In 2022, the Aperam Acesita Foundation once again oversaw a number of successful social initiatives, benefiting more than 81,000 people and involving a total investment of BRL 3.9 million in the Steel Valley and Jequitinhonha Valley. The social projects covered the Foundation's four main focus areas (38% education, 38% social development, 13% culture, 10% environment) and were aligned with our ESG strategy and mission of contributing to the local, integrated and sustainable development of communities.

With the pandemic-related restrictions of prior years lifted, but still applying the health and safety protocols, we were able to restart our actions closer to the communities being serviced (while still following all health and safety protocols). Even if our actions remained below pre-pandemic figures, they nonetheless had a big impact either through its various events and through the Aperam virtual channels.

• Education and Training

- Continuous Skills Training for Professionals: to support the continuous self-development in the Vale do Aço and Jequitinhonha regions, we provided qualitative education for professional improvement and updated pedagogical practices. A total of 1,800 professionals benefited from these initiatives, including school general service assistants, teachers, pedagogues and school directors.

- School Complementary Projects: 3,200 students benefited from our traffic safety and drug resistance education programs, both of which were held in partnership with the Military Police. We also partnered with local firefighters on safety training and with the Lawyers from Brazil Association(OAB) on a course about law and citizenship.

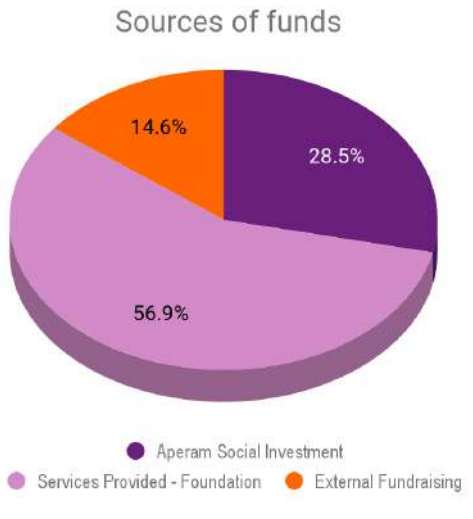
- **Female Empowerment:** the Girls Empowerment and Citizenship project, done in partnership with Itaú Social and the Council for the Rights of Children and Adolescents of Timóteo, developed the potential of female students by providing new skills and teaching about their rights as citizens and gender equality. A total of 163 young women from six schools benefited.

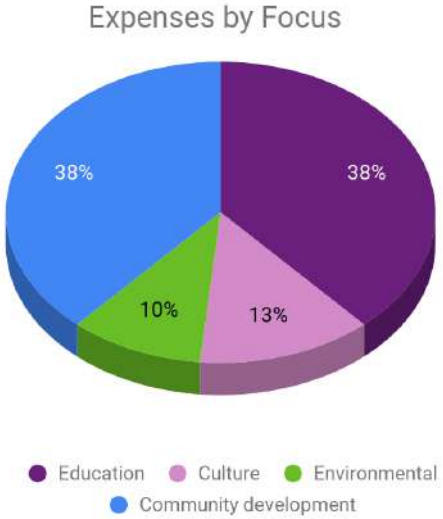
- Strengthening Ecological Awareness: with the goal of raising awareness about environment preservation and conservation, we implemented an Ecological Calendar. The calendar reinforced the responsibility each of us has for the sustainability of the planet by highlighting important dates related to environmental and ecological themes that were celebrated throughout the year, like World Water, Environment, Traffic and Tree Days.
The project also organised ecological walks, school writing competitions and theatrical opportunities for students.
In 2022, 802 people benefited, including employees, teachers, students and communities.

Aperam Acesita Foundation Activity GRI 413-1

Indicator	Unit	2022	2021	2020	2019	2018
Beneficiaries	Unit	>81,000	> 26,001	> 40,000	>65,000	>64,000
Cultural Events		200	60	94	89	102
Online Events (Views)		132(2)	> 61,001	>265,000	n/a	n/a
Social Impact Investments (Social Projects only)	BR$ million	3.9	2.7	1.98	2.3	2.9
Other Aperam Acesita Foundation Expenses		1.5	1.1	0.72	0.9	n/a
Total Investments by the Foundation (1)		5.4	3.7	2.7	3.2	2.9

(1) Including expenses linked to the services provided.
(2) Due to return to face-to-face actions after the pandemics.





- Empowering the Elderly: these actions aimed to support our senior citizens by encouraging healthy habits, raising awareness about physical and mental health issues, and providing social opportunities like dance classes, theatre and choir groups and various physical activities. Almost 3,000 elderly people in the city of Timóteo benefited.

● Professional Qualification

- Industrial

The Steel Institute, which aims to provide professional training, qualified 23 people from the community in welding, finishing and cleaning processes for stainless steel, generating more than 5,000 hours of training. In line with our commitment to diversity and inclusion, 24 women were trained as Steel Operators Welders, (5,000hours of qualification) with a focus on preparing them for potential employment opportunities at various regional industries, including Aperam Stainless. More than 70% of the women trained were already employed in the metalworking sector by the end of 2022. The same strategy has also been applied for training Steel Operators with physical disabilities, with more than 10,000 hours of training provided to 30 employees.

- Rural

With the goal of improving the quality of life for those living in rural areas, and in partnership with SENAR (National Rural Learning System) and Rural Unions, we provided 754 people with more than 20,000 hours of training in Vale do Aço and Vale do Jequitinhonha. Training covered such topics as revitalising degraded areas, maintaining brush cutters, building an ecological septic tank, beekeeping, recycling plastic bottles, cutting and sewing, amongst others.

● Culture

Contributing to the cultural strength of the communities where Aperam operates, 200 different events were held, including children's and adult's theatre, musical and dance shows; art exhibitions; outdoor activities; and educational lectures. We also provided workshops on organising and promoting cultural events. A total of 555 local artists and more than 50,000 spectators participated in the various cultural offerings.

● Public Notice for Social Projects

Through its own resources, 23 new projects were approved in the Vale do Aço and Vale do Jequitinhonha regions. These new projects are focused on generating employment and income opportunities, strengthening the solidaire economy, enhancing formal educational process, and empowering associations and communities in general. Community Associations, cultural associations, women's associations, and school funds, among others, from the financial contributions and technical support these projects provided, directly benefiting almost 3,000 thousand people.

● Project Notice - Environmental Initiatives

Also using its own resources, the Public Notice for projects with a focus on the environment has been put in place to support social organisations working to develop environmental technologies and generate a positive socio-environmental impact on the communities located in the areas covered by Aperam BioEnergia. Support was given to 11 initiatives organised by various social organisations, including community associations of small rural producers, Quilombola's associations, cultural associations and residents' associations. Nearly 3,300 people in the Jequitinhonha Valley region benefited from these initiatives.

For more information (in Portuguese), please visit: http://brasil.aperam.com/sustainability/fundacao-aperam-ace sita/a-fundacao/

A Focus on Sustainable Innovation

Our mission is to provide innovative steel and alloy solutions that are affordable, long-lasting, and that offer the strength and versatility our customers have come to expect. That's why we place a particular focus on growing our portfolio of high-value added products and solutions. For example, we continue to develop innovative products through our research and development initiatives, while also leveraging our marketing and communication efforts to expand our brand recognition and grow our market share.

Sale of New Products by Category

Index, based in volumes	**Base**	**2022**	**2021**	**2020**	**2019**
Stainless Steels	2019	76	69	58	100
Electrical Steels		247	261	92	100
Special Carbon Steels		154	69	131	100
Alloys	2020	554	168	100	n/a

Note: after a certain amount of time (e.g., 5 - 7 years), a product can no longer be considered 'new', which explains the decrease in 'new' projects seen in 2020.

Employee Survey 2022

8.1/10 agree that we actively study customers' requirements and expectations

Yet while we are intent on growing, we want to ensure we do so sustainably. To do this, we are dedicated to producing products and solutions that both drive a circular economy and enable the sustainable world our future demands

Answering Tomorrow's Challenges Today

Whether it be electric vehicles, renewable energy or addressing the challenge of climate change, many of today's megatrends are acutely focused on sustainability. But to be truly sustainable, these solutions must be sustainable themselves – and that means being made of materials that support the circular economy and that can go the distance.

100% recyclable, inherently reusable, durable, resistant to corrosion, hygienic, easily formable and offering excellent mechanical strength – not to mention being competitively priced – stainless steel has emerged as the material of choice for megatrends, which means big opportunities for companies like Aperam.

To leverage this opportunity, Aperam has launched new business programs to position ourselves as a leading actor in the megatrends arena. Megatrends will shape our world for a long time, which is why Aperam is dedicated to working with our customers to develop the innovative solutions that will drive these trends.

The Innovative Materials Behind the Mobility Revolution

The mobility and transport sector is moving full steam towards full decarbonization. In the last few years, key decisions have been made to accelerate this shift. For example, in May 2023, EU Member States adopted legislation phasing out sales of internal combustion engine cars and vans by 2035. The International Maritime Organization agreed to aim for a reduction of annual GHG emissions from international shipping by at least half by 2050, compared to their levels in 2008.

Automotive, rail, aviation, maritime… all of these major industries are subjected to ever growing pressure to go green. Answering this pressure will require the use of innovative new materials. Overall, Aperam is committed to supporting the transition towards sustainable mobility and transport through our innovative materials solutions, including in these three areas that we see as being ripe for disruption:

- **SHIFT TO ELECTRIFICATION:**

  The sale of electric vehicles is set to skyrocket in the next few years, from 1.4 million in 2022 to 11 million in 2030 and 16 million in 2035 (Europe), and from 752 000 in 2022 to 5 million in 2030 and 8 million in 2035 in the US (IHS Markit).

  Connected cars will account for 100% of the market by 2035. Aircraft will become more and more electric, increasing the percentage of systems that are powered electrically.

Voice

"These developments open the door for new opportunities for Aperam and the materials we produce.

Whether it be electrical steel for e-motors, stainless steel for battery parts, and alloys for high-efficiency e-motors, power electronics, and battery components - Aperam is ready to deliver".

Gwenaëlle Le Meur
Director New Business – Mobility & Transport.

- **DEVELOPMENT OF HYDROGEN MOBILITY:**

  According to the International Energy Agency, there are 50 national targets, mandates and policy incentives in place today that directly support hydrogen. The majority of these are focused on transport.

  Thanks to its unique properties, stainless steel is being used to store hydrogen in cryogenic tanks, and produce bipolar plates for fuel cell vehicles.

- **THE DECARBONIZATION OF TRANSPORT:**

  The Green Transition and various regulations supporting this transition will cause fundamental change to the materials used in the shipping, trade, offshore and energy sectors. For example, governments have agreed to adopt a revised and strengthened set of climate goals at the 80th session of the Marine Environment Protection Committee (MEPC80) in July 2023.

  Within the maritime sector, alloys are the material of choice in applications for on-shore supply, while stainless steel is favoured for CO_2 scrubbers and NOX selective catalytic reduction.

Sustainable Solutions for the Food & Beverage Sector

Aperam's focus on megatrends is by no means limited to the transportation sector. The company is dedicated to developing sustainable solutions to some of society's most pressing problems – including the use of plastic packaging.

To position stainless steel as a sustainable alternative to the plastic packaging used in grocery stores, we recently partnered with Berny to design and develop a returnable and reusable stainless tray to get your meat, poultry, and fish products packaged. "This project is an excellent example of how our research and innovation initiatives leverage the strengths and capabilities found across the company and within our network of partnerships," says Saghi Saedlou - Head of Stainless Steel Research, Europe.

Voice

"Aperam also contributed to NF norm D21-304, which defines the conditions for microwaveable stainless steel. The use of stainless steel and the shape of the final product are crucial for compliance.
We saved Qwetch time in developing their certified food container, allowing them to be among the first to introduce a sustainable microwaveable alternative to plastic food containers."

Saghi Saedlou
Head of Stainless Steel Research, Europe

Building Better with Stainless Steel

Beyond the Food & Beverage sector, stainless steel has become the material of choice for the building and construction sector.
To help this sector comply with new obligations on the use of low carbon and circular-friendly building materials, Aperam has developed a robust pipeline of stainless solutions for use with building roofs and facades, all of which offer an unprecedented level of durability, a long lifespan and are infinitely recyclable.

Considering that, in Europe, buildings account for 40% of the EU's total energy consumption, Aperam is also developing solutions to help buildings and homes become more energy efficient.

For example, with the use of thinner stainless steel, brazed heat exchangers can get better heat exchange and thus offer better performance.

Stainless steel is also used to help insulate windows - a key step to improving the overall efficiency of a home or office.

Customer Satisfaction

Indicator	Unit	2022	2021	2020	2019
Customer satisfaction: Alloys	Rate on 10	n/a	9.15	n/a	8.8
Customer satisfaction: Stainless		7.0 - 7.8(2)	7.9 (1)	8,0(1)	n/a

(1): Brazil
(2) Specific countries in Europe: Italy, Spain, Portugal, North-Africa, Poland, Czech Republic.

Customer satisfaction remains a top priority, and something we measure via our customer satisfaction surveys. In 2022, several surveys have been conducted, giving an average rate from 7.0 to 7.8 depending on the countries.

The Energy Transition

To fit with our climate objectives, today's energy system must be deeply transformed within the next decade:

- **CONSUME LESS AND BETTER**

  → Increase energy efficiency by a third by 2030(1) and phase out from fossil fuels, leveraging on electrification
  Aperam is partnering with customers to produce solutions that consume less energy and improve efficiency. Heat exchangers and water storage tanks are being boosted in the commercial and residential markets by the fast development of heat pumps. Stainless and alloys are critical for the emergence of those markets. Energy efficiency and electrification are key words for the industry.

  A few examples: Efficient motors and compressors (Non Grain Oriented electrical steels or NGO), water desalination plants use important volumes (stainless steel), recovery of heat in the industry processes (stainless steel), etc.
  (1) *Source: International Energy Agency, Net Zero Scenario*

- **PRODUCE GREENER**

  → Transition from 80% fossil fuel to 80% low carbon energies, with remaining emissions being captured and stored.
  Stainless steel can also play a leading role in the shift to greener sources of energy – and Aperam is at the forefront of this transition too.

Voice

"I think Aperam can bring a lot to the energy transition, and that the energy transition represents a great opportunity for Aperam.

For example, to help reduce the use of fossil fuels from 80% to 20% by 2050, Aperam is developing a range of applications for generating renewable energy (geothermal, concentrated solar power, solar Photo-Voltaic, offshore wind), creating nuclear energy, capturing CO2 – and more".

Gilles Bourgain
Director New Business - Energy Transition.

- **TRANSPORT & STORE EFFICIENTLY**

  → Build the infrastructure needed to efficiently and sustainably transport, distribute and store green energy from source to switch.
  Stainless steel and alloys are crucial to creating the infrastructure required to transform, transport, distribute and store energy. Electrification will develop massively globally because electricity is a vector enabling the use of green energy in a number of sectors.

  Aperam's zero CO_2 Grain Oriented electrical steels (GO) will play an important role in producing efficient power transformers. A good way to transport large volumes of energy over long distances is to transport it through liquid gas (natural gas, biogas, e methane, H_2). Stainless and Alloys are critical to store liquid energy in large vessels at very low temperature. The electrolysis process to produce H_2 also requires high resistance materials. Aperam is set to play a leading role in providing long lasting materials for bipolar plates and electrodes of the different electrolysis technologies.

Aperam also carefully monitors emerging markets to identify opportunities for new partnerships and joint ventures.

Whether it's the sustainability-oriented megatrends of today or the emerging trends that will define tomorrow, Aperam has the solutions, the experience and the expertise our customers need to navigate a changing world.

About this Report

This report is based on Aperam figures and inspired by the following initiatives: United Nations Global Compact; Carbon Disclosure Project; ISSF Sustainable Charter; WorldSteel Sustainable Charter, ResponsibleSteel™ principles ; and the Global Reporting Initiative (see Index below). Other GRI-related references are within our Online Supplements.

GRI Index	Disclosure code	Reference
All indicators	3.3	Disclosure on Management of Material Topics - Online Supplement C.
Economics		
Economic Performance	201-1	Direct economic value generated & distributed - p. 6 - 7, 50.
Procurement Practices	204-1	Proportion of spent on local suppliers at main sites - p. 50, 52.
Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures - p. 53, 55.
	205-3	Confirmed incidents of corruption and actions taken - p. 53, 57.
Environmental		
Material	301-2	Recycled input materials used - p. 31, 39, 40.
Energy	302-3	Energy intensity - p. 31-33, 35.
	302-4	Reduction in energy consumption - p. 34, 35.
Water and Effluents	303-3	Water withdrawal - p. 31, 38.
	303-4	Water discharge - p. 31, 38, 41.
	303-5	Water consumption - p. 31, 38.
Waste	306-1	Waste Generation and Significant Waste-related impacts - p. 39, 40.
	306-2	Waste by type and disposal method - p. 31, 39, 40
	306-3	Waste generated - p. 31, 39.
Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas - p. 43-45.
Emissions	305-1	Direct (Scope 1) GHG emissions - p. 31- 33.
	305-2	Energy indirect (Scope 2) GHG emissions - p. 31-33.
	305-3	Other indirect (Scope 3) GHG emissions - p. 31, 34.
	305-4	GHG emissions intensity - p. 33-35.
	305-7	NOx, SOx and other significant air emissions - p. 37.
Labour		
Occupational Health & Safety	403-1	Health and safety management, assessment, consultation, training, prevention - p. 14, 15.
	403-5	Worker training on occupational health and safety - p. 14, 15, 26.
	403-9	Rate and gravity of injury, occupational diseases, lost days, absenteeism, number of work related fatalities, by region and gender - p. 14, 15.
Training & Education	404-1	Average hours of training per year per employee by gender, and by employee category - p. 14-16, 25, 26.
	404-3	Percentage of employees receiving regular performance reviews, by gender and by employee category - p. 23.
Diversity	405-1	Diversity of governance bodies and employees - p. 19, 21, 23 and Annual Report 2022 (Board of Director and Leadership Team) - p. 67-75, 77, 82.
	405-2	Ratio of basic salary and remuneration of women to men - p. 20.
	406-1	Incidents of discrimination and corrective actions taken - p.53
Supplier Assessment for Labour Practices	414-2	Significant actual and potential negative impacts for labour practices in the supply chain and actions taken: Present report - p. 51-52.
Society		
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programmes - p. 48, 50, 60, 61.

General Standard Disclosure		Information or comment and Reference (page number)
The organisation and its reporting practices		
GRI 2.1	**Organisational details** (Location of headquarters, Local operations, Ownership and legal form)	Aperam Cover and Back Cover., 2022, p. 14-18, Public limited company in Luxembourg.
GRI 2.2	**Entities included in the organisation's sustainability reporting**	Aperam Annual Report 2021, p. 185. ELG is partially covered in the current report, unless otherwise mentioned (as mentioned in the first page caveat note, p. 2). Specifying the differences between the entities included in the organisation's sustainability reporting and financial reporting
GRI 2.3	**Reporting period, frequency and contact point**	Calendar year 2022 (Annual) is reported in the Made for life Report 2022. Previous issue reported on calendar year 2021. sustainability@aperam.com or contact@aperam.com
GRI 2.4	**Restatements of information**	Restatements may result from: Mergers or acquisitions, change of scope of segments, base years or periods, nature of business, measurement methods and tools. Thus, 2021 Aperam financial figures by Divisions have been reevaluated in line with the new organisation further to the creation of Aperam Recycling & Renewables.
GRI 2.5	**External assurance**	Main report, and online supplement bundle. Current report, p. 2.
Activities and Workers		
GRI 2.6	**Activities, value chain, and other business relationships** (Markets served, Scale of organisation, Supply chain)	Aperam Annual Report 2022 p.12-18, 48--55, Current report p. 7 and Annual Report 2022 p.19, 31--32, 152., 2022 p. 12, 114 and 209., Online Supplement C – p. 1, 2. Purchased ELG, partially covered in this report, p. 12 and Annual Report 2022 p. 12.
GRI 2.7	**Employees**	Employees: Figures based on FTE as of December 2022, Full time own employees at year-end excluding Haven Genk. A small portion of the workforce at BioEnergia in Brazil is subject to variations due to seasonal factors (growing cycle of the trees: planting, harvesting etc.).
Governance		
GRI 2.9	**Governance structure and composition**	Current report, p. 11, Annual Report 2021, p.68-88.
GRI 2.22	**Statement on sustainable development strategy (by the CEO)**	Opening Words. Current report, p. 4-5.
GRI 2.23	**Policy commitments**	Values in Current report, p. 9, Aperam Code of business conduct – available on the web in multiple languages.
GRI 2.26	**Mechanisms for seeking advice and raising concerns**	Annual Report 2022 p. 97, Current report p. 55. advice about ethical and lawful behaviour, and organisational integrity' has been changed to 'advice on implementing the organisation's policies and practices for responsible business conduct'
GRI 2.28	**Membership association**	EUROFER, Brazil Steel Institute, ISSF and WorldSteel. Annual Report 2022, p. 61, ResponsibleSteel, Aperam Foundation, 2022 p 60-61
Stakeholder engagement		
GRI 2.29	**Approach to stakeholder engagement** (Stakeholder groups, Identification and selection of stakeholders)	Description of our Stakeholders groups as well as our reporting process and materiality analysis is to be found within our Supplement C. Current report, p.11, 12, 58 and further, and Supplement B.
GRI 2.30	**Collective bargaining agreements**	100% of the Aperam employees are covered by collective bargaining agreements

Disclosures on material topics		
GRI 3.1	**Process for determine material topics**	In line with the GRI framework. Current report, p. 12, Supplement B. Description of our Stakeholders groups, reporting process and materiality analysis to be found within our Supplement C
GRI 3.2	**List of material aspects**	Current report, p. 12, Supplement B p. 1. Description of our Stakeholders groups, reporting process and materiality analysis to be found within our Online Supplement C.
GRI 3.3	**Management of Material Topics**	See our Risk Management in Current report, p. 53 and Annual Report 2022 p.52--54.

aperam

Aperam
24–26 Boulevard d'Avranches
L-1160 Luxembourg
Grand Duchy of Luxembourg

Email: stainless@aperam.com
For all sustainability feedback: sustainability@aperam.com

For more information, please visit our website:
www.aperam.com/sustainability

Aperam Becomes First Stainless Steel Company to Earn ResponsibleSteel™ Certification

Independent Limited Assurance Report on a selection of Key Performance Indicators disclosed in the 2022 Made for Life Report

To the Board of Directors of

APERAM S.A.
24-26, Boulevard d'Avranches
L-1160 Luxembourg

We have performed a limited assurance engagement with respect to a selection of Key Performance Indicators disclosed in the 2022 Made for Life Report (the "Sustainability Report") of APERAM S.A. (the "Company") for the year ended 31 December 2022 as set out in the "Scope" section below.

Scope

The scope of our work was limited to provide limited assurance over the selected Key Performance Indicators as set out in the Table below (the "Selected Information").

Key Performance Indicators	**Units**
Total Recordable Incident Rate (TRIR)	-
Lost Time Injury Frequency Rate (LTIFR)	-
Severity Rate	%
Energy: Elec + Nat. Gas + LPG	GJ/tcs
Energy: All	GJ/tcs
CO2 sequestration; also named Sequestration (absolute value) in the report	ktCO2e
GHG emissions (net); also named Scope 1+2 net intensity (all tons) in the report	tCO2e/tcs
Dust emissions (exhaustive)	t
Dust emissions (exhaustive)	g/tcs
Water intake	million m^3
Water intake	m^3/tcs
Scope 1 - Non-Biogenic (absolute value)	ktCO2e
Scope 1 - Biogenic (absolute value)	ktCO2e
Scope 2 (absolute value) location based	ktCO2e
Scope 2 (absolute value) market based	ktCO2e
Scope 1+2 gross intensity (own tcs)	tCO2e/tcs
Scope 1+2 gross intensity (all tons)	tCO2e/tcs
Scope 1+2 net intensity (own tcs)	tCO2e/tcs
Metallic scrap ratio	%

Our assurance work was performed with respect to the year ended 31 December 2022 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2022 Sustainability Report and, therefore, do not express any conclusion thereon.

The Assessment Criteria

The Selected Information was prepared in accordance with certain sections of the Global Reporting Initiative (GRI) framework and additional methodologies defined by Company policies (together the "Assessment Criteria") for the year ended 31 December 2022, accompanying the KPI disclosures in the Sustainability Report.

Management considers the Assessment Criteria relevant for the purpose of the Company's business and for the ultimate users of the Sustainability Report.

Responsibilities of the Board of Directors

The Board of Directors of the Company is responsible for:

- developing appropriate Assessment Criteria against which to assess the Selected Information and applying these consistently;
- ensuring that those Assessment Criteria are relevant and appropriate to the Company and its shareholders;
- designing, implementing and maintaining internal control procedures that provide adequate control over the preparation and presentation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- selecting and applying appropriate policies, and making estimates that are reasonable in the circumstances;
- the preparation of the Selected Information in accordance with the Assessment Criteria;
- the retention of sufficient, appropriate records to support the reported data and assertions included in the Selected Information.

Inherent limitations

The Selected Information needs to be read and understood together with the Assessment Criteria which the Company is solely responsible for selecting and applying. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time. The selection of different but acceptable measurement techniques may result in materially different measurements.

Our independence and quality management

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" (CSSF), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Management 1, as adopted for Luxembourg by the CSSF, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Responsibility of the "Réviseur d'entreprises agréé"

Our responsibility is to express a limited assurance conclusion on the Selected Information as set out in the Table above based on the procedures we have performed and the evidence we have obtained. We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information issued by the "International Auditing and Assurance Standards Board" (IAASB) as adopted for Luxembourg by the "Institut des Réviseurs d'Entreprises". This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Selected Information has not been prepared, in all material aspects, in accordance with the Assessment Criteria.

A limited assurance engagement involves assessing the suitability in the circumstances of the Company's use of the Assessment Criteria as the basis for the preparation of the Selected Information, assessing the risks of material misstatement of the Selected Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Selected Information.

In a limited assurance engagement, the procedures vary in nature and timing and are less in extent than for a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Within the scope of our engagement we did not perform an audit or a review on external sources of information or expert opinions, referred to in the Sustainability Report.

Within the scope of our limited assurance engagement, we performed, amongst others, the following procedures:

- we gained an understanding of the Selected Information and related disclosures;
- we gained an understanding of the Assessment Criteria and their suitability for the evaluation and/or measurements of the Selected Information;

- we gained an understanding of the internal control procedures in place supporting the gathering, aggregation, processing, transmittal of data and information and reporting of the Selected Information, including controls over third party information (if applicable) and performing walkthroughs to confirm our understanding;

- based on that understanding, we assessed the risks that the Selected Information may be materially misstated and determination of the nature, timing and extent of further procedures;

- we inquired relevant Company management, personnel and third parties;

- we performed analytical procedures related to the Selected Information;

- we considered the significant estimates and judgements made by management in the preparation of the Selected Information;

- we performed limited testing, on a selective basis of evidence supporting the reported Selected Information and assessed the related disclosures.

Limited Assurance Conclusion

Based on the procedures we have performed and evidence we have obtained, nothing has come to our attention that causes us to believe that the Company's Selected Information for the period from 1 January 2022 to 31 December 2022 has not been prepared, in all material aspects, in accordance with the Assessment Criteria.

Restriction on Use and Distribution of our Report

This report, including the opinion, has been prepared for and only for the Board of Directors in accordance with the terms of our engagement letter and is not suitable for any other purpose. We do not accept any responsibility to any other party to whom it may be distributed.

PricewaterhouseCoopers, Société coopérative
Represented by

Luxembourg, 27 April 2023

Gilles Vanderweyen
Réviseur d'entreprises agréé

Supplement A

United Nations Global Compact references

To facilitate stakeholders' understanding and benchmarking of our corporate responsibility performance, we show how our operations and strategy align with the UNGC's ten principles (www.unglobalcompact.org).

Our Sustainability Report and specific additional items (as noted) represent our UNGC Communication on Progress (COP).
1. Our Statement by the Chief Executive is on p. 4-5 of the 2022 Made for Life report.
2. Our practical actions to implement the Global Compact principles in the four key issue areas of human rights, labour, environment and anti-corruption are described in our Sustainability Report, as well as in online supplement C, which covers our disclosures of Management of Material Topics (MMT).
3. Our measurement of outcomes is described in the performance dashboards "at a glance" of each section, on p. 14, 31, 48 of the 2022 Made for Life report.

Further detail is provided in each chapter:

Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2: make sure that they are not complicit in human rights abuses.

>> Assessment, Policy, Goals and Implementation:
Our policies and how we implement them are described in all our Sustainability reports and in the online supporting documents, specifically:

- Sustainability Report p. 51-58 (Supply Chain CSR Risk Assessment, Compliance Framework, Stakeholder relationships) and Online Supplement C (Economic; Supply chain management) ;
- Code of Business Conduct, available online [1] ;
- Purchasing Policy, available online [1];
- Annual Report Corporate Responsibility and Governance Statement p. 56-62;
- Online Corporate Governance at Aperam website [2]
- Human Rights Policy, available online [1].

Labour

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labour;
Principle 5: the effective abolition of child labour; and
Principle 6: the elimination of discrimination in respect of employment and occupation.

>> Assessment, Policy, Goals and Implementation:
Examples of how we implement our policies are described in the 2022 Sustainability Report and in the online supporting documents, specifically:

- Sustainability Report p.18-22, 51-52 ,53-56 (Diversity of talent, Supply Chain, Risk and Compliance) and Online Supplement C ;
- Human Rights Policy, available online [1] ;
- Code of Business Conduct, available online [1] ;
- Purchasing Policy, available online [1] ;
- Annual Report Corporate Responsibility and Governance Statement p. 57-59 ; and
- Online Corporate Governance on Aperam website [2] .

United Nations Global Compact references
continued

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;
Principle 8: undertake initiatives to promote greater environmental responsibility; and
Principle 9: encourage the development and diffusion of environmentally friendly Technologies.

>> Assessment, Policy, Goals and Implementation:
Our policies and how we implement them are described in the 2022 Sustainability Report and in the online supporting documents, specifically :

- Sustainability Report p. 30-46 (Environmental impacts) and p. 62-65 (Product & Customer responsibility);
- Environment, Energy, Health and Safety policies, available on (1) ;
- Code of Business Conduct, available online (1) ;
- Purchasing policy, available online (1) ;
- Annual Report Corporate Responsibility and Governance Statement p. 100-103 ; and
- Online Corporate Governance details on Aperam website(2).

Anti-Corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

>> Assessment, Policy, Goals and Implementation:
Aperam Policies and implementation are described in the 2022 Sustainability Report and in the online supporting documents, specifically :

- Sustainability Report p. 53-55 (Risks and Compliance) ;
- Code of Business Conduct, available online (1) ;
- Purchasing Policy, available online (1) ;
- Anti-corruption and money laundering policy online (1) ;
- Annual Report Corporate Responsibility and Governance Statement p. 97; and
- Online Corporate Governance on Aperam website(2) ;
- Tax policy available online(1).

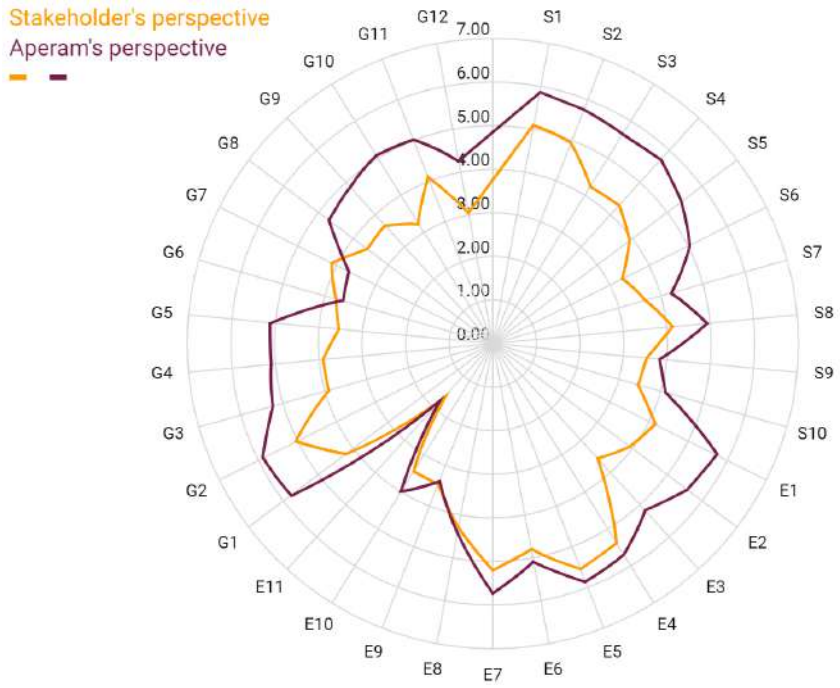
(1) Policies address: https://www.aperam.com/investors/corporate-governance/corporate-policies/
(2) Corporate Governance address: https://www.aperam.com/investors/corporate-governance/board-composition-committee

In addition, Aperam expresses its full support to the United Nations Sustainable Developments Goals, with a particular focus to ten of them, which are listed below, are detailed all along the 2022 Made for Life report as well as in the previous reports.

Supplement B

The Report Materiality Process at Aperam

2022 Group Materiality matrix



This graph presents the Stakeholders' and Aperam's perspective points concerning the Material topics.

The items are listed below as per their priority level, a priority ranking which has been defined by multiplying the notes given from both perspectives (this year, assessment made by the site managers according to the exchanges led during the year 2022 with local different stakeholders).
Eleven of our main sites and, for the first time, three main Recycling (formerly ELG) units participated.

1	E05 Industrial security & Pollution Prevention
2	E04 Air & Dust Emissions
3	S01 Occupational Safety
4	E07 Climate Change, CO2 & severe weather
5	G02 Business Ethics & Legal Compliance
6	S02 Health
7	S04 Employee Engagement
8	E06 Water Management
9	G01 Cost Leadership & Efficiency
10	S03 Social Dialogue & responsible variabilisation
11	E01 Raw Material Cons., Waste & Recycling
12	E02 Energy footprint
13	S05 Competencies & Employability
14	G11 Digitalization, Data Privacy and cyber-criminality
15	G03 Customer Satisfaction
16	S08 Diversity & Equal Opportunity
17	G04 Competition & free trade
18	E08 Noise and smells
19	E03 Environmental Management Syst. and Awareness
20	G05 Cash, Debt & Financing
21	G09 Sustainable Supply Chain & Resp. Purchasing
22	G08 Market Dynamics and new consumption patterns
23	S06 Employer Branding
24	G10 Innovation and product differentiation
25	S07 Stakeholder & Community Engagement
26	G07 Urban Integration & circulation
27	S10 New work patterns & Work/Life Balance
28	E10 Biodiversity
29	S09 Philanthropy & Social Impact Investing
30	G06 Local Development
31	G12 Positioning in the Value Chain
32	E09 Transport impact
33	G13 Product Safety/Quality (Radioactivity)
34	E11 Dismantling

23	Social
12	Environment
15	Governance

Determining Report Content

We follow a structured process to identify our most material sustainability issues and determine the content of our report.
This is based on the GRI Reporting Principles for Defining Report Content. To determine if an Aspect (Topic) is material for us, we assess its potential impact in terms of sustainability within our business. This assessment evaluates potential financial and reputational risks to Aperam ; the importance to our stakeholders and the links with our mission and goals. Initially, from our internal risk perspective, we evaluated the magnitude of the impact using a 12 points scale from Minor risk to Critical risk, and we started with this methodology to assess our Sustainability risks too.

> In 2014, further to regular stakeholder engagement at our six main plants in Europe and Brazil, the local and Group dashboard was updated with the 12 identified sustainability Aspects for Aperam.

> In 2015, we focused on a specific stakeholder group: Aperam employees We deployed a Group worldwide Survey, asking our people to prioritize topics on the three pillars of our Sustainability strategy: Aperam people; Environment; Governance. It confirmed our previous matrix with two additional topics, "Local Pollution Prevention" and "Quality of Life at work", added to our matrix and 2015 report.

Also, we have started to take into account elements from several ESG-rating agencies and enquiries from shareholders' associations for our internal focus and the 2015 Sustainability reporting.

> In 2016, our matrix was updated taking into account the answers from our 11 major sites including three sites for Service & Solutions (Brazil, Germany and Italy) and two additional industrial units with more specific business, Précision in Pont-de-Roide and BioEnergia. Some topics emerged at that time (eg. 'Noise' and 'Traffic', although they did not rank on the top.)

Indeed, the Group matrix is being consolidated using each of the matrices defined by our units and weighing their responses based on the number of their employees, so the smallest units cannot reshuffle the top topics. A final fine-tuning was performed using the feedback of our Leadership Team to reflect the opinions of non-local stakeholders (eg. Professional Associations, Large Industrial customers, ESG analysts, ...).
Thanks to this process, we expanded the scope to cover 85% of our global workforce and managed to reflect the diversity of our sites, stakeholders and material topics.

> In 2017, we continued the 2015 strategy to focus regularly on one Stakeholder group and we set up specific meetings to engage with local authorities at each of our main sites.
Such meetings were an opportunity to explain our strategy in detail, present short term action plans on stakeholder engagement at local level and evaluate each of the material aspects of our GRI matrix in face-to-face meetings. It was the opportunity for a "helicopter view" exercise that allowed us to confirm that our matrix was still valid while refining our vision, in particular thanks to the add-in of four distinct topics:

- "Urban integration", which had never arisen until then.

- "Industrial Security": already covered in previous reports, within the "Pollution prevention" chapter describing the protocols in place to ensure quick reactions in case of accidental pollution. It is obviously clearer to distinguish these two topics as matters of intrusions are also covered by National programs, in particular with the European anti-terrorism context whereas "Pollution prevention and remediation" can deal with awareness, installations such as retention basins or regular simulation exercises.

- "Noise" : the issue was tackled in view of our Environmental permits, but was not identified among the most material ones, especially at the largest plants.

- "Traffic" was considered into the Transportation impact, but it gained importance in our matrix with Local Authorities confirming their concerns in relation with 'Urban integration' and/or our impact on traffic congestion.

> In 2018, we changed our scale analysis from twelve to six points from Minor to Critical risk, and requested our eleven major sites to update their local matrix. We observed eight of the top ten items of 2016 still present in top 2018, and the inclusion of three topics at Group- level matrices. Also "Fair business practices', 'Energy consumption', and 'Waste & Recycling' ended up within the top ten topics (Operational Health and operational Safety have been merged).

> In 2019 and 2020, we decided to consider the discussions from the ResponsibleSteel™ forum as the main source for checking and updating our materiality matrix. It makes sense as all those members and participants reflect different interests and perspectives, from industrialists who know the difficulty that we can face, NGOs and Unions that stress the responsibility of heavy industry in the protection of the living beings, down to customers and suppliers, that bring a different perspective.

As a result, and based on the discussions held to define the ResponsibleSteel™ site-specific standard, we added two material aspects ('Biodiversity' and 'Decommissioning'), previously not yet considered of paramount importance and therefore not reported upon systematically.

> In 2021, we updated our matrix based on our methodology: site-level input consolidated based on FTE weighing, plus LT feedback, but also took into account the audit led according to the framework of ResponsibleSteel™. This included direct exchanges between the external auditors and our stakeholders. Although they remained confidential, the generic feedback we received was that we do not disregard the major topics. We also added a specific 'Local Development' topic, to recognize the expectations of ResponsibleSteel™ and to separate the 'Health' subject from the 'Safety' topic to reflect the new program set up in the aftermath of COVID. We also merged and/or renamed a couple of topics for further clarity like 'Social Dialogue and Responsible Variabilization', the new 'Stakeholder & Community Engagement' or the 'Raw material consumption, Waste and recycling' as they come as the two faces of the same coin for us.

> For 2022, the materiality matrix was built based on the 11 mains sites and cross-checked in view of our latest Employee Global Survey, launched in October 2022 and recording a 77% response rate of our workforce.

With the aim to ensure that the Sustainability issues of our newly acquired recycling units are well in line with the group, we have also consulted three different former ELG, now Aperam Recycling units, which lead us to include a topic called 'Product Safety/Quality (Radioactivity)'.

The final matrix and the list of material topics (GRI 3.2) are available on the first page of this Supplement.

GRI Index

GRI 1 Index Foundation 2021	Disclosure code	Reference
All indicators	3.3	Disclosure on Management Approach Online Supplement C.
Economics		
Economic Performance	201-1	Direct economic value generated & distributed - p. 6 - 7, 50.
Procurement Practices	204-1	Proportion of spent on local suppliers at main sites - p. 50, 51, 53.
Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures - p. 53,--55.
	205-3	Confirmed incidents of corruption and actions taken - p. 53.
Environmental		
Material	301-2	Recycled input materials used - p. 31, 39.
Energy	302-3	Energy intensity - p. 31-35.
	302-4	Reduction in energy consumption - p. 35.
Water and Effluents	303-3	Water withdrawal - p. 31, 38.
	303-4	Water discharge - p. 31, 38.
	303-5	Water consumption - p. 31, 38.
Waste	306-1	Waste Generation and Significant Waste-related impacts - p. 31, 39.
	306-2	Waste by type and disposal method - p. 31, 40
	306-3	Waste generated - p. 31, 39--40
Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas - p. 43;
Emissions	305-1	Direct (Scope 1) GHG emissions- p. 31- 34.
	305-2	Energy indirect (Scope 2) GHG emissions - p. 31-33.
	305-3	Other indirect (Scope 3) GHG emissions - p. 31, 34.
	305-4	GHG emissions intensity - p. 31--34.
	305-7	NOx, SOx and other significant air emissions - p. 31,36--37.
Labour		
Occupational Health & Safety	403-1	Health and safety management, assessment, consultation, training, prevention - p. 14, 16..
	403-5	Worker training on occupational health and safety - p. 14--16, 25, 26.
	403-9	Rate and gravity of injury, occupational diseases, lost days, absenteeism, number of work related fatalities, by region and gender - p. 14, 16.
Training & Education	404-1	Average hours of training per year per employee by gender, and by employee category - p. 14-16, 25, 26.
	404-3	Percentage of employees receiving regular performance reviews, by gender and by employee category - p. 26.
Diversity	405-1	Diversity of governance bodies and employees - p. 18, 21-22 and Annual Report 2022 (Board of Director and Leadership Team) - p. 67-75, 77, 82.
	405-2	Ratio of basic salary and remuneration of women to men - p. 22.
	406-1	Incidents of discrimination and corrective actions taken - p.53
Supplier Assessment for Labour Practices	414-2	Significant actual and potential negative impacts for labour practices in the supply chain and actions taken - p. 51-52.
Society		
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programmes - p. 58 -61.

The Boundary Protocol

Aperam operates mostly in Europe and South America and the specific sites that are subject to the materiality process were production facilities from Brazil, Belgium, France, Germany and Italy, representing, together with three Recycling areas, over 80% of our workforce. Operations within the boundary of the report represent all main entities included in our consolidated financial statements (GRI 2-2), except otherwise mentioned.
This list of entities is provided p.209 of our 2022 Annual Report.

However, there are entities included in our consolidated financial statements that are not subject to the sustainability reporting processes and coverage (GRI 3-1). These are as follows:

■ Process: As described, the materiality assessment is based on the analysis of eleven significant sites, plus three main scopes of our new Aperam Recycling division. The resulting list of material Aspects is then applied to the whole Group.
■ Materiality Process: The materiality process highlights topics that are material for the Group and does not supersede local analysis and specific site-based action plans. Additional information identified in the GRI G4 Mining and Metals Sector Disclosures document is somewhat relevant to Aperam operations.
■ Coverage: We report performance data for the Group (G4-3-1).
Aspects, their indicators and the materiality boundaries are shown below. The disclosures on Management of Material Topics (MMT) information is shown in Supplement C.

Reporting notes

General reporting notes:

Safety data covers all our operations, as well as contractors on site.
People data do not include contractors but cover all employees at year end, in Full-Time Equivalent, including Aperam Headquarters, Alloys ICS and excluding Haven Genk. People from our former ELG sites are included in some of the KPIs, as indicated in the respective topics, as the integration is still ongoing.
Environmental data covers all main industrial sites, service center operations, scrap yards and corporate offices, with the following exceptions: radioactivity alerts, relevant to Aperam recycling only, and raw material data excludes packaging and miscellaneous parts.

Specific indicators notes:

■ 204-1: Local supplier information covers mainly non-raw materials industrial purchasing for our most significant operations in Europe and Brazil, since 2016, and including BioEnergia starting 2021. It excludes our Services and Solutions and former ELG units, which have tiny units, the reason why the indicator would not be relevant.

■ 205-2: This indicator is addressed as part of our Compliance section and can cover training relative to our Code of Conduct, Corruption, Conflicts of interest, Money Laundering and other anti-Fraud training. Such training exists for all employees' categories but it is followed as part of MyHR, for White Collars, and reported annually, and monitored separately for Blue Collar employees, at unit level and through a multitude of less sophisticated ways that do not guarantee a quality consolidated information. Therefore, we currently only report on White Collar training.

■ 205-3: Confirmed incidents of corruption are reported as 'founded fraud allegations' as they can entail a large spectrum of incidents from thefts to sophisticated fraudulent schemes sometimes involving corrupt employees. We do not detail the actions taken but proven misconduct of such cases traditionally lead to contract termination and legal proceedings.

■ 301-2: Recycled input materials data is reported in "our environmental performance" and detailed in 'Waste and Recycling / Recycling of Metallurgy By-products' topic .

■ 305-1: Direct (Scope 1) GHG emissions are reported and receive an external assurance. Considering the chemistry linked to the steelmaking process, and also the impact of our biomass (charcoal) in the calculations, we are constantly trying to refine our figures and methodology, in line with the best practices.

■ 305-2: Energy indirect (Scope 2) GHG emissions are calculated based on location-based emissions factors and also reported based on market-based emission factors, the latter coming from our own suppliers as well as International agencies (e.g. IEA database) with supporting documentation. As we develop the usage of renewable energy, also through the set up of local solutions (eg. photovoltaic panels), the gap between the two calculations is due to the increase of renewable energy solutions.

■ 305-3: When looking at our Scope 3 emissions, we mostly focus on the Upstream GHG emissions (Scope 3a), and specific Downstream emissions on areas such as Transport or Information Systems. At this stage, we can only provide rough estimates but we are progressively refining our figures, based on detailed product analyses (Life-Cycle analysis from our Environmental Product Declarations, the first were released in 2021) and on local emission factors. We launched a process to collect more precise information from key suppliers in 2020-21 and improved this process in 2022, which will be analyzed to provide a report based on the same going forward.

■ 305-4: As for most of our indicators, we usually check the absolute values in order to produce an intensity ratio to decorrelate the information from the production level of our tools. The intensity is calculated based on our production, using the standard industry indicator of tons of crude steel ex-caster, in short, tons of crude steel or slabs. As for the intensity of our GHG emissions, we report the emissions scope 1 and 2 put together but we aim to disclose going forward intensity in terms of scope 1+2+3a (upstream).

For 305-1, 305-2, 305-3, 305-4, please also see the Supplement D.

■ 305-7: As it is the most relevant indicator to most of our main sites local stakeholders, dust emissions are reported consolidated at Group level. NOx, SOx indicators are also disclosed for our sites in Europe.

From 2016 on, we have improved our measurement protocols, increasing their frequency and aiming at online monitoring by introducing a specific stress-test with the aim to identify our weaknesses and ensure compliance at all times, at some of our most emitting sites. The data from the measures taken on top of our regulatory obligations have been integrated in our total dust emissions calculations (so-called "exhaustive" emissions data) starting 2020, next to the dataset calculated using the regulatory methodologies defined in our permits.
As for most indicators, we follow them in absolute values and in intensity.

■ 306-1, 306-2: Steel production is based on the melting of different raw materials and processing of slabs into coils or smaller formats of steel (such as sheets, tubes, bars and wires). The process generates by-products, such as slags or scraps, together with industrial wastes (dust, slag, sludge, oils, acid, refractories and paper).

These residues, many of which have a metallic content, are considered valuable so they are sorted and considered as potential materials for reuse or treatment. Usually, they are reused in the process or sent for treatment at Recyco or an external firm, but in some cases they are simply stored for the future, in wait for a sustainable technical and economical solution, or land-filled. All these volumes are taken into account in our calculations and zero-waste target. More details in Supplement C.

■ 403-5: This H&S training indicator is provided in total, using our Learning Management System. We also highlight the home-made training (physical or digital) linked to the cultural maturity of our employees.

■ 403-9: This health & safety metric also covers the subcontractors working on Aperam sites. In 2018, we reviewed the reporting process and methodology used for the calculation of the severity rate. With the implementation of our new standard across 100% of our entities, some historical data has been recalculated in 2020. In 2022, we included the new Aperam Recycling (former ELG) units' data (Which discloses H&S metrics for own and interim employees, but excludes subcontractors).

■ 404-1: This training indicator is provided in total and by country, using our Learning Management System from 2020 on. Data is available on a split Physical/e-Learning and the proportion of hours per topic is given. The information is provided for Exempts/

Non-Exempts, but not by gender.

■ 404-3: This career development indicator is currently provided with the split by employee categories but not by gender nor age.

Reporting notes (Continued)

■ 405-1: This Diversity indicator is provided partially with respect to Aperam's governance body, knowing that information (age, nationality, experience and education) on our Board of Directors and Executive Committee - referred to as the Leadership Team- is extensively disclosed within our Annual Report. With respect to Aperam's workforce, the information is reported for the whole group in terms of gender, by employee type, as well as information regarding age groups.
We use this information to reflect on the diversity of our new hires and leavers but we aim to develop further such indicators in line with Global Data Privacy Regulations to ensure we ensure equal opportunities for all Aperam employees.

In the 2022 report, several initiatives are reported aiming to answer the local and group expectations gathered during the Climate Survey and other opportunities, nourishing our Inclusion & Diversity program.

■ 405-2: The Gender pay gap is calculated for all exempts, men and women alike globally, using external market data by country for a given responsibility level. It allows us to make sure we are paying our people over the market median for a given job/ responsibility, as we aim to ensure we continuously provide competitive remuneration to our employees. The individual gap to this local reference in percentage is summed up for all exempts and then the average gap for women is compared to the one for men. This way, we have not only the average gap to the market median, but also the gender-related pay gap.

For non-exempt employees, we do not have the possibility to use the same method as we lack data on each market reference by country but we usually have salary grids negotiated with employee representatives for most of the non-exempt roles. We also comply with local regulations that may require (like it is the case in France) to conduct assessments for non-exempts following a pre-defined methodology using also the age and seniority in the roles. We also report this information on: https://www.aperam.com/sustainability/social/diversity/professional-equality-index/

■ 413-1: This indicator reflects the proportion of our sites that conduct active stakeholder engagement, within the eight main industrial sites analyzed in greater detail (excluding Service centers and former ELG sites).

Using an extensive mapping of existing practices conducted in 2016 over 30 of our sites, we validated what are Aperam corporate guidelines in terms of stakeholder engagement and defined a clear methodology to assess what we mean with "active engagement". Based on this method, we are able to report the indicator, using several clear criteria:
> Impact assessment (based on the 2016 systematic mapping)
> High end grievance mechanisms (including a 24/7 availability)
> Public disclosures of results
> Practices of Stakeholder engagement beyond legal requirements (such as those conducted by the Acesita Foundation, Open Days and other cooperation patterns).
On top of local initiatives, our new official guidelines and generic communication tools (including entrance posters displaying KPIs and contact forms to interact in local language) help our sites to engage more effectively with local stakeholders.

In late 2021, we started a full review of our practices based on the take-aways of our ResponsibleSteel^{tm} audit, which will define more demanding engagement modes for our main plants. A piloting will be organised in 2022 on the Stainless Europe perimeter and we aim to revise our methodology for evaluation based on this, to come closer to true 'local development plans', even when it is not a formal request from local stakeholders.

Managing risks at Aperam

Risk management processes are embedded in the organizational culture. They support decision-making and continuous improvement, and allow us to identify and act on opportunities. Our Global Assurance department facilitates this process and prepares the Risk Management reporting elements for both the Management Committee and the Board's Audit & Risk Management Committee.

Our framework for managing risk is based on:
■ COSO Enterprise Risk Management Framework;
■ ISO 31000 principles and guidelines for risk management; and
■ Benchmarking with external companies.

Our Audit and Risk Management Committee supports the Board of Directors in fulfilling their corporate governance duties relating to defining and reviewing risk, managing risk assessment, and risk audit, all the above including sustainability risks as well.
Our Risk Management Manual describes risk as a pillar of corporate governance and organizational responsibilities for risk.
Our numerous Aperam Policies and Whistleblowing protocols allow employees to raise concerns over possible irregularities and malpractices that would contravene our Code of Conduct. In addition, the compliance programme set up in 2014 (including a network of local correspondents and a full set of policies) has pursued its roll-out in 2022, with an active sanction-based screening in view of the developments linked to the Ukrainian invasion, the yearly Anti-Fraud Week and an active integration of the new Aperam recycling units.
The implementation of these actions was carried out in close cooperation with our Legal department and our Combined Assurance risk management function.

Industrial Risks are managed by the Environment & Risk department, as part of the CTO team led by one member of the LT. They are analyzed regularly and help us continuously improve our impact assessments, as well as our prevention and mitigation strategy. We run this exercise with the support of external advisors, also taking into account the inputs of our Insurers, and following the best practices - in particular:

- ISO1490:2019 standard
- ISO14091:2021 standard
- and the TCFD requirements.

Indeed, the physical risks related to Climate Change are also addressed by the same team based on two scenarii suggested by the IPCC (SSP2-4.5 and SSP5-8.5).

The Report Materiality Process at Aperam Continued

Below is a summary of the stakeholders we engage with, and whose feedback also serves as a basis for the preparation of this report.
Stakeholder engagement is an ongoing activity at each site, and it is the responsibility of the site's General (Plant) Manager or equivalent. Any new issues that require attention are shared with key subject matter experts within Aperam and are then included in our materiality assessments.

Employees & Management

Unions, European Work Council, Educational Institutions & trainees, Retired Aperam employees, Students and potential joiners.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– Collective agreements including CSR based incentives,
– Proximity meetings,
– HR and Human Rights policies,
– H&S programmes and H&S days,
– Data Privacy policies,
– Yearly performance appraisals and employees' development plans,
– Training plans & catalogs,
– Professional Committees,
– Climate Surveys and other surveys,
– Newsletters incl. Bonus letters, Gender Diversity Focus and H&S newsletters
– Videos on Company results and campaigns.
– Events such as Anti-Fraud Week.

Authorities & regulators

Governments and local authorities, Competition Authorities, Standardisation Authorities.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– Regular meetings with local authorities,
– Policies and formal procedures eg. Antitrust, Anti-Corruption, Anti-Money Laundering, Economic Sanctions,
– Events such as the Anti-Fraud Week.
– Compliance programmes and trainings, including specific intranet page and Ethics & Compliance Academy,
– Regular measurements, certifications and risks prevention protocols,
– Global Insurance audits and alerting systems (Whistleblowing lines, network of Compliance correspondents)
– Diligent responses to enquiries,
– Support of global initiatives such as CDP, Global Compact
– ResponsibleSteel™ membership.

Communities

Neighbours & Communities, NGOs & Local Associations, Local Media, local Academics, Local economic players.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– Ethical, H&S, Environmental and Human Rights policies,
– Responsible Purchasing policy and support of local suppliers,
– Stakeholders' days or meetings, site visits, open days or "Family days",
– Specific newsletters or internet pages, press releases, interviews, social media,
– Acesita Foundation programs, local Development plans ("Territoires d'industrie", etc.)
– Pollution prevention training exercises and the leaflets distributed to provide the instructions in case of emergencies,
– Local development and student fairs
– Our Stakeholder engagement policy and internal guidelines including Site-specific entrance posters, Country supplements and contact forms.
– Charitable contributions and philanthropy.

Customers

Customers, End Consumers, Subscribers.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– Meetings, site visits, trade fairs and technical customer trainings,
– General Sales Conditions,
– Product documentation,
– Antitrust & Anti-Corruption policies,
– Economic sanctions policy and protocols,
– Requests for quotations and annual contract negotiations,
– Customer satisfaction surveys,
– R&D partnerships,
– Sustainability and/or Ethical questionnaires (customer-specific ones, EcoVadis, etc.).
– Customer Newsletters or web series

Financial partners

Shareholders, Banks & investors, Stock Exchanges, Financial & ESG Analysts.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– Annual and Sustainability reports,
– Policies on Anti-Fraud, Insider dealings, Money-Laundering, Double-Signature protocols
– Regular assessments, certifications and risks prevention protocols
– Internal and external audits and alerting systems
– Earnings & press releases, IR meeting & IR day, interviews, web-site pages,
– Shareholders meetings, general meeting and votes, dividend payment,
– ESG-specific Investor Relations' conferences
– Investors' Days, sites' visits.

Business partners

Suppliers and Subcontractors, Trade Associations, Audit & Certification firms Sectoral initiatives.

Our engagement is reflected in:
– Aperam's updated Code of Conduct,
– ResponsibleSteel™ certification standard (and certificate for 5 plants)
– General Purchase Conditions,
– Environmental policies,
– Sustainable Sourcing charter,
– Associations, working groups and exchanges on H&S best practices,
– Subcontractor Safety Charter,
– Requests for quotations and annual contract negotiations,
– Congresses and trade fairs,
– R&D partnerships,
– Certification audits and site visits (Boss to boss meetings),
– Direct dispatch of general communications such as Sustainability reports or Gift policies.

Supplement C

Aperam GRI Index 2022 – section 3.3
Management of Material Topics (MMT)

Economic

Economic performance

The circulation of economic value generated by private industry has a positive impact on local communities, regional economies and national trading balance sheets, primarily as a result of the jobs created by our commercial activity. The tax we pay to the state and the programmes we run to improve social conditions in communities where we operate also make an important positive contribution to society. In addition, the returns we pay to our investors facilitate their continued financial interest in Aperam.

We manage our potentially negative impacts via a range of suitable channels. Our legal, commercial and financial matters are managed through appropriate governance and executive processes in accordance with the laws of the Grand Duchy of Luxembourg where we are listed, as described on p.112 of our Annual Report.

We assess the effectiveness and quality of our approach through internal audit and external assurance, in accordance with our listing requirements. We also assess sustainability risks via our group risk register and management process (see p. 52 of our Annual Report), and set medium to long-term numerical targets (five- to ten-year) to roll out our environmental roadmap and usually shorter-term targets (two- to three-year) on social and governance action plans, with longer term qualitative objectives. Since 2021, we disclose targets pertaining to social topics.

We report the economic value generated at Group level. In the past, we complemented them with a few sub-indicators consolidated at divisional level that are followed operationally, including some by region (Europe/Brazil for the Stainless & Electrical Steel Division), but we have chosen not to disclose them any more as they are less relevant to external stakeholders. However, as we did for the first time in the 2020 report, we provide also in 2022 in our main report, additional information (p. 50) , related to our three biggest countries of operations: Belgium, Brazil and France, which is complementary to the three Country supplements that we have been releasing every year since 2017.
Such elements pertain to local economic contributions, such as the salaries paid, investments made, total tax contributions (as well as local spending - see GRI 204-1).

Our human resources teams manage the employment impacts through a wide range of policies and practices in line with our values and using trained experts. In 2020, considering the magnitude of the phenomenon across the planet, we decided to disclose data related to the impact of temporary economic unemployment in terms of full-time equivalent, thereby providing an estimate of the variabilisation that we managed to realise responsibly, without recurring to permanent layoffs. This data was updated for 2022 (p.50).

We manage our community impacts primarily through our Acesita Foundation in South America and through local action plans defined jointly with local stakeholders at our European sites. Information on this topic is provided p. 58-61 and further in this document (section Stakeholders>Impact on Local Communities.

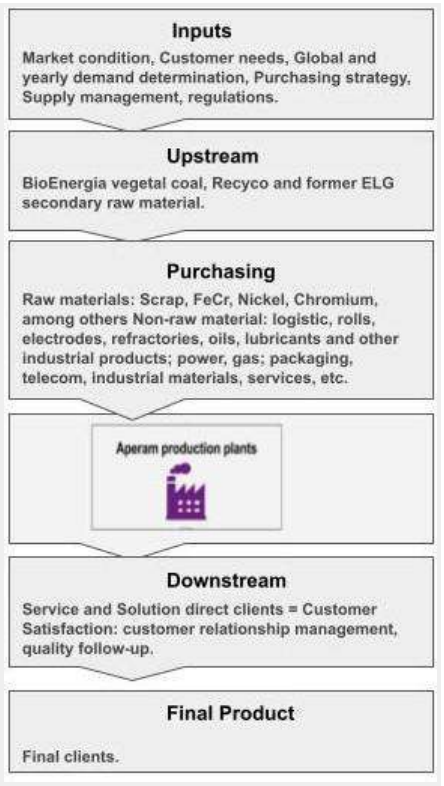
>> Indicator:
GRI 201-1 Direct economic value generated and distributed.

Procurement – Supply Chain

On our historical perimeter, we have around 14.200 partners in our global supply chain, though the exact number varies from month to month. Subcontractors also work on our sites. Our General Purchasing Conditions require our partners to respect quality, environmental, safety and labour practice regulations, and the subcontractors that perform services on Aperam premises have to comply with our General Health and Safety Instructions (GHSI) to ensure they align with our high safety standards.

Supply Chain

GRI2-6



In support of our company vision, the United Nations' Global Compact principles, and the ResponsibleSteel ™ principles, we work with our suppliers to:
■ Operate a lean supply chain that

supports our corporate policies;
■ Develop procurement solutions in line with customer's, regulatory and wider stakeholders' expectations; and
■ Create long-term value and reduce risk for all stakeholders.

We aim to achieve these objectives by setting standards for sustainable procurement, and by collaborating, innovating and embedding sustainable purchasing into our business processes.

In 2020, we put in place an updated Purchasing Policy (acting on the whole group sourcing and purchasing activities) describing how we work with our suppliers and require them to meet our standards on health and safety, human rights, ethical and environmental topics, and be transparent by disclosing results periodically. We encourage our suppliers to work with us to identify and develop ongoing improvements to our sustainable procurement. The result of this analysis is shown in the 2022 report (p.51-52).

Aperam procurement department is composed of two separate teams, the first one in charge of sourcing raw materials and the second in charge of non-raw materials purchasing.

> The Raw Material Sourcing team optimises centrally the supply chain process for raw materials such as Nickel, Chromium, and recycled (carbon) steel and stainless steel (scrap). Many of these extractive raw materials come from a few high-density deposits on Earth and shape narrow oligopolistic markets with a small number of global players, meaning that there are few options globally. As a result, this category is excluded from our local spent analysis.

> The key objective of Non-Raw Material Purchasing is to have an effective buying process for our industrial sites with a platform for central buying. Non raw-materials are mostly composed of operational products (such as rolls and electrodes), industrial products (such as oils and lubricants) and various services including logistics, industrial and IT services (see diagram above) (GRI 2-6), many of which can be sourced locally.

We explain our approach to managing community impacts further but we consider that careful selection of our partners and local spending are some of the ways we can contribute to the promotion of sustainable business practices and local development. We are conscious that smaller suppliers are part of a community where economic development may be limited or where there may be social deprivation, in particular in isolated areas and/or in Brazil.

>> Indicator:
GRI 204-1 Percentage of spending on local suppliers

Anti-Corruption

Aperam follows the best standards in terms of Business Ethics, notably through its Code of Conduct, and defends a zero-tolerance policy.

We regularly benchmark and update our policies and procedures to address all the dimensions of Corruption, from minor conflicts of interests, traffic of influence, facilitation payments, up to international corruption and money laundering supporting terrorist financing. Economic sanctions are also considered at the same time as part of our due diligence.
Based on best practices, the risk assessments in terms of Corruption are regularly updated based on real cases and scenarios and also split by geographies. They are complemented by focused awareness-raising information sessions focusing on some particular functions (commercial, buyers) or scopes (the former-ELG perimeter in 2022), organised yearly during the Global Anti-Fraud Week promoted by the Association of Certified Fraud Examiners. Additional detailed analysis can also be led, for instance with respect to the external agents used to develop our sales where we have little local presence.

Our Compliance organisation trains all our employees with the support of a network of local correspondents able to provide all explanations and advice in the local languages. Various operating modes are used, from digital learning through our MyHR platform down to information meetings, quizzes, and gamified sessions, depending on the best solution for the different categories of employees.

Since 2020, for enhanced efficiency, our Compliance organisation is even more closely intertwined with our Internal Audit and Forensic Department that is investigating any allegation reported in the field of Fraud through our multilingual Whistleblowing systems. The Compliance organisation is regularly reporting to a Committee gathering the Company's Chief Finance Officer, Legal Counsel, Head of Global Assurance (Internal Audit & Forensic), Group Sustainability Officer and representative from the Commercial and Human Resources functions as needed.

The reporting is done on a quarterly basis to our Audit & Risk Committee and on a yearly basis within our Annual and Sustainability Reports. See Ethics & Compliance table in 2022 report (p. 53).

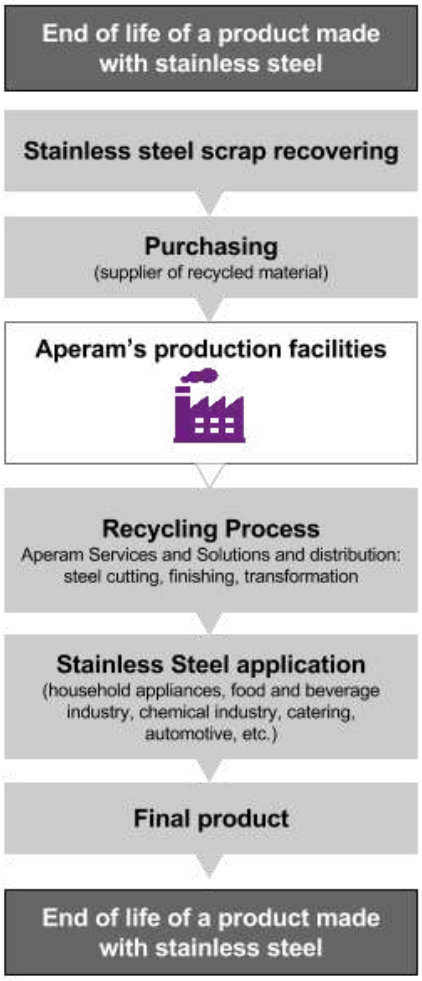
>> Indicator:
GRI 205-2 Communication and training about anti-corruption policies and procedures.
GRI 205-3 Confirmed incidents of corruption and actions taken.

Environmental

Materials and Waste

Stainless steel is 100% recyclable, meaning our products are at the beginning and the end of the product life cycle (see graph below). In addition, the production process requires various materials, which can be primary ones or from recycled sources. So for a stainless steel producer, the right usage of input materials is key and there is a blur line between materials and residues.

Lifecycle of stainless products



Firstly, extracting minerals and ores is more costly than collecting scraps (for us and for the community as a whole, considering the related externalities). As a consequence, the usage of recycled metallic input has a positive impact on our profitability. These secondary material can come in the form of scrap, but also as a residue (or by-product) with a high grade of metallic components - such as melt shop dust and slags.

Secondly, the properties of our various grades, as well as our energy intensity, depend upon the right dosage of the different ores. Also, our production process generates a lot of different residues (e.g. sludge, dust, slag), many of which still contain valuable chemical elements.

Finally, our melting, rolling and shipping processes request more diverse materials than simply metals, and our purchases encompasses consumables such as gas, refractories (made from silica, alumina, etc.), oil or acids, that can often be recycled. As a result, on a day-to-day basis, we are striving to avoid any type of waste, as they are also costly to manage (landfill or treatment cost). We are promoting recycling and reuse and trying to reduce total consumption as much as possible.

Actually, we have committed to become a zero-waste company and are actively looking for various options to leverage all types of residues and extract value out of them. We are partnering with external firms and have also implemented our own recycling channels, notably through our fully-owned Recyco subsidiary and our newly acquired scrap recycling site in Zutendaal - and starting in 2022, the new ELG business purchased by Aperam in December 2021.

To monitor the deployment of this policy in Aperam, we use various indicators followed at site level and regularly reviewed by the management. Amongst them are the scrap usage ratio (metallic recycled input material at the melting phase) and our yield indicators (in all our transformation sites), which consolidated figures we do not disclose for confidentiality reasons. As a consequence, the total input breakdown (GRI 301-1), is material but not disclosed.

We are also monitoring our Waste recycling ratio and our Recycled Manufacturing input ratio, which takes into account products ranging from scraps to paper, via refractories providing a breakdown of Aperam waste by type (hazardous/not hazardous).

>> Indicators:
GRI 301-2 Recycled input materials used.
GRI 306-2 Management of significant waste-related impacts.
GRI 306-3 Waste generated.
GRI 306-4 Waste diverted from disposal.
GRI 306-5 Waste directed to disposal.

CO_2e and Energy consumption

Steel making is amongst the most CO_2e and energy-intensive industrial processes. As energy costs can increase and environmental regulations progress, we have invested in more efficient methods and equipment.

Our Environmental and Energy Policies commit to a long-term approach to resource-efficiency and sustainability and cover all Aperam sites and operations. They promote new efficiency programmes, and tight collaboration with suppliers and customers to maximise the resource efficiency of our steel products, decarbonize our processes and fight Climate Change.

We identify and implement energy conservation measures to cut costs and protect from price and supply volatilities both our customers and ourselves. We continuously aim to increase the share of renewable energy consumed, either through the purchase of green power or via the installation of renewable sources of energy (windmills, photovoltaïc panels), either on a stand-alone basis or in partnerships.

Since production can vary, and our tools cannot be shut down easily nor quickly, monitoring our energy intensity (together with absolute energy use) is also a key metric for our financial performance. Considering the fact that we may purchase more or less semi-products, further processed on our lines, we have introduced a specific intensity calculation methodology - see also Appendix D.
However, not all the energy has the same impact on GHG, and our charcoal is an energy that we do not want to reduce as, in Brazil, on top of its energetic capacities, it brings a carbon content that is integral to the chemistry of our metallurgy. Therefore, we focus on electricity, LPG and natural gas for our optimization action plan.
As a result, and since 2020, we have in place two targets that address our energy use, the first one focused on a restricted scope of energy (after removal of charcoal and other miscellaneous as diesel), and the second one on CO_2:

- A 11% reduction by 2030 (from a 2015 baseline) decided in 2020, and focusing on electricity, LPG and natural gas, aiming at 7.8GJ/tcs.
- A 30% reduction in carbon intensity by 2030, scope 1+2 (from a 2015 baseline).

We monitor the effectiveness of our energy management based on data at site level, and our performance relative to the two targets above (p. 31-35).

>> Indicators:
GRI 302-3 Energy intensity,
GRI 305-1,2,3,4 GHG emissions (Scopes 1,2, Other) and intensity.

Emissions

Local air quality is an important issue for our steelmaking operations: dust (particulate matter) is one of our main material issues every year, but we also emit volumes of NOx and SOx and other air emissions.
All are carefully treated and monitored at the chimneys at each of our sites according to the local regulations. Indeed, we operate in jurisdictions where air quality regulations are enforced and we monitor our performance in relation to the operating limits defined in our permits. We use external firms to take measurements and accredited laboratories for analysis but we also have local air quality monitoring stations. Units report to the authorities according to the agreed periodicity, by chimney and in nano-grammes by cubic metres (ng/m^3) and can also be submitted to impromptu audits. Any punctual non-conformity is quickly addressed, in liaison with local authorities.

Since our level and mix of production can vary, both of which can have an impact on our tools and emissions, we look at our performance using absolute and relative metrics. We also assess our total impact taking into account all additional measurements, including those taken during abnormal conditions of operations and we run simulations and stress tests. This “exhaustive methodology” is more reliable and allows better identification of the dedusting systems that need preventive maintenance. The emission volume estimate based on the data reported to the authorities is called the “regulatory emissions” (total of each legally reported ng/m^3 * flow measured * operating hours of the chimney for the semester) but we also use - and have reported publicly since 2016 - the total volume based on our “exhaustive methodology”, with many more measurements taken into account.

Diffused dust is measured periodically to evaluate the leakages and identify the areas for improvement. It is a relevant indicator, as it reflects directly the nuisances caused to local populations but this last metric is impacted by external factors (wind, agriculture, etc.), rendering the interpretation subject to debate, so we mostly use it internally (unless it is reliable enough) and report publicly on ducted dust emissions.

With the aim to acknowledge our external stakeholders’ expectations and ensure that progress is continuous, we have a multi-year action plan with global targets and more frequent measurements. With our 2020 goal being achieved (-12%, from 2015 point), we announced in 2020 a new target of a -70% decrease of our ducted dust emission intensity in 2030 compared to 2015, something for which we are committed while also reducing the diffuse (non ducted) dust (p. 37).

>> Indicator:
GRI 305-7 Other significant air emissions (Dust only).

Water

Water is an important resource. Our significant sites of operation are not located in water-stressed regions, except for BioEnergia’s plantations. However, our other units meet their water-related permit conditions and strive for continuous improvement, as we know that Climate Change will severely impact the availability of water and face more regions with drought and chronic water stress.

Our Environmental Policy commits us to a long-term approach to resource efficiency and environmental performance. We operate in jurisdictions where water quality regulations are strongly enforced. The vast majority of our water (more than 90%) is sourced from surface waters – local rivers and canals. The rest is sourced from rainwater collection that we try to develop, groundwater and municipal supplies. We do not receive wastewater from any other organisation.

Where we are abstracting water, this must be in accordance with the conditions of our abstraction licence. We are subject to periodic inspections from the relevant authorities to ensure full compliance. We follow up on the effectiveness of our water management based on data recorded at site level, and in terms of our total annual consumption (m^3) and our relative consumption per tonne of crude steel (m^3 per tonne of crude steel).

We monitor water consumption and discharge carefully at each site, through automated metering wherever possible. Through this we are able to accurately measure our consumption (in cubic metres) on a monthly basis at significant sites of operation, as well as the proportion of recycling of water, comparing our needs to our consumption. We report this recycling rate as the percentage of closed circuit, since it better materialises our efforts. We have an Aperam target of -40% reduction of water intakes in 2030 in intensity compared with 2015 (ie -8% versus 2012).

Starting 2017, we have begun to report on water discharge volume and quality (metal and suspended solids, relative to our production), as it appeared as an important information for our local stakeholders: it can impact the quality of the rivers and related activities (fishing) (p. 38).

>> Indicators:
GRI 303-3 Water withdrawal.
GRI 303-4 Water discharge.
GRI 303-5 Water consumption.

Biodiversity

To the exception of BioEnergia, which is by essence managing carefully the biological balance of its forestry to produce wood for our future charcoal, our sites are mostly located in industrial areas and/or in perimeters that have remained unchanged for numerous decades and operate in such way (water discharge, air emissions) that they are not considered by the Authorities as posing acute biodiversity problems.
As a fact, Bioenergia has the legal obligation to maintain areas of native forest to ensure the local biodiversity thrives, with a particular focus and monitoring on endangered species and large mammals. The unit reports on this periodically and is also attentive to the matter as part of its FSC(C) certification.

The other main plants are not located close to any Ramsar or IUCN Protected Areas. A river is usually next to the main plants, as historically, the hydro energy and the cooling waters were necessary to our operations, but the specificities of the operating permits ensure no harm is done to the natural environment.
This also explains why our steel plants used to have a more sporadic and opportunistic approach regarding the promotion of biodiversity, which issue was not covered either by their Environmental Certifications.

However, with Aperam’s involvement within ResponsibleSteel™, we have decided to develop a more proactive approach to biodiversity conservation. As a result, in 2020-21 and still ongoing, we initiated the development of procedures involving a precise identification of impacts. We also started to roll-out training and awareness-raising of employees on the interactions between climate change and biodiversity destruction.

In 2022, for instance, we developed local partnerships with local associations to promote biodiversity. We also had Aperam first Sustainable Development Week with daily

newsletters recalling our environmental objectives and presenting our main plants' mascots. And our monthly Environmental follow-ups started to include topics in relation to Biodiversity. Going forward, we aim to implement more specific KPIs to better monitor the way we can act positively on the topic (p. 44).

>> Indicator:
GRI 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.

People

The workforce of Aperam represents an asset for the company, as well as a significant part of the costs. Therefore it is key to the competitiveness of the company. The Full-Time Equivalent (FTE) of the total workforce is used to calculate several KPIs, including 'productivity' (ton/FTE) and 'competitiveness' (total cost of employment/ton). Achieving our targets on these KPIs is vital for the sustainability of Aperam, and doing it responsibly is in line with our values.

In times of hardship, we can adjust our workforce, firstly by freeing up interim employees, also using Economic Unemployment - and, when it cannot be avoided, by implementing responsible restructuring measures discussed with employees representatives.

The data on our workforce are reported by each entity in a unique IT system MyHR. We measure the internal workforce by FTE at the end of the period – this number varies only a little and so the average workforce is only disclosed annually as it is frequently asked by some external stakeholders. Details such as the employment contract, employment type, gender, region, also give us a view of the structure and diversity of the workforce (see below chapter on Diversity). HR data is consolidated and reported monthly at the Group level.
With the integration of the former ELG units happening in 2022, some details pertaining to this population are currently not available in the system but we aim to have all details for the whole group for the 2023 reporting.

The external workforce (including supervised workers) is usually measured by the average FTE in the period and this workforce can vary a lot (eg. due to seasonal variations and scheduled annual maintenance or harvesting, for example). At the Group level, supervised workers are counted as part of sub-groupings but not statistically consolidated on an individual basis. We therefore do not report their split in detail eg. by gender or employment type.

The effectiveness of our employees and their ability to innovate are key to the company's success. This is why we remain attentive to their level of commitment and follow closely their satisfaction using global employees surveys that are integral to the development of an efficient Human Resources framework.
Starting 2021, we disclose a new objective to obtain 80% both in the response rate and the sustainable commitment of our employees.
In the 2022 exercise, we recorded a 77% participation, with a lower rate at the former ELG units, and a good level of overall satisfaction from our people, at 75% overall - see Sustainability report (page 50) for more information.

Diversity and Equal Opportunity

We have stated in our Code of Conduct, Human Rights and Gender Diversity Appendix our commitments to promoting diversity, refusing discrimination and facilitating the development of each employee.

Since 2018, we pay accrued attention to the proportion of women in our staff with a view to balance their presence, especially at shop floor level and so, on top of our detailed workforce tables, we report the split by gender for some of the KPIs. We are following up the gender pay gap to ensure equal opportunities. (See supplement B)

In the 2021 report, we disclosed for the first time our target to increase our percentage of women exempts to reach 30% by 2029.

At the 2021 end, we extended further our Inclusion program, notably by the creation of specific roles to drive the program in Europe and Brazil, but we are not able to track many additional diversity aspects efficiently and will see how to progressively improve our follow-up, also minding local regulations and gaps in definitions. We only report partially on diversity within our governance bodies and employees, with nationality, age and gender available for all of Aperam but other criteria on a smaller scope (eg. Disability only for Belgium/ Brazil/ France).

We want our workforce to be able to bring their full self to Aperam and feel welcome to participate with all their abilities to its success.
On the one hand, we work on inclusiveness through the fight against stereotypes and evaluate the overall success of our efforts through specific questions from our Climate Survey. In 2022, we extended the number of questions addressing this aspect. The result is positive, 81% of employees being satisfied with no significant difference overall reported between women and men.
On the other hand, we remain attentive to any incident of discrimination and are regularly rolling out training and information to raise awareness, promote

diversity and clarify the reporting channels available to report any harassment or misconduct. We have processes in place to fairly investigate any case brought forward, in particular via our Whistleblowing system. This reporting allows to make cases known and addressed in a rigorous and timely manner, particularly in our South America operations, where local communications were particularly strong, but other perimeters are still managing the cases through other historical and/or informal channels.
As a result, our reporting is still to be improved to ensure we capture all incidents reported to local management as part of Human Resources issues, but we already can provide a consolidated view of all the cases reported through formal lines (GRI 406-1).

>> Indicators:
GRI 405-1 Diversity of governance bodies and employees.
GRI 405-2 Ratio of basic salary and remuneration of women to men.

Occupational Health and Safety

Nobody working for, or with us should have their health and safety compromised in any way. This is Aperam's top priority across the Company, for anyone at any moment. There are three drivers for good management of our health and safety performance: legal, moral and financial. Our health & safety management and practices are governed by our Health & Safety Policy and supported by a Management System approach, with certification and continuous improvement.

Our Leadership Team has reinforced this heightened vigilance by establishing a new organisation in 2020 and the program was efficiently deployed. In 2022, it was further strengthened with new roles in charge of a specific Health program (including Mental Health). Our roadmap is built around three main axes: 'Organisation', 'Standards and Tools', and finally 'Cultural Maturity', which necessitates a long-term approach on training.

We have monthly, senior level health & safety global conference calls to discuss general performance, the management response required and individual incidents using detailed descriptions, root cause analysis and photographic evidence. This is a check on how well we are managing safety.
To comply with the Aperam safety standards, all accidents are only counted once, and are put in the highest category. So, if the accident resulted in a fatality (as sadly was the case in 2015, 2018 and 2022), it is categorised as such. We assess if the person was absent from work for at least one day, excepting the day of the incident. If this is the case then the incident is categorised as a lost time incident (LTI). If not, we assess if the person benefited from 'adapted work' as prescribed by a medical professional. If this is the case then the incident is categorised as an incident requiring medical aid. If not, we count it as an incident requiring first aid.

When we uncover an issue, we establish a thorough management response. In 2022, we unfortunately had a fatal accident on the Viracopos site. A thorough root cause analysis has since been performed, as well as an independent site H&S audit. Both have led to the implementation of a series of actions, on site as well as at the Group level, to avoid such a tragic accident from being repeated.

We use a combined Lost Time Injury (LTI) Frequency Rate, which incorporates the impact of lost days as well as of occupational disease. For this reason we do not collect distinct data to report an Occupational Diseases Rate (ODR).
We also use a Severity rate and a number of leading indicators to check on the deployment of our programs.
Also, we track performance very closely and report on it monthly within our Group internal newsletter. To be more efficient, we have deployed enhanced Information systems, by the introduction of a prospective vision (using the TRIR -Total Recordable Injury Rate) and to cover more specifically the Health topics by working on physical and mental wellbeing programs to our people.(GRI403-1,9)
.

The absenteeism rate is monitored only for our employees, excluding supervised workers. The rate is defined as the number of hours of absence for illness up to a maximum of six months divided by the number of theoretical to-be-worked hours. We calculate this based on the time and attendance data reported each month by each entity. Also, small entities are not included – the workforce of small entities is 3% of the workforce of Aperam. At Group level, the time and attendance data are available by site, country and Division, but the Aperam Recycling division is not fully integrated at the end of 2022.

Training is central to our Health & Safety program and delivered in local languages. Aperam employees, as well as subcontractors, are briefed and trained on safety. Some of the training is very long and intensive, mixing awareness-raising, shop floor audits and case studies. We receive regular awards, for instance for the SAFE training program, which included a full week training for the entire population of operators, and also in 2022 for the Just Culture concept.
There is also a well attended annual Health & Safety Day and a competency framework to make sure people have the right skills and equipment to do their job safely.
In 2020, we started to audit the H&S Cultural Maturity on site, through discussion sessions gathering employees from all departments that had been designed with consultants to identify the mental blockages in force. In 2021, we built upon this for new training involving the management ('SAFE- Me with my team') and rolled out our Just Culture program in 2022.

Safety is material inside Aperam as well outside the organisation (cf. GRI 3-1 Process to determine material topics). In particular, all subcontractors operating on our sites are being fully considered in our action plans and approach and they are part of our reporting (p. 14-15).

>> Indicator:
GRI 403-1 H&S Management System.
GRI 403-5 Worker training on H&S.
GRI 403-9 Work-related injuries.

Training and education

People are at the heart of Aperam and we want to develop them all and retain in particular the most talented. It is key that we listen to our employees and that we support them so that they are equipped to develop themselves and deliver quality-work, so personal development is part of our annual review meeting process. In addition, it is vital that we have a competency framework and management system that helps us anticipate, works efficiently and that is recognised by our people.

Specifically, through our talent development programme – Global Exempt Development Programme (GEDP) – we provide our exempts and managers with annual appraisals and career development reviews. With this, at the annual review, a manager assesses whether or not an individual has achieved the yearly goals and expectations from their career plan. The latter are tailored to specific roles, and by measuring an individual's performance annually, both the manager and the employee can formally evaluate performance against the plan and find the best ways to move further. We

monitor the number of annual appraisals conducted yearly and regularly bring new features to make this regular exercise a valuable tool for self-development, for instance the ability to request feedback from peers.
We also monitor Blue Collar and White Collar workers through annual interviews, which are progressively integrated within the same system (MyHR). We report the information for the group and by employee category - but again not by gender and other detail.
In 2022, we have not finalised the integration into MyHR of our colleagues coming from the former-ELG units but we aim to do so shortly.

We also provide our workforce with the necessary tools to maintain and upgrade their competencies and their behavioural skills via external training or on-the-job learning experiences. Since 2018-2020, we have been using the e-Learning module of MyHR to strengthen our monitoring and provide adapted content, both for in-person and online courses, many of which are being designed in-house.
In the 2021 report, we communicated for the first time our objective to boost the share of Digital Learning and see it reaching 30% of the total training time by 2029 (p. 25-26).

>> Indicators:
GRI 404-1 Average hours of training per year per employee
GRI 404-3 Percentage of employees receiving regular performance and career development reviews ;

Stakeholders

Supplier assessment for labour practices

The way we assess our suppliers and subcontractors is guided by our Code for Sustainable Sourcing and Purchasing, supplier commitment programmes, supply chain risk assessment, supplier awards, on-site contractor rules and our General Terms and Conditions. They govern how we work with suppliers to understand performance and improvements, how we support them and how we focus on key areas for improvement (see also p. 51-52, Supply Chain).

On Aperam's historical scope, suppliers and subcontractors are subject to pre-qualification reviews and on-site induction and training, audit and dialogue, principally on health and safety labour practices, but nominally on wider human rights and ethical standards. Our supplier evaluation is the tool by which we assess suppliers on business performance, and decide on improvement action plans and boss-to-boss discussions, for example. The actions taken with subcontractors on site include action plans on site safety, briefings upon site access and the use of temporary workers, for example.

Expectations are described in such action plans, but they are also enshrined in the contractual documents, which are subject to our procurement policies described above. In addition to our preventive measures, we have procedures in place for terminating a relationship with an existing supplier in case of detection of non-respect of any rules on labour practices.

Since 2010, we also assess sustainability practices of our raw material suppliers. Our raw materials supplier survey covers topics such as health & safety management, human rights, business ethics, environmental management, REACH and conflict materials. In addition, all suppliers are engaged to respect the General Purchasing Conditions, attached to the contract. In 2016, we started to use the same approach for non-raw materials suppliers.
In 2020 a new methodology was put in place to better assess our raw materials and non-raw materials suppliers. We based our analysis on the responses given directly by our partners in detailed questionnaires covering topics related to ethics, H&S and other human rights, environment, stakeholder engagement and supply chain responsibility. The aim was to screen (potential) suppliers, to red-flag those with mediocre scores and to follow-up on any remediation action requested by Aperam. On top of the initial scope covering subcontractors and raw materials suppliers, we included as well non-raw materials suppliers that have a direct impact on the quality of our final products or on the production process.
Since 2021, we continue with the same reporting, after a year of training and consolidation of our operating modes, including efforts to improve our stakeholders' watch (p. 51-52).

On the new perimeter of Aperam recycling, the integration is still under way, with a roll-out taking into account the differences in the suppliers portfolio of our former-ELG units.
As a fact, such partners are very often quite small entities, often family businesses, with sporadic deliveries. They are managed in a global distinct information system, which alignment to Aperam's processes started in 2022. Although the underlying principles are identical to Aperam's, the Suppliers' pre-qualification and follow-up protocols still significantly differ, therefore, this new scope is not integrated into our global assessments and does not appear as part of the 2022 reporting KPis.

>> Indicator:
GRI 414-2 Negative social impacts in the supply chain and actions taken

---

Impacts on local communities

We contribute to the economic livelihood of those who work for us directly and those in the supply chains serving us, we pay company taxes where we operate, and we operate community involvement in line with our values and with frameworks such as the UN Global Compact and ResponsibleSteel™.

In addition, in order to promote sustainability in its host regions, Aperam operates the Aperam Acesita Foundation in Brazil with social impact investment projects in culture, education, health, environment and development. Since 1994, the foundation has helped integrate Aperam into the community of Timóteo, and the Jequitinhonha Valley, partnering with non-governmental organisations, governments at federal, state and city level, global agencies, foundations and institutions. Our team there runs projects using volunteers as well as funded programmes to promote development for all publics. They conduct community needs assessments, using feedback from the common people, local partners and our

Environmental Education Centre (Oikós). We provide elements regarding the funding, number of events and number of beneficiaries.
In Europe, we try to move from a focus on specific partnerships on an ad-hoc basis to a more structured local development and engagement plan, at least at our main sites, and so we started to report also on the donations organised to support local events.

In 2016, in order to homogenise our practices we organised an inventory for 30 sites. The result of this analysis became the basis for our guidelines to have specific criteria of GRI 413-1 assessments.
In 2017, we have defined and validated these guidelines and prepared the implementation, which included the roll-out of additional communication tools to interact efficiently with communities. Based on these preliminary works, we were able to formalise a clear methodology to assess in a fully auditable manner the number of sites that meet the criteria proposed by the guidance elements regarding the GRI 413-1 indicator, and also, it helps us to follow up on improvements in this area. Since 2020, our Stakeholder Engagement policy has formalised our engagement patterns and promoted practices in relation with the size and impact of our sites. In 2021, for the preparation of the ResponsibleSteel™ audit in Europe, we initiated the review of our engagement practices with the aim to be more proactive, go beyond the historical relationships to cover more aspects and develop a stronger cooperation with local stakeholders (p. 58-61).
Going forward, after several years in this new operating mode, we aim to build on our experience and develop a revised methodology.

>> Indicators:
GRI 413-1 Operation with local community engagement, impact assessments, and development programs ,
See also earlier:
GRI 201-1 *Direct economic value generated and distributed,*
GRI 204-1 *Proportion of spending on local suppliers.*

Products

Product and Service labelling

Firstly, for our steelmaking business, the health and safety impacts of products are assessed at the metallurgical design stage and certification relating to materials safety in the use phase is in place. This applies to all significant products.

Stainless steels and alloys are manufactured and independently certified according to international standards such as the EN, ASTM and UNS series. We are regularly audited on these certifications. Our latest material safety data sheets confirm the absence of health or toxicological hazards.
We meet European regulations and French ministerial decrees relating to materials intended to come into contact with food. Finally, Aperam Stainless Steel Europe achieved compliance with EU REACH regulations again as our products do not contain any substance listed on the Candidate List of the European Chemical Agency.

Primary product information is provided to customers. Regular product sheets and brochure documentation disclose the raw materials in our carbon or stainless steels and alloys.
Starting 2021, we have started to complete existing disclosures with the release of our first Environmental Product Declarations, with externally verified information about the life-cycle assessment impacts of such products in terms of CO_2 emissions and water consumptions (for instance).
We have no recorded incidents of non-compliance relating to product information.

For our steelmaking business, the health and safety impacts of products are assessed at the metallurgical design stage and certification relating to materials safety in the use phase is in place. This applies to all significant products.

Secondly, for our secondary raw materials products, commercialised by our Aperam Recycling division, we act as a bridge and important interface between our numerous suppliers worldwide and our customers in the processing industry. We buy scrap in the form of waste, chips, strips, residues, ingots, runners/risers, runnings, splashings, skulls, etc..
With decades of market and material expertise and thanks to our innovative reprocessing technology, we are able to sell secondary raw materials that we have turned into high-quality ready-to-use products. We take pride in following the highest quality standards and your individual requirements when reprocessing Chrome-Nickel containing scrap to secondary raw materials. This is how our customers can be guaranteed they receive the raw materials exactly in the metallurgical and physical composition and form they need.

In spite of their positive environmental contributions, the handling of secondary material also poses a challenge : the detection of radioactively contaminated substances that could enter the recycling cycle, for example through medical or technical equipment that would not have been disposed of properly. Our yards are equipped with stationary detection systems for incoming and outgoing material and our cranes are equipped with grapple detectors to further enhance the probability of detection of small parts. Our processes and trained teams ensure that any incident is addressed properly, possibly in liaison with local authorities, and we engage with our customers, to avoid any impact at their side.
This is a new material aspect for Aperam, addressed through the reporting of Radioactivity Alerts (not a GRI indicator).

Across Aperam, customer satisfaction is of paramount importance to us for business reasons and it is part of our collaborative approach to R&D. We survey customer satisfaction regularly, usually every one to two years, overall, and in line with our market approach i.e. by market and/or product lines. This enables us to monitor how well we are meeting their requirements. Results are discussed by each Commercial organisation and the Leadership Team. Aperam Recycling has not been part of this monitoring this year. (p. 65).

>> Indicator:
GRI 2-29 Approach to stakeholder engagement - (Results surveys measuring customer satisfaction) .

Supplement D

Aperam Methodological Appendix

Introduction

As Aperam is always willing to track and follow-up its performance in the best possible manner with the aim to improve further, there can be adjustments of methods over time. For instance, with the aim to have a proactive approach to the risks of non compliance pertaining to dust emissions, we have decided to release stress tests and to report on these figures, including measures taken at times of dysfunctioning of installations, in parallel with the figures calculated in line with local regulations that demand to rely only on data reflecting 'normal operating conditions'.
In these circumstances, our approach is always to promote transparency and explain our rationale.

In this appendix, we propose to detail our enhanced methodologies as they are implemented and to highlight how and why they can deviate from existing norms.

GHG emissions

Context

Steelmaking is a sector that has an important responsibility for the decarbonization of the economy, as it is a heavy energy consumer and also can emit CO_2e as part of the chemistry of the metallurgical process. In addition, the raw materials used in the process for the stainless steel production can be from recycled or extractive sources, the latter requiring high-energy extraction processes. As a result, the CO_2e emission categories material to steel making -and to the stainless sub-sector in particular- are the scopes 1, 2, and 3a (upstream, raw-material and consumable part).
Conscious of its impact, Aperam has converted its Brazilian Blast Furnaces (hereafter BF) in the 2010s to accept charcoal instead of extractive coke and is striving to increase further the scrap input in its European Electric Arc Furnaces (hereafter EAFs). This is impacting both the scope 1 and scope 3a emissions. The company is also working to improve its energy efficiency and the share of low-carbon energy it consumes, thereby impacting its scope 2 emissions.
In addition, in the past, questions from stakeholders were mostly focused on scope 1+2 emissions but we have seen a growing interest for the scope 3 (or total footprint i.e. scope 1+2+3) assessments, in particular from investors and Business-to-Consumers customers. As we also believe it is a much sounder ground for comparisons, and because it is also a request from the SBTi, we also aim to quantify our scope 3 to be able to report it, as part of our contribution to the carbon neutrality in 2050. In 2022 we are disclosing our first estimation of our scope 3a (scope 3 upstream) and scope 3.1 (purchased goods and services) for Aperam global.
In addition, in the past, although the company has been using the simplified assumptions prevailing in the steel industry - the major ones being the ISO 14404-1 and 14404-2 standards, which consider biomass to be carbon neutral on a full life cycle analysis -, we were convinced that the exemplary forestry management of our FSC-certified BioEnergia unit (which is producing the wood and carbonising it into charcoal) was not correctly taken into account in our publicly released CO_2e emissions. As we aimed to provide a fully detailed roadmap for our decarbonization trajectory, we went further into the details of our emissions calculations and identified areas of improvements to better quantify our impacts as well as to reduce them. In particular, we saw emerging practices in Brazil, whereby the forestry's carbon capture was identified and assessed separately from the emissions related to the consumption of the charcoal it was turned into, in compliance with the GHG Protocol that requires separate reporting of CO_2e emissions and capture. Such practices were making it possible to identify the yearly removal operated by the managed parcels (cultivated parcels as well as managed reservation areas of native vegetation).

Further, the CO_2e emissions need to be reported differently, as biogenic emissions, from the other scope 1 emissions. As a result, starting 2021, we report separately our scope 1 biogenic emissions, mostly from charcoal, from our scope 1 non-biogenic, the latter being added to the scope 2 emissions (Market-based) to report Aperam's carbon footprint intensity, with a gross impact (A') or a net impact (B' and B'' - see below).

For CO_2e accounting, we use emission factors for some input elements, particularly the raw materials and the energy but we also use chemical analysis run by our own laboratories - this is the case for our own products (eg. crude steel) or by-products (eg. slags). The emission factors can be provided by the professional associations (WorldSteel, International Stainless Steel Forum - ISSF) or the National Authorities, but firstly they come from our laboratory data and from our suppliers. As a matter of fact, we are currently working with our suppliers to refine our scope 3a data so that they really reflect the footprint of the product we buy instead of the average footprint of the selling entity's mother company. It also enables us to educate our buyers so that they can integrate this factor in their decision-making.

All these CO_2e footprint data are not only used for our own Sustainability reporting and monthly monitoring, they are also integrated as part of our Carbon Disclosure Project (CDP) submissions -which has rated us "Management level" for a few years - and consistent with those used for our European Trading Systems mandatory EU reporting for our European plants or for the EU-Taxonomy mandatory reporting assessments.
In addition, starting 2022, our CO_2e footprint is one of the sustainability indicators integrated as part of our €500 million unsecured Revolving Credit Facility.

Description of the need

Avoiding double-counting and mixing of biogenic/non-biogenic emissions

Our process is fully embedded in the circular economy philosophy as it aims to be recycling / using all the by-products we generate during the production process. This brings additional complexity in our footprint inventory. As reflected by our recycling ratio (over 90%, i.e. 93% in 2022 GRI 301-2), many by-products generated during a melting shop phase (i.e. recorded as stocks and not consumed materials) are re-entering the process as input for the further steps of the production process. This is the case, for instance, of blast furnace gas, almost 100% of which is reused as heating energy further down in the process in the Timoteo plant. The blast furnace process transforms the input materials (eg. charcoal, iron ore, lime, refractory) into pig iron and BF gas (mainly). The carbon (or carbon-equivalent) content (atoms) of such gas, identified at our laboratories thanks to chemical analysis, obviously comes from the input materials. So if we count the C-emissions from the input material at the BF stage of the process, counting also as emissions the carbon content of the gas during the phase of its reuse would mean double-counting the C atoms release. So firstly, we have to identify the volumes stocked as residues or (by)products to really focus on the consumptions only. Then, we need to always keep in mind the origin of the C-content when calculating the impacts at each phase of the process. This means that we have to "follow" the C-content, to identify the theoretical impacts at each phase and to neutralise in the total those already taken into account to avoid any double counting.
When you add to this that charcoal is triggering only biogenic emissions, you understand that tracing the C-content from biomass across the process is important to avoid counting several times something that must only be reported as part of the scope 1 biogenic and not in the scope (1+2) footprint (non-biogenic).

Sequestration of forestry

Our forestry is planted with eucalyptus clones, always more adapted to the local conditions via genetic selection. We usually harvest it every six or seven years to optimise the charcoal production for our blast furnace's needs. The forestry has been planted for decades and is not contributing to deforestation. It is regularly replanted, each time with the best new breeds from our R&D laboratory and we consider that we must always have a potential of seven years of charcoal production being cultivated.
The impact of charcoal considered at zero throughout its lifetime is a simplified assumption according to ISO 14404-1, reflecting the circular process from the production phase (forest, CO_2e storage by the trees) to the consumer (BF, CO_2e release from the charcoal). However, this assumption does not consider the impact of a well managed forestry leaving branches and leaves deposits to degrade into humus: only the trunks are carbonised and turned into charcoal, so only the carbon fixed on the trunks is emitted at the blast furnaces. This means that only a share of our large forestry is considered, and that the remains of the cut trees that we leave on the soil as well as the significant areas of native forest maintained to act as a harbour for biodiversity are not counted at all.

Starting 2019, some companies in Brazil have certified the impacts of their forestry and we have used them as benchmarks. In parallel, Aperam BioEnergia is known in Brazil for its excellent practices (FSC certification, genetic selection of seedling, biological pest control, etc.), for which it receives regular awards (see previous Aperam's Sustainability reports).
With that in mind, we hired consultants to develop a methodology in order to assess the full impact of CO_2e of the entire forestry: end-of-year stock of CO_2e i.e sequestration and yearly flow i.e emissions or removals. The result of their work was that the sequestration was very significant, corresponding to a very significant annual CO_2e capture (several hundreds of $ktCO_2e$). Consequently, we decided firstly to assess and certify the methodology with an independent third-party verification run by a local firm and finally to roll it out as a routine to better reflect the reality of our overall impacts.

Solution: the updated methodologies

Mass Balance Accounting

As of 2020, Aperam's approach has been based on a finer chemical analysis, This mass balance approach is also a more conservative approach to computing the CO_2e emissions from all our outputs (products, by-products).
The metallurgical effect of each input element needs to be analysed at each phase of the process as some consumables may have none, meaning their carbon-content may not be "emitted" but simply transmitted to the next phase of the process or stored permanently.
For instance, the materials introduced for the blast furnace phase of the process may have an important carbon content and even generate carbon emissions, but many of the latter may be captured within the BF gases. In that case, we have to count the carbon emissions either during the blast furnace phase of the process, or during the re-use of that blast furnace gas to heat up slabs (or generate energy) - but not twice. This means that we have to model the process and follow the transformation of the materials in order to track the C-elements and their origin at each phase (Blast Furnace, Melting Shop, Hot Strip Mill, Cold Rolling Mill).
Of course, if the origin of the C-element is considered as biogenic (i.e. our charcoal made from biomass), the emissions will be reported separately. So our calculations are allocating to each input and output categories a proportion of "C biomass" and "C non-biomass", which is calculated until the end of the process stage and allocated to the final products, by-products and emissions. For the elements that play a

role in the metallurgical phases, the CO_2e is considered as being from biomass origin to the same extent as for the total production input (averaging), reflecting the melting of all elements in this phase.

Assessing separately the yearly increase in the removals of the forestry and the emissions from the rest of the process

CO_2e scope 1 removals of our forestry

The reference used for the calculations is 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 1 Introduction, Page 1.11, with the “Tier-1” methodology for the non-cultivated (native) forest and the “Tier-2” methodology for the cultivated (eucalyptus) forest. This means that the CO_2e impact for the native forest is calculated directly, based on ratios adapted to the specific carbone capture of the plants. For the cultivated forests, it is the difference between the stock for the year N and N-1 and can either be a capture (positive result) or an emission (negative result).

The coefficients used in the calculation mostly come from the relevant Brazilian Authorities and depend upon the type of trees or forest (in our case, for the native forest, Mata Atlãntica and Cerrado).
Although we are actively combating pests and fires, the surfaces that may be impacted (which are replanted, including for the native plantation) are fully considered. Their removals will not be counted and the emissions incurred (particularly by fires) are calculated together with the other forest CO_2e emissions.

Non-Cultivated forest

These forests are not harvested, they are only protected from fire risk and maintained to thrive - they suffer no wood removal. Our FSC certification (renewed in the course of 2021) also encompasses requirements and verifications regarding these surfaces.

To calculate the CO_2e footprint of the forest, the key information concerns the spread of the areas analysed, according to the location with the type and maturity of the vegetation for each, and the carbon content of the biomass above the ground and underground. The maturity of the parcel is assessed by satellite technology and visual inspection then classified as low / medium / high level, with the size of the trees and density of the flora being a key element.

The general formula for the native forest is:

Potential CO_2e removals= Area surface (ha) * tCO_2e/ha * Coefficient

For each location/type of vegetation (here, Mata Atlãntica or Cerrado), the value of the “Coefficient” (of “regeneration”) depends upon the maturity of the parcel: full for the ‘high’ maturity vegetation (“avançado”) and minored by a 81% coefficient (up from 60% until 2021 figures) for the flora in a low/medium stage of maturity.

The total removals are the sum-total of the removals of each parcel of native forests maintained by Aperam (exclusive of areas such as storage houses, roads, etc.).

Cultivated forest

All parcels are populated by trees of the same age and equally distributed, as planting is performed in one go for a full parcel using mechanical engines. For the cultivated forest, the removals are calculated for each parcel containing trees over two years of age ; before two years of age, the plants are not considered as wood and no removals are calculated (which stands as a conservative assumption).

To evaluate the carbon storage, we rely on the difference between the end stock (typically December 31st, Year N-1) and the entry stock (typically December 31st, Year N), in line with the "Tier 2" methodology as per the IPCC.
This is done by calculating the stock (both end and entry stock) following the same method, which is multiplying a coefficient of Carbon content for the dry matter by an evaluation of the total dry matter of the parcel. The latter is composed by the multiplication of:

- the volume of the trunks
- its expected normative density when it will be 6 years-old (depending on the species)
- the average annual increase in carbon in the Eucalyptus ("biomass expansion factor", needed to adjust the density to the age)
- the biomass dry matter[1], evaluating the other parts of the trees: live branches, leaves, roots, etc.

This summarises as:

Area surface (ha) * merchantable growing stock volume (m^3/ha)
*** D (wood density)**
*** (biomass expansion factor)**
*** [1+R (ton dry matter above and below ground : biomass)]**
*** CF (C-content by ton of dry matter)**

Forest inventory is held during the whole year by measuring samples/parcels (plot) on the field. We measure the tree trunk diameter and the height of the tree, which have all the same age on a given parcel. Then using mathematical models corroborated with sample measures, the wood volume is defined. According to our internal laboratory database, we elaborate the density per year.
Our FSC certification also ensures that our forestry management follows the best practices and that our stocks of live or cut trees are properly evaluated and regularly audited.

The total removals are the sum-total of the removals of each parcel of cultivated forest hosting trees of over two-years age.

CO_2e emissions of our other activities

The CO_2e calculation will follow the GHG Protocol (Corporate Standard, Scope 2 guidance, GHG Global Warming Potential Values - Feb 16 2016), ISO14064, ISO14404 and European Directive 2009/28/EC guidance.

Basically the GHG emissions calculations are based on the formula:

Quantity of consumption * GHG emissions per unit of consumption

Data collection and calculations apply to all Aperam's industrial plants (including service centres), headquarters, main offices and sales offices.
Data for the main plants are collected and consolidated by main production stage: Blast Furnace, Melting Shop, Hot Rolling Mill, Cold Rolling Mill (with Timoteo plant's production also detailed by product type Carbon & Electrical Steel vs. Stainless Steel - 2020 improvement) in order to be able to:
- follow scrupulously the main emissions and the reduction programs (on a monthly basis)
- follow scrupulously the C-content as defined above, to avoid double-counting and identify biogenic emissions, as well as
- to assess the emissions "as is" of the purchased tons (see § Adjusted ratios).

[1] Note: The below-ground biomass dry matter is deducted from the above-ground dry biomass mater by using the R ratio. Then the two CO_2e stored results are added.

Scope 1

For the calculation, the yearly consumption of following categories will be analysed:

- Production: Output material produced by the process stage (Pig Iron, Coil, etc.)
- Utilities: Industrial gas (DiHydrogen -Grey, Blue, Green-, Argon, Nitrogen, Oxygen…), Hot water, Steam, etc.
- Condensed Fuels: Coke (various), Coal, Oil (various), LPG, Consumed Charcoal, …
- Gaseous Fuels: Natural gas, Biofuel, BioGas, BF gas
- Materials: Scrap metals, Ferro-Alloys, Pure metals and other kinds of metals, Other materials (electrodes, refractory, lime, acid…).
- Residues: slag, sludge, dust
- Other GHG-Gas: CO_2e used for fire fighting, Gas used in air-conditioning system
- Forest: For cultivated and non-cultivated areas.
    - CO_2e emitted during the carbonization process and fires in forests.
    - CO_2e (CH_4) avoided during the carbonization process due to the usage of kilns' gas burners.

For the Scope 1 emissions, we cover the seven greenhouse gases identified by the 2015 update of the Kyoto Protocol and differentiate biogenic/non-biogenic emissions. The emission factors used come from our suppliers and our laboratories. They can also come from WorldSteel, ADEME, GHG / IPCC, if needed.

According to ISO Norm ISO 14404-1:2013 and ISO 14404-2:2013 (both chapter 6.2.3), the plant manufacturing steel records the quantities of raw materials, intermediate products and energy that are exported to outside users as an offset of CO_2e emission sources, eg. slag or dust sold.

The total biogenic/non-biogenic emissions are the sum-total of the emissions at each process of each unit.

Scope 2

In respect to CO_2e Scope 2 definition, the collected and analysed elements are:

- Purchased electricity from the grid.
- Purchased electricity from Supplier
- Purchased renewable electricity (solar cell installation, windmill installation, dam).
- Purchased heating.

Until further notice, Aperam does not purchase compressed air, steam and cooling.

When the energy provider can supply the information, the CO_2e emissions ratio used is the gCO_2e/kWh - and the emissions are said to be "market based". According to the GHG Protocol, the CO_2 scope 2 ratio of renewable sources (Solar, Windmills), equal to zero[2] gCO_2e/kWh.
Otherwise, the gCO_2e / kWh for the electricity from the grid ("location based") is established using a 3 (three) years-rolling average for Europe and Brazil (reporting year, year-1, year-2), with the following sources:

- European Union countries EEA database
- Brasil: Ministério da Ciência, Tecnologia e Inovações / Clima / Fator médio - Inventários corporativos.
- USA: EPA database (use of the last published values).
- Other countries: Use of the International Energy Agency (IEA) data published in 2011.

Remarks and interpretation

We report our CO_2e emissions using the GRI framework, under GRI codes 305-1, 305-2, 305-4 and 305-6. Starting 2021, we also report "scope 1 biogenic emissions" and "scope 1 non-biogenic emissions", the latter being used for the calculation of the scope 1+2 footprint, together with the "market-based scope 2 emissions".

[2] However, a value is to be applied for any Scope 3 estimates.

We also report additional indicators tailored to our reality, in particular the consolidated impact of the year totaling emissions and removals, integrating the yearly removal, as “net emissions (scope 1+2)” (hereafter B’’).

Mass Balance Accounting interpretation

While this methodology was developed primarily to address the charcoal effect after the blast furnace phase (particularly as part of by-products) and before we started to report on biogenic emissions, the concept will prove particularly useful if we aim to develop the use of other biomass-based energy or materials. It is still useful to avoid counting twice the emissions of the same carbon dioxide at two steps of the process. As we aim to be a zero-waste company, we will increase further the re-use or recycling of all our by-products eg. dust, slags, etc and this approach will progressively be more and more necessary.

The impact of this adjustment concerned only Brazil and meant less than 0.3% at the Group level - it did not change our 2030 objective, neigher in 2020 at change time than today.

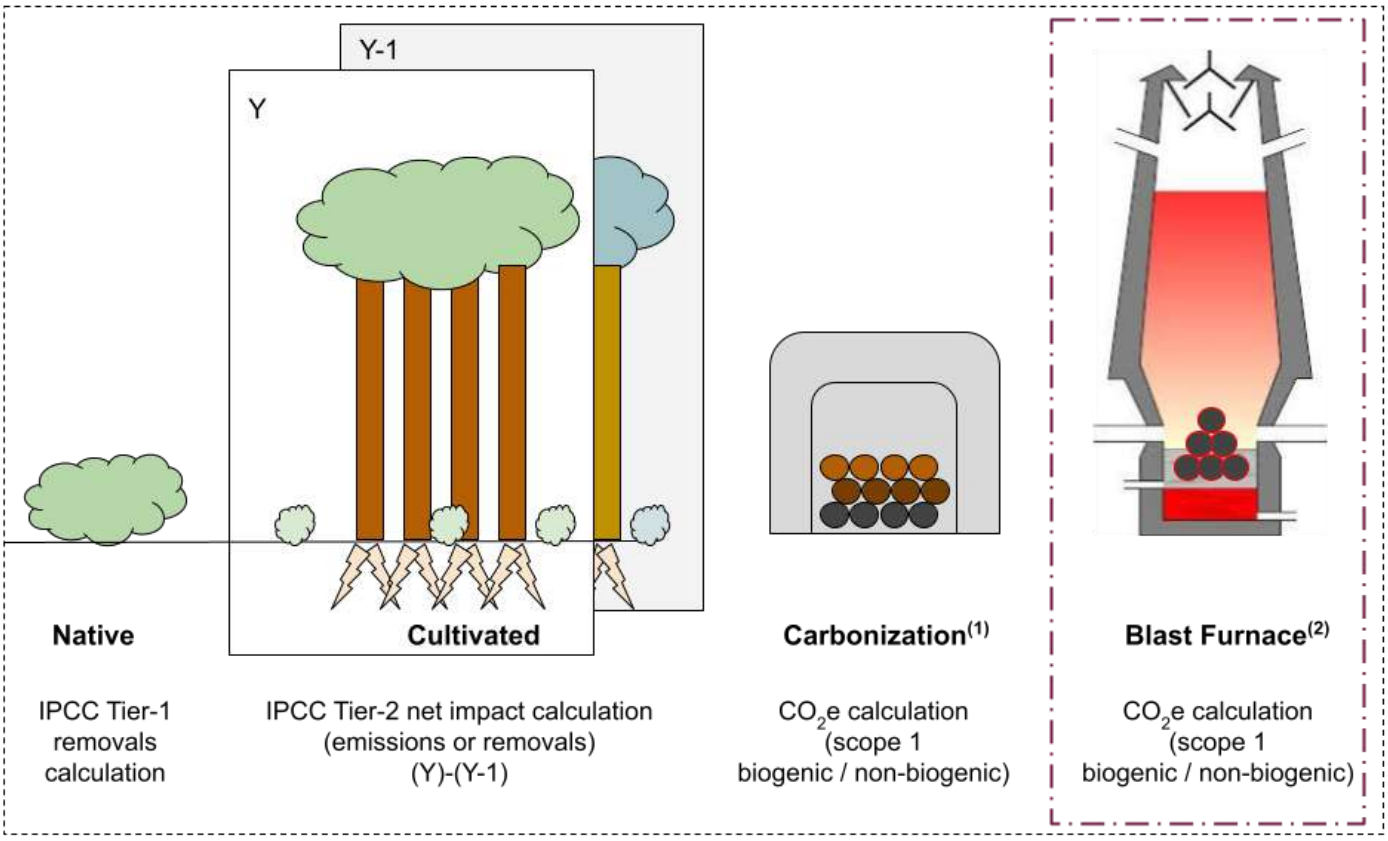
Benefits from assessing separately the yearly increase in the removal of the forestry and the emissions from the rest of the process

As long as the stock sequestered into the cultivated forest equals the value of the previous year, it means that the cuts have been offset by the CO_2e capture operated by the forestry (excluding the parcels replanted during the year).
Calculating separately the biogenic/non-biogenic emissions and the removals operated by BioEnergia, rather than using the assumption “charcoal = zero”, is a heavy work we conduct in line with the GHG protocol and IPCC 2006 and 2019. However, it allows firstly to identify the specific emissions related to the cultivation and carbonization process (biogenic/non-biogenic, including emissions of methane not turned into CO_2e by kilns’ gas burners, fertilisers; etc) while evaluating the huge amounts of CO_2e stored in the forestry (soil, native forest, etc.).

To clarify the methodology and impacts, we presented in the 2021 report a table (incl. changes in relation to intensity ratios - see § Intensity ratios), providing a comprehensive view of the gaps between methodologies and highlighting the importance of the removal operated yearly by our forestry, in addition to a schematic (next page).
We also updated our objective, at 0.3 tCO_2e/tcs by 2030, Scope 1+2 including offsets (B’’), valid as of 2022.

Overall, this change in methodology showed an increase of the carbon intensity at a level of 17,4% for A’’ (gross intensity, without sequestration, all tons), in 2021. This exhaustive methodology is more complete and accurate than the charcoal = 0 assumption (life-cycle analysis), and it gives higher emission values than the old methodology, due to the impact of methane, but it is also allowing to integrate the full impact of the calculation of the sequestration without any double counting.
This is reflected in the B’’ indicator.

Schematic 1: methodology



Air emissions

Context

Air emissions and primarily dust emissions are amongst the key topics of interest of our local stakeholders. According to our Environmental policy, Aperam's commitment is to go beyond legislation and reduce in a continuous manner its emissions of dust: it is repeated on our several external communication tools. To do so, we organise the containment of dust-emitting operations and/or installation of obstacles to prevent the spread of the diffused dust mainly associated with material handling, stockpiling and transport activities.
To avoid stack emissions (released from identifiable sources), we can arrange water sprinkling in order to channel the dust via water (eg. Châtelet HSM) and, when possible, the ducting of dust, which can then be recuperated in filtering systems using fabric sleeves and treated in Recyco (or landfilled in Brazil). At critical points, we can set up continuous measurement and alerting systems triggered well below the authorised thresholds to launch analysis/corrective measures, and monitoring cameras can be added to detect visually and in real time any dysfunctioning.

The monitoring of the volumes emitted is organised locally, primarily according to the permits, and this is periodically verified by local authorities. Our measurement protocol is based on the following key principles:

- We follow ducted dust (particulate matters) via opacimeters, placed at the main sources of emissions, usually the chimneys, and chemical components by analysis. The volume of ducted dust emitted is calculated by equipment, using the measures taken in mg/Nm^3 from the opacimeters. Once multiplied by a flow and a duration (operating hours of each equipment), it provides absolute value emissions and also allows a consolidation by process stage, plant, country, and ultimately at group level. Sometimes, the measures can be real time with our own systems, but generally, the assessment is done via sample measurement campaigns subcontracted to external firms at a frequency depending on the permit and on the local criticality of the topic (from multiple times per month to once per year according to the criticality of the dust emissions points). We can also be subject to impromptu audits organised by the legal authorities.
- Additional measurements can be organised beyond the limits of the plants, when requested locally, to evidence dust falls (immissions) or the presence of pollutants (eg. Nickel and Chromium) and to have all elements to understand our impact on the environment. Of course, these metrics are also impacted by external factors (wind, agriculture, traffic, ..) and production mix. Therefore some baseline measurements can be organised to better identify the impact of our operations.
- NOx and SOx are only measured in our European plants.

Industrial units use all this data to report to the authorities according to the required periodicity, by chimney and in mg/Nm^3 and g/t.
The data undergoes regular verifications from various auditors, for instance as part of the framework of our ISO 14001 and Sustainability reporting audits.

The diffused dust from industrial buildings is analysed separately and only counted in the Group total emissions when it is reported to the authorities, as it is the case for the Imphy plant (France). This small variation in the total emissions is negligible, diffused emissions being very marginal at Aperam level.

Description of the need

One of the problems we face is the heterogeneity of the measuring periodicity, a reflection of the diversity of the regulations in force and also the various impacts of our plants. The local Authorities request periodical communications of the measures (typically once a quarter but can also be once per year) and the specifications of such ‘legal measures’ usually clarify that those not taken during normal operating conditions cannot be considered.
A parallel issue is the variability of the performance of our dedusting systems. These are huge equipment with turbines to duct and cool the flow and filtering sleeves that need periodical maintenance. Indeed, when some sleeves are displaced, torn or pierced (as in a vacuum cleaner), they fail to filter the air flow, which explains an accrued release of particles through the chimneys. In this case, filters need replacement, which in turns requires a stoppage of the system and a maintenance operation with new sleeves.
On top of that, it is not always easy to detect when maintenance is needed or whether the dedusting performance is satisfactory. This is why we usually use dust emissions measurements to check the reliability of the system and to prioritise the actions in the maintenance schedule. Indeed, since 2016, we have also decided to intensify, beyond the legal requirements, our measurement frequency to enhance our performance, identify areas of improvement and adequately schedule our maintenance. In case of problem, our procedure even requests to increase the frequency of the measurement until a sustainable return to normal within the permit limit, in order to efficiently follow the results of the corrective action plan.

Thus we have measures that are valid for legal reporting use and others that are not qualified for the same, but that are still necessary for our own operations monitoring.

Solution: the different methodologies

At Aperam level, dust emissions are consolidated using several methodologies to address the various standpoints of our stakeholders:

- 'Regulatory methodologies' are used for local disclosures purposes mostly ('legal view'). They take into account the measures in line with our operating permits obligations. This figure is fully in line with the data reported to the authorities.
- The 'exhaustive methodology' considers all measures taken and is reported as part of our Sustainability reporting, in order to reflect the volume of the dust emitted with the best precision possible. To assess our impact in terms of total air emissions, each measure is considered from the date of the measure until the following measure, whatever the level of performance they reflect (in 'normal operating conditions' as per the regulatory demands or at times of dysfunctioning).
- As regard to NOx/SOx, we only report a total for Europe, using the 'regulatory methodology' as we are not organising additional measures.

For our calculations, where possible, we use the real-time measures of our opacimeters. However, sometimes, the opacimeters are not coupled with real-time flow metres and can only serve for the alerting of operational departments - in which case we rely on the regular measurement campaigns (mg/Nm^3) to compute our total emissions.

Remarks and interpretation

The totals based on the 'legal' measures (emissions using 'regulatory methodologies') provide a yearly estimate based on a couple of points (typically, the two semestrial measures by chimney). Our own internal exhaustive assessments benefit from a greater set of measures, which, considering the variability of the performance, significantly improve the accuracy of the assessment.
Considering this 'legal vision' as less homogeneous in terms of measuring points and less relevant to reflect the reality of our impacts towards our stakeholders, we are reporting on a consolidated level 'exhaustive assessments' that are taking into account all the reliable measures taken (incl. during breakdown of de-dusting installations) - we consider that it matches the GRI definition of the indicator "GRI 305-7: NOx, SOx and other significant air emissions".

Overall, Timoteo emissions account for over 80% of the total emissions of the company.

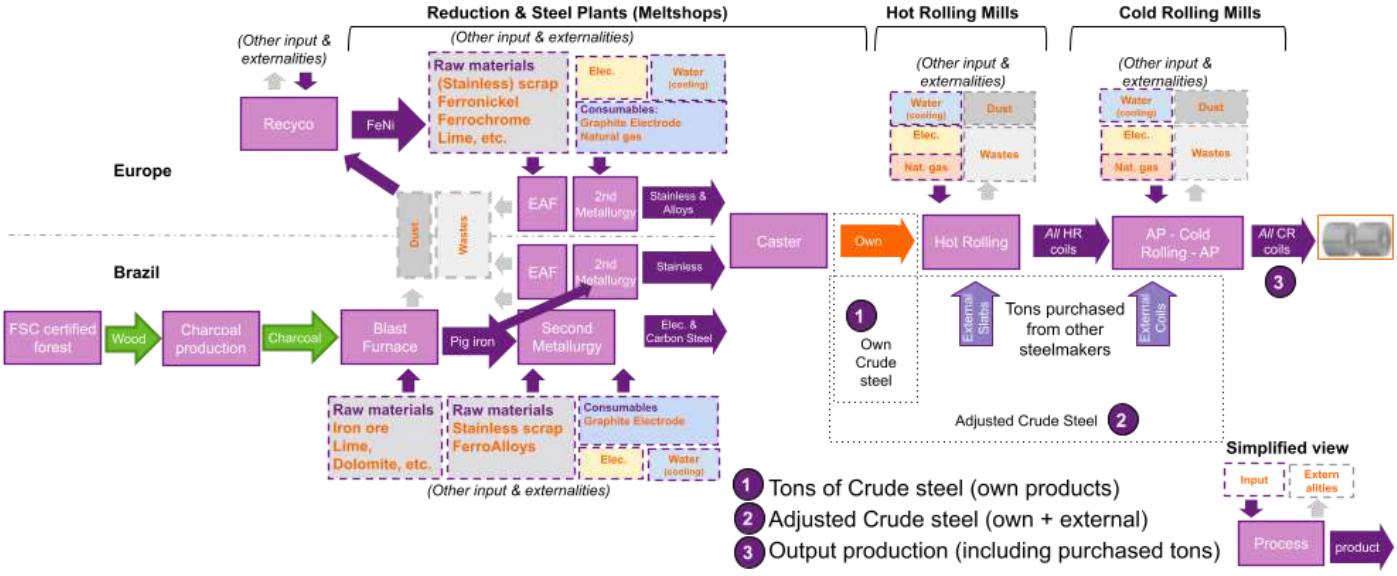
Intensity ratios

Context

The production process of steel is that of a transformation of primary or secondary raw materials into crude steel then turning it into long (bars, wires) or flat (coils that can be cut into sheets) products. For Aperam, it's mostly coils / sheets. As the crude steel is therefore a common denominator to all processes, whatever the end product is (very thin or ultra-bright stainless coil, pickled coil of carbon steel), it is traditionally used in the industry to calculate all ratios in intensity with the aim to decorrelate the absolute consumptions and emissions from the production level. For instance, the EU taxonomy and the ETS are both indicating thresholds in terms of CO_2e intensity calculated based on "tonnes of crude steel ex-caster", usually abbreviated "tcs" for tonnes of crude steel.

The graphic (Schematic 2) below represents the process within Aperam. The company can decide to increase its production by purchasing some semi-finished products to other steelmakers. These volumes will therefore join the flow of the total products passing through our tools. When these volumes are limited or purchased in a very advanced stage of transformation, little input or externalities will be used or generated by their processing. This means that the marginal increase in absolute values (in terms of water, energy, or dust, for instance) will hardly be visible, compared to the total impacts of our “fully owned” production on the same criteria. Likewise, the ratio of total impacts/total production will not be distorted if the total production is very close to our own production. In that case, not counting the purchased volumes within the “tons of crude steel” used as a divider is not a problem and will hardly change the result of the ratio.

Schematic 2: Integration of Purchased tons into our Industrial framework



Description of the need

Problems come when the volumes of purchased semi-products (usually slabs or hot rolled coils) vary significantly. Indeed, the consumption and externalities are measured independently, in absolute values, and can significantly increase -or drop-, particularly if the products undergo heavy-impact phases of the process. For instance, an external slab will pass through the hot rolling mill step (and downstream), which is part of the total process in terms of energy consumption, and adds its kWh use to the relevant counters.

Unfortunately, as the counter used for the denominator in standard ratios is the ton of crude steel produced (slab, for convenience), this external slab cannot be counted with our own slabs - only with the original steelmaker. As a result, when one purchases significant volumes of external semi-products, one has an increased nominator and an unchanged denominator, ending up in a distorted ratio. It is particularly inconvenient if the volumes of external semi-products entering our process fluctuate over time: the ratios could improve or deteriorate, showing variations that are not reflecting our gains in efficiency and even mislead our own people in quest for constant optimization.

That is why, knowing that we have important variations in the proportion of external products transformed at our plants, we decided in 2021 to design a methodology to redress this anomaly.

Solution: the ‘adjusted’ methodology

The concept is simple: adjust the intensity fraction ‘fairly’ by recognizing all the impacts of the purchased products “as if” they were our own (that of the same plant), both at the numerator (consumption of energy and water, GHG and dust emissions, etc.) and at the denominator levels (production, here tonnes of crude steel). This allows us to avoid ‘false’ variations over the years that would be justified only by the proportion of semi-products transformed and not by a change in the efficiency of our processes.
To do this, we must adjust both the numerator and denominator of the fraction, based on our own data of the period - and this is valid for all our main ratios: GHG and Air (dust) emissions, Energy and Water consumption.

- For the numerator (impacts), we already have the impacts generated by the products as they pass on our tools but we miss the impact they would have had, if they had been melted at Aperam’s. To do that, we apply the same standard impacts generated by our own tons during the upstream part of the process (ie. average CO_2e emissions during the elaboration at the Meltshop). This means that first we calculate the impacts (absolute, intensity) of our own slabs in terms of water, dust, etc., at the process stage (eg for instance Melting shop Water Consumption). Then we allocate the same intensity ratio to the external tons. Finally this value is added to actual consumption. This sum reflects the consumption linked to our own production and the external inputs as well.

- For the denominator (production level), we add the purchased products to our own production. If the products are a coil, we have to recalculate the equivalent of tons of crude steel (slabs) that the purchased products represent. For instance, if we had a yield of 98% for our own transformation slabs to black coil (blackcoil weight / slab weight = 98%), we inflate (division) the tonnage of the black coils purchased by that factor to obtain a “slab equivalent”. Then we add this “equivalent slab purchased” from the purchased back coils to our own tons of crude steel for an “adjusted total production”. This figure will then be used as the divider to calculate all “adjusted intensity ratios”.

- Unless otherwise stated, the intensity ratios of environmental indicators provided in this Made for Life Report take into account purchased slabs (both the impact in the numerator and the number of slabs in the denominator). Conversely, the absolute figures of environmental indicators only take into account the impact of Aperam, whereby the impact of purchased slabs is not accounted for.

Remarks and interpretation

As a conclusion, with such an approach we are getting closer to a product-specific approach and we erase the visual distortion linked to the fact that not all tons have passed through all the steps of the steelmaking process. We also make the comparisons between tools (as we do internally) and amongst steelmakers (as is done externally) more relevant.
In 2022, the adjusted ‘intensity CO_2e emission’ considering all tons (including purchased metal) was presenting a gap below 1% compared to the standard ratio considering only our “own tons”.

This approach was also decided knowing that we will progressively move to a comprehensive scope 3 CO_2e reporting, i.e. from scope 1 to scope 3a (Upstream). At that time, we will aggregate the CO_2e footprint from the raw material mine (“cradle”) to the delivery of our end-product (“gate”). Note that while communication of the scope 3 data of the purchased slab will avoid calculating the CO_2 intensity with the purchased slabs, we will have to keep the methodology to apply it for Water use and Dust emission in order to keep coherent intensity kpi.