

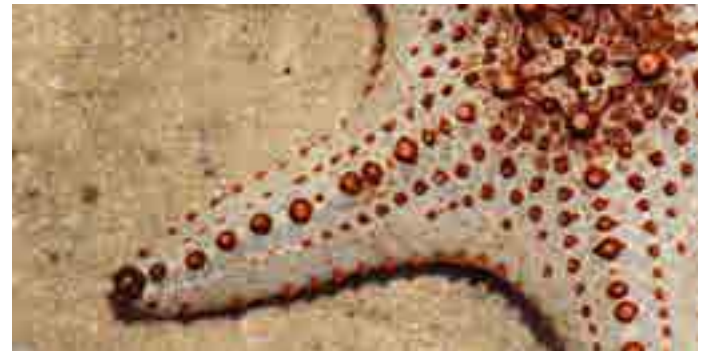
renewal

Towards increased stakeholder value

The seed of the lotus flower can remain at the bottom of a pond for as long as 1,300 years before it rises to float on the top. Here it becomes an exquisite flower, opening in the morning and closing in the evening. The flower is a powerful metaphor for regeneration and renewal.



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Reader's guide

About our theme

Renewal

The way the world works is fundamentally changing. Today's businesses, governments, societies and individuals are responding to shifts that would have seemed unimaginable even a few years ago. These shifts mean that we are recalibrating our approach to issues of commerce, community and consumption—rethinking the value business adds to our daily lives, reformulating social contracts and focusing more intensely on the regeneration of natural resources. At Sappi, we see these shifts as representing an opportunity for renewing our commitment to Prosperity, People and Planet.





Towards our 2020Vision

Our 2020Vision was formulated as a strategic response to the megatrends which are changing the world in which we live and work. We have worked tirelessly to refocus and restructure our business so that we are better placed to respond to these megatrends and serve existing and new markets and customers. Our 2020Vision is well on track as we continued to focus on being a leader in our industry and a valued member of our local communities beyond 2020.

Getting around




This sustainability report makes use of in-document navigation tools, allowing you navigate to the subjects that interest you most. The navigation bar at the top of the page will keep you apprised of where you are in the report.

Click on the icons to:


-  Move to the contents page.
-  Move forward one page.
-  Move back one page.
-  Move back to the previous page you were reading.

More information ...

More detailed information on many of the topics discussed in this interactive *Group Sustainability Report* is available in other Sappi publications, our own website, and third-party sources. Where available, we provide links to these sources.

-  Related and explanatory information within this report is cross referenced.
-  See more detailed information available in other published documents available on www.sappi.com or other interactive reports.
-  See more detailed information on third-party websites.


Best viewed

This sustainability report is best viewed, using Adobe Acrobat's PDF-viewer, which can be downloaded free of charge from Adobe's website  (acrobat.adobe.com/za/en/acrobat/pdf-reader.html).

Viewing the report online, using your browser's native built-in PDF-viewer may render some of the navigational and interactive functionality unusable.

Certification systems

Certification systems, eg the *Forest Stewardship Council® (FSC®)*, the *Programme for the Endorsement of Forest Certification™ (PEFC™)* and the *Sustainable Forestry Initiative® (SFI®)* are referenced throughout this report, without providing detailed information about each of our operations' certification status in each instance, to ensure ease of reading.

Certification information for each mill is available on  www.sappi.com/certifications.

Intellectual property

Various websites, research reports, trademarks, registered trademarks and other forms of intellectual property are referenced in this report. All of these, whether marked or unmarked, are without exception, acknowledged as the legal property of their respective owners.

Conventions

Billion

We follow contemporary 'short scale' convention; defining a billion as one thousand million.

Specific

When data is expressed in specific form, this means that the actual quantity consumed (energy, water etc) or emitted (emissions, solid waste etc) is expressed in terms of a production parameter for the period indicated. For Sappi, as with other pulp and paper companies, the parameter is air dry tons (adt) of product.

Tons

We standardise all our reported measurements using the metric ton equivalent to 1,000 kg (one thousand kilograms).


Exchange rates

We have used the following exchange rates:
US\$/ZAR: 13.05
US\$/EUR: 1.19



About this report

Scope of this report

 This report is aligned with our [Annual Integrated Report](#) and covers the period from the beginning of October 2017 to the end of September 2018. We report on a regional and global basis, wherever possible presenting data over five years to make the information relevant, accessible and comparable. Safety, health, environmental and quality (SHEQ) data is compiled according to international best practice. Commentary is provided on graphs to enhance understanding and specific measurement criteria—as well as instances where these have changed—are clearly spelled out.

Reporting framework

As Sappi Limited is headquartered in South Africa and we have our primary listing on the Johannesburg Stock Exchange, we abide by the King IV Code on Corporate Governance (King IV). Our *Annual Integrated Report* provides a very clear link between sustainability and strategy and sets out how we creating stakeholder value in a sustainable manner.

In response to stakeholders’ needs for more in-depth information pertinent to their specific region, we publish region-specific sustainability reports in addition to this group overview. Our 2018 regional sustainability reports for our operations in Southern Africa and North America, together with an updated summary for Europe, will be available in 2019.


Joint ventures

LignoTech South Africa, our 50:50 joint venture with Borregaard at Saiccor Mill is excluded from the **Prosperity**, **People** (with the exception of safety) and **Planet** data as we do not manage the operation.

New acquisitions

The report does not cover **People** and **Planet** information for the digital imaging business or the Carmignano and Condino Mills acquired from the Cham Paper Group Holding AG (CPG). However, these new acquisitions have been included in the safety statistics as from 01 March 2018.

Global Reporting Initiative

 We have reported in terms of the *Global Reporting Initiative’s (GRI’s)* Standards (see [GRI](#)). We have included a GRI index and a separate section communicating our progress in terms of the *United Nations Global Compact (UNGC)*, as well as the *United Nations Sustainable Development Goals (SDGs)* (see [UNGC and SDGs](#)).

Business units

Throughout this report, Sappi’s regional business units are referred to as:

- [SEU](#) – Sappi Europe
- [SNA](#) – Sappi North America, and
- [SSA](#) – Sappi Southern Africa.

Defining report content


Determining materiality

We consider material matters to be those matters that could facilitate or inhibit our One Sappi strategy and that could substantively affect—either positively or negatively—our ability to create stakeholder value over the short-, medium- and long term.

The information presented has been determined on the basis of our ongoing extensive engagement with our stakeholders and has been assessed against the backdrop of current business operations, as well as the opportunities, challenges and prevailing trends in our industry and the global economy. These trends occur in the broader context of a world where climate change concerns and resource scarcity are raising expectations to make more and better with less and where sustainably manufactured products derived from renewable resources are more important than ever before.


Based on this context, we have realigned our strategy to maintain our position as a global forest products leader and developed a global vision based on the power of One Sappi. In preparing this report we have tracked environmental findings and research, public opinion, employee views and attitudes, the interests and priorities of environmental and social groups, as well as the activities, profiles and interests of investors, employees, suppliers, customers, communities, governments and regulatory authorities.

Throughout the report, qualitative text is backed up by quantitative information, generally in the form of graphs illustrating performance over five years from 2014 – 2018. We aim to present information that is material, accurate, comparable, relevant and complete. The information presented covers topics and indicators that reflect our significant economic, environmental, and social impacts, as well as issues that would substantively influence the assessments and decisions of stakeholders.


We publish our performance against targets in both the *Group Sustainability Report* and our regional sustainability reports  (see www.sappi.com/sustainability), transparently reporting on success or lack thereof in achieving these targets.

Prioritising content

This report is structured along Sappi’s well-established 3Ps of sustainability: **Prosperity**, **People** and **Planet**. It covers material sustainability focus areas that affect the long-term success of our business, and that relate to any significant impacts we have on the economy, environment or communities in which we operate.

While we do cover economic (**Prosperity**) issues to some extent, these are dealt with in greater detail in our  [Annual Integrated Report](#).

Identifying stakeholders

We have identified the stakeholders we expect to use our report on the basis of our ongoing engagement—formal and informal—with them. The various ways in which we engage our  stakeholders are set out in detail in the [People](#) section of this report. The stakeholders we expect to use this report include investors, customers, suppliers, employees, communities, governmental and non-governmental organisations, environmental bodies and all those who are affected by our activities.

Defining report content continued

External assurance

In 2018, we obtained external limited assurance on selected sustainability key performance indicators included in this report (see [Independent Assurance Practitioner’s Limited Assurance Report on Selected Key Performance Indicators](#)).

Assured data

| | |
|---|-------------------------|
| Direct emissions (Scope 1) (tCO ₂ e) | 4,297,429 ^{LA} |
| Indirect emissions (Scope 2) (tCO ₂ e) | 1,473,162 ^{LA} |
| Employee (Own) LTIFR (rate) | 0.55 ^{LA} |
| Contractor LTIFR (rate) | 0.34 ^{LA} |

LA: Limited assurance provided by KPMG.

Our sustainability information also continues to be verified by our internal audit team. Their verification process includes reviewing the procedures applied for collecting and/or measuring, calculating and validating non-financial data, as well as reviewing reported information and supporting documentation.

In addition, most of our key operations undergo external verification including the *Eco-Management Audit System (EMAS)* in Europe, *ISO 50001* energy certification in Europe and South Africa and globally, *ISO 14001* environmental certification, *ISO 9001* quality certification and *OHSAS 18001* certification.

We are also assessed in terms of the forest certification systems we use, and in South Africa, our broad-based black economic empowerment (BBBEE) performance is assessed by an external ratings agency.

In 2018, Sappi Limited was a constituent of the *FTSE/JSE Responsible Investment Index* and the *FTSE/JSE Responsible Investment Top 30 Index*. Being included in these indices means that our sustainability performance has been externally assessed.

Collectively, these external assessments and certifications as well as interaction with our stakeholders give us confidence that our performance indicators are reliable, accurate and pertinent. The *Social, Ethics, Transformation and Sustainability (SETS) Committee* is satisfied that the sustainability information presented in this report has been provided with a reasonable degree of accuracy.

External reviews of our sustainability performance


Our focus on continuous improvement and commitment to integrate the principles of sustainability into our everyday business activities is highlighted by the fact that in 2018:




- We were included in the *FTSE/JSE Responsible Investment Top 30 Index* and confirmed as a constituent of the *FTSE4Good Index Series*.



- In addition, Sappi has been classified as *Prime* by *Oekom*, one of the world’s leading environmental, social and governance (ESG) research and rating agencies for sustainable investments.



- In all three regions, we were awarded a *Gold Recognition Level* in sustainability performance by independent rating agency *EcoVadis*, placing us in the top 5% of 30,000 companies.



- We reported to the *CDP* (www.cdp.net/en) in terms of their *Climate Change and Forest Programmes*, making our responses publicly available.

Created by the global index provider FTSE Russell, the *FTSE4Good Index Series* is designed to measure the performance of companies demonstrating strong **environmental, social and governance (ESG) practices**. The *FTSE4Good* indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.



Independent Assurance Practitioner’s Limited Assurance Report on Selected Key Performance Indicators

To the Directors of Sappi Limited

We have undertaken a limited assurance engagement on selected key performance indicators (“KPIs”), as described below, and presented in the 2018 Sappi Group Sustainability Report of Sappi Limited (Sappi) for the year ended 30 September 2018 (the Report). This engagement was conducted by a multidisciplinary team including environmental, safety and assurance specialists with relevant experience in sustainability reporting.

Subject Matter

We have been engaged to provide a limited assurance conclusion in our report on the following selected KPIs set out in the Table below and marked with an LA in the “Assured Data” table on page 5 of the Report. The selected KPIs described below have been prepared in accordance with the Global Reporting Initiative Standards (‘GRI Standards’), supported by Sappi’s internally developed guidelines (collectively referred to as “Sappi’s reporting criteria”).

Table: Scope of the KPIs prepared for the 2018 reporting period

| Category | Selected KPIs | Coverage/Reporting Boundary |
|-------------|---|-----------------------------|
| Environment | Direct emissions (Scope 1) tCO ₂ e | Sappi Global (Total Group) |
| | Indirect emissions (Scope 2) tCO ₂ e | |
| Safety | Employee (Own) LTIFR (rate) | Sappi Global (Total Group) |
| | Contractor LTIFR (rate) | |

Directors’ Responsibilities

The Directors are responsible for the selection, preparation and presentation of the selected KPIs in accordance with Sappi’s reporting criteria. This responsibility includes the identification of stakeholders and stakeholder requirements, material issues, commitments with respect to sustainability performance and design, implementation and maintenance of internal control relevant to the preparation of the Report that is free from material misstatement, whether due to fraud or error. The Directors are also responsible for determining the appropriateness of the measurement and reporting criteria in view of the intended users of the selected KPIs and for ensuring that those criteria are publicly available to the Report users.

Inherent Limitations

Greenhouse gas emissions quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the independence and all other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. KPMG Services Proprietary Limited applies the International Standard on Quality Control 1, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner’s Responsibility

Our responsibility is to express a limited assurance conclusion on the selected KPIs 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. That Standard requires that we plan and perform our engagement to obtain limited assurance about whether the selected sustainability KPIs are free from material misstatement.

A limited assurance engagement undertaken in accordance with ISAE 3000 (Revised) involves assessing the suitability in the circumstances of Sappi’s use of its reporting criteria as the basis of preparation for the selected KPIs, assessing the risks of material misstatement of the selected KPIs whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the selected KPIs.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. The procedures we performed were based on our professional judgement and included inquiries, observation of processes followed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Independent Assurance Practitioner’s Limited Assurance Report on Selected Key Performance Indicators continued

To the Directors of Sappi Limited

Given the circumstances of the engagement, in performing the procedures listed above we:

- Interviewed management to obtain an understanding of the internal control environment, risk assessment process and information systems relevant to the sustainability reporting process;
- Inspected documentation to corroborate the statements of management in our interviews;
- Conducted interviews with relevant key personnel and data owners to understand data collection and report preparation processes, as well as the associated key controls;
- Inspected supporting documentation on a sample basis and performed analytical procedures to evaluate the data generation and reporting processes against the reporting criteria;
- Evaluated the reasonableness and appropriateness of significant estimates and judgements made by the directors in the preparation of the selected KPIs;
- Undertook site visits, to complete the abovementioned procedures; and
- Evaluated whether the selected KPIs presented in the Report are consistent with our overall knowledge and experience of sustainability management and performance at Sappi.

The procedures performed in a limited assurance engagement 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. Accordingly, we do not express a reasonable assurance opinion about whether Sappi’s selected KPIs have been prepared, in all material respects, in accordance with Sappi’s reporting criteria.

Limited Assurance Conclusion

Based on the procedures we have performed and evidence we have obtained and subject to the inherent limitations outlined elsewhere in this report, nothing has come to our attention that causes us to believe that the selected KPIs, as set out in the table included in the Subject Matter paragraph above for the year ended 30 September 2018 are not prepared, in all material respects, in accordance with Sappi’s reporting criteria.

Other Matters

The maintenance and integrity of the Sappi website is the responsibility of Sappi’s management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to either the information in the Report or our independent limited assurance report that may have occurred since the initial date of presentation on the Sappi Website.

Restriction of Liability

Our work has been undertaken to enable us to express a limited assurance conclusion on the selected KPIs to the Directors of Sappi in accordance with the terms of our engagement, and for no other purpose. We do not accept or assume liability to any party other than Sappi, for our work, for this report, or for the conclusion we have reached.
KPMG Services Proprietary Limited

Per PD Naidoo
Director

KPMG Crescent
85 Empire Road
Parktown
Johannesburg
2193

20 December 2018



Leadership messages



While specific strategic external trends represent risks, they are also opportunities to which we are responding with determination and commitment.

Dear stakeholders,

Sappi's sustainability strategy builds on our 2020Vision, people and core assets and aims to create real value by contributing to business growth within the context of the constantly changing external environment in which we operate. **Renewal**, which is the theme for this year's report, reflects our response to this environment—one which is characterised by rapidly evolving customer needs, shifting regulatory and investor requirements and escalating environmental concerns. The theme also showcases the success of our 2020Vision which is based on forest products renewal and intentionally evolving our business as we extract previously untapped value from woodfibre and unlock and commercialise the potential of woodfibre based bioproducts.

The more specific strategic external trends to which we are responding are set out on [page 16](#) of this report and include artificial intelligence, transparent supply chains, demographic shifts, ethical fashion, resource scarcity, anti-plastic sentiment and climate change.

Our strategy asks: what impact does our business have on **People** and **Planet**? and how can we positively impact the lives of **People** while treading more lightly on the **Planet**.

While these trends represent risks, they are also opportunities to which we are responding with determination and commitment. Meeting customer needs with new products, investing in innovation, establishing more transparent supply chains, treading more lightly on the **Planet** and developing our **People** are all building Sappi's reputation and create a compelling business case to drive our sustainability strategy forward.

This highlights our fundamental belief that sustainable business is not about peripheral activities, but about core operations.

Valli Moosa

Chairman

Social, Ethics, Transformation and Sustainability (SETS) Committee



Leadership messages continued



Our clear focus and drive to operate as One Sappi continues to pay dividends.

Dear stakeholders

The past year focused on investing for the future. Investing to secure more benefits for our stakeholders, investing in our people and investing in reducing our environmental footprint. Significant projects at our Maastricht and Somerset Mills expanded our capacity of specialities and packaging papers in response to sustained strong demand and market growth. At our Ngodwana and Saiccor Mills, debottlenecking projects ensured that we increased the amount of dissolving wood pulp (DWP) we could deliver to an equally buoyant market. Such projects were disruptive and despite the required downtime and loss of saleable tons, we managed to deliver results for the full year which were on par with the previous year. A testimony to the hard work and dedication of everyone across the group to maintain our positive forward momentum towards our 2020Vision goals.

We spent over US\$500 per employee on training and skills development, and continued our focused safety awareness and training programmes for employees and contractors. Unfortunately, we cannot be satisfied with our safety performance. Despite very good improvements across the regions in reducing the frequency and seriousness of work-related injuries, we started the year badly with two fatalities.

As I have stated on many occasions, safety at Sappi comes before everything else. If we are not a safe company for our people, we cannot claim to be a top performing company. We do not accept that injuries and accidents are inevitable.

At the end of the reporting period we received permission to commence with a significant five-year upgrade of our Saiccor (DWP) Mill, which will not only increase capacity by 110,000 tons, but will significantly improve and reduce our environmental footprint with the introduction of new technology and utilising the benefits of increased scale.

The strong market demand for DWP and specialities and packaging papers throughout the year ensured our production capacity in these grades was fully utilised, supporting our decision to invest further in these segments. In the graphic paper market, a series of successful selling price increases throughout the year enabled margins to be maintained notwithstanding significantly higher raw material costs, mainly from paper pulp and various process chemicals. Our confidence in the DWP market was confirmed when we launched **Verve**, our first brand range bolstering our leadership in this market. We also launched a number of new specialities and packaging paper grades and brands as we moved to provide our existing and new customers with an ever wider choice of quality products. Progress in our **Sappi Biotech** division has also been positive, with strong market interest in our biocomposites, biomaterials and **Valida** (nanocellulose).

Our demonstration plant for sugars extraction is also under construction.

The hard work of Sappi's employees was rewarded when Sappi was announced as the second best performing company on the Johannesburg Stock Exchange over the past five years with a compound annual growth rate of 33.5%. Our clear focus and drive to operate as **One Sappi** continues to pay dividends.

With the world economy under pressure, we are confident that our strategy and **2020Vision** plan will deliver on our **Prosperity**, **People** and **Planet** goals. Our value statement—*At Sappi we do business with integrity and courage; making smart decisions which we execute with speed, underpinned by an unrelenting focus on and commitment to safety*—remains as our guide towards the right behaviour.

Steve Binnie
Chief Executive Officer
Sappi Limited



Sustainability governance

Our approach to sustainability is framed in terms of **Prosperity**, **People** and **Planet**—referred to internally as the 3Ps—and **S** is set out in our *Group Sustainability Charter* (www.sappi.com/sustainability).

This in turn is underpinned by our *Code of Ethics* and our group value statement:

At Sappi we do business with integrity and courage; making smart decisions which we execute with speed. Our values are underpinned by an unrelenting focus on and commitment to safety.

Regional Sustainability Councils (RSCs) operate in Sappi Europe (SEU), Sappi North America (SNA) and Sappi Southern Africa (SSA). Each RSC focuses on key material issues relevant to their specific region and on incorporating sustainability into everyday business processes.

These RSCs report to the *Group Sustainable Development Council (GSDC)* which in turn reports to the *Social, Ethics, Transformation and Sustainability (SETS) Committee* which in turn reports to the board.

Sustainability ambassadors in SEU and SNA and brand ambassadors in SSA help to entrench an holistic approach to the 3Ps of **Prosperity**, **People** and **Planet** throughout the group.



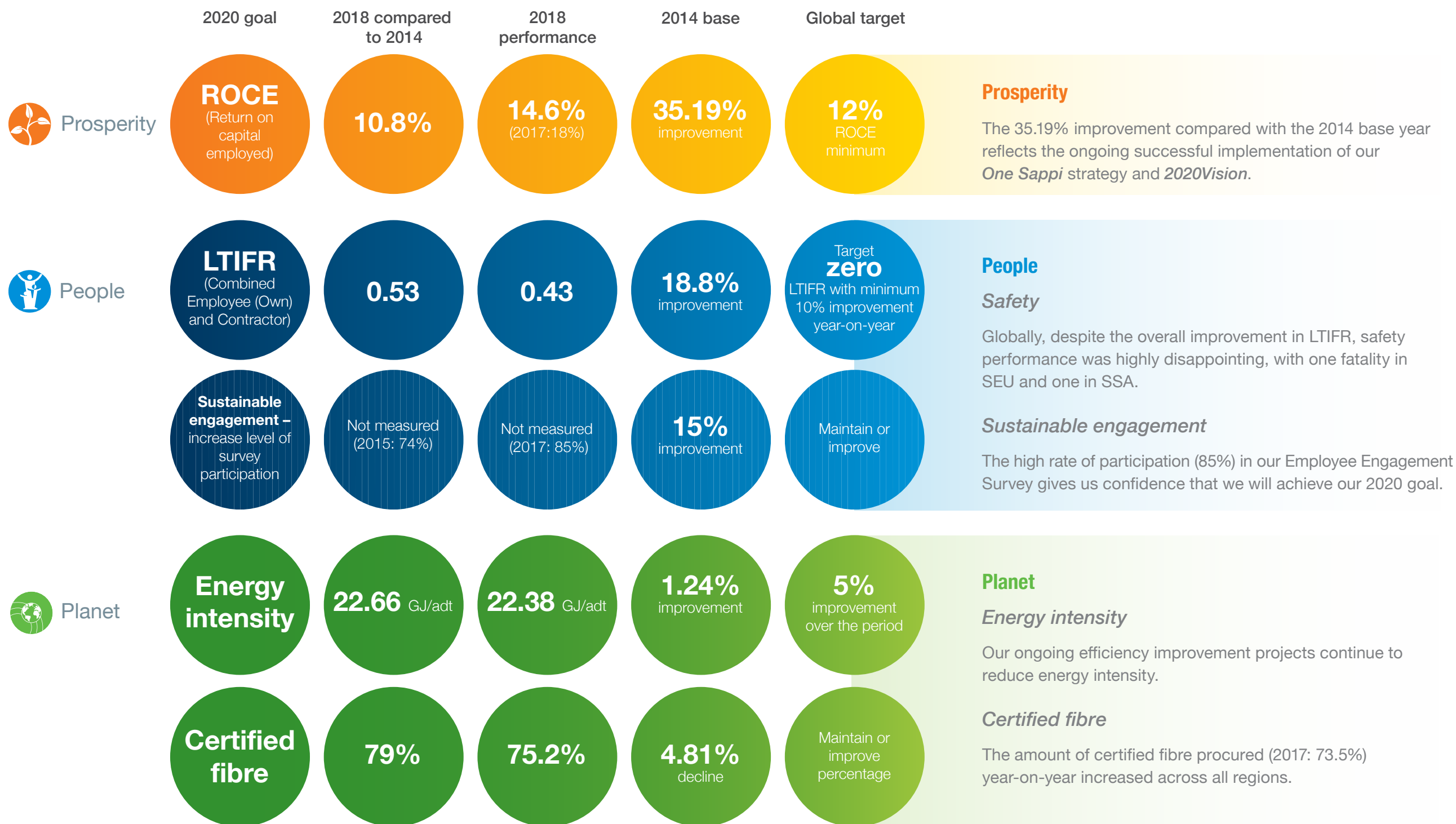
Our performance against our 2020 global sustainability goals

In line with our *2020Vision* and *One Sappi* strategic approach, in 2015 we established ambitious global sustainability targets. Regional targets are aligned to these goals.

The base year is 2014, with five-year targets from 2016 – 2020. Capital spend budget over five years will be used to determine targets in various elements.

Our performance in 2018, together with commentary, is set out opposite.

Our targets reflect issues that are important to our sustainability as a business and are a key element in our work to continually improve our performance in terms of the 3Ps. Progress—or lack thereof—against our targets is monitored and reported on regularly to management, the *Regional Sustainability Councils (RSCs)*, the *Global Sustainable Development Council (GSDC)* and ultimately, to the *Social, Ethics, Transformation and Sustainability (SETS) Committee*, a fully constituted board committee.



Our performance against our 2020 regional targets



PROSPERITY

The regional performance contributes to the global Prosperity target.

| PEOPLE | Target | Performance in 2018 compared to 2014 base year |
|--------|---|---|
| SEU | Engaged employees in terms of participation and commitment. | Participation in Employees Engagement Survey: 87% Level of engagement: 78% |
| | Target of 0.52 for Employee (Own) LTIFR from a baseline of 0.99 in 2014. | 22% reduction |
| SNA | Offer training at average of 60 hours per employee per year with baseline of 74 hours per employee in 2014. | 54.3% increase |
| | Achieve zero workplace injuries from a baseline of 0.56 Employee (Own) LTIFR in 2014. | 38% reduction |
| SSA | Achieve Level 3 compliance in BBBEE (in respect of the new forestry codes) from a baseline of Level 4 in 2014. | Level 3 |
| | Improvement of 2% every other year of engaged employees in terms of participation, commitment and issues closed out. | Sustainable engagement: 76% Participation rate: 89% |
| | Combined Employee (Own) and Contractor Lost Time Injury Frequency Rate (LTIFR) to be better than best ever achieved on a continuous 12-month basis and Lost Time Injury Severity rate to be below 25 from a baseline of 0.38 in 2014. | 16% reduction |

Self assessment of 2018 performance

- Satisfactory performance
- Progress to be made/Ongoing
- Unsatisfactory performance

Our performance against our 2020 regional targets continued

| PLANET | Target | Performance in 2018 compared to 2014 base year |
|--------|---|--|
| SEU | 5% reduction of specific fossil CO ₂ emissions including purchased power emissions (calculated at 400 gCO ₂ /KWh) from 2014 as base year. | 10.95% increase |
| | Reduce energy intensity (GJ/adt) by 5% from 2014 as base year. | 2.2% reduction |
| | Ensure a minimum of 70% certified fibre delivered to our mills (FSC®- or PEFC™-certified or equivalent). | 78% certified fibre |
| SNA | Procure 60% certified fibre to meet customer demands for certified products. | 58% certified fibre |
| | Reduce energy intensity (GJ/adt) with 5% from 2014 as base year. | 0.9% reduction |
| | Reduce paper mill raw material waste by 5% (lb/adt) from a baseline of 42 lb/adt in 2017. | 15% increase |
| | Reduce pulp mill raw material waste by 10% (lb/adt) from a baseline of 20.7 lb/adt in 2014. | 18.4% reduction |
| SSA | Achieve 5% reduction in energy intensity (GJ/adt) from 2014 as base year. | 4.62% reduction |
| | Achieve a 10% reduction in total specific process water usage (m ³ /adt) from 2014 as base year. | 20.22% reduction |
| | Achieve a 10% reduction in specific fossil energy intensity (GJ/adt) from 2014 as base year. | 9.52% reduction |
| | Achieve a 10% reduction in specific solid waste landfilled (t/adt) from 2014 as base year. | 1.73% increase |
| | 100% certification of own timber. 70% certification of Chain of Custody for our manufacturing plants. | 82% certified fibre |

Self assessment of 2018 performance

- Satisfactory performance
- Progress to be made/Ongoing
- Unsatisfactory performance



Our accolades in 2018



- Shortly after year-end, Sappi Limited received the honour of second place in the *Sunday Times Top 100 Companies* awards.
- At the *GAPP Print Quality Awards*, our *2017 Sappi Annual Integrated Report* won the gold award in the *Litho Sheetfed – Annual Reports* category, while the *2017 Sappi Southern Africa Sustainability Report* won the silver award in the same category.



- The Chief Executive Officer of Sappi Europe, Berry Wiersum, was recognised by Pulp and Paper International (PPI) as *International CEO of the Year*.



- The American Forest & Paper Association (AF&PA) honoured Cloquet Mill with the *2017 AF&PA Leadership in Sustainability Award* for Safety for their *Over Two Million Hours Worked Without Lost Time Injury* project.
- Named a 2018 recipient of the prestigious *Governor's Award for Business Excellence* for outstanding commitment to employees, community, customers and manufacturing in the state of Maine. This award is in recognition of significant investments at the Somerset Mill, to modernise the woodyard and to rebuild PM1 to make new consumer packaging grades.

The Governor of Maine recognised Sappi North America for its significant US\$200+ million investment at the Somerset Mill in Skowhegan, Maine to rebuild its Paper Machine No 1 to enable the production of new consumer packaging grades as well as for the modernisation and improvement to its woodyard, powering Sappi and the local Maine economy.



- Sappi Forests' *Stop and Think Before You Act* safety initiative won a coveted *Gold Quill Award of Excellence for Safety Communication Management* from the International Association of Business Communications (IABC). In addition, the work was also selected as one of eight *Best of the Best* entries from 258 awarded entries. In total, 699 entries from 27 countries were judged.
- Ngodwana Mill received the *Kruger Lowveld Chamber of Business and Tourism's Annual Environmental Award*.
- The Absa Business Day Supplier Development Awards celebrate companies in South Africa who have made a remarkable contribution to successful supplier development. Sappi Forests won the *Women's Empowerment Award* and *Rural Economies Award* and was also recognised as an overall finalist as well as a finalist in the *Innovation* category. The awards were based on Sappi's contribution to supplier development in South Africa through *Sappi Khulisa*.

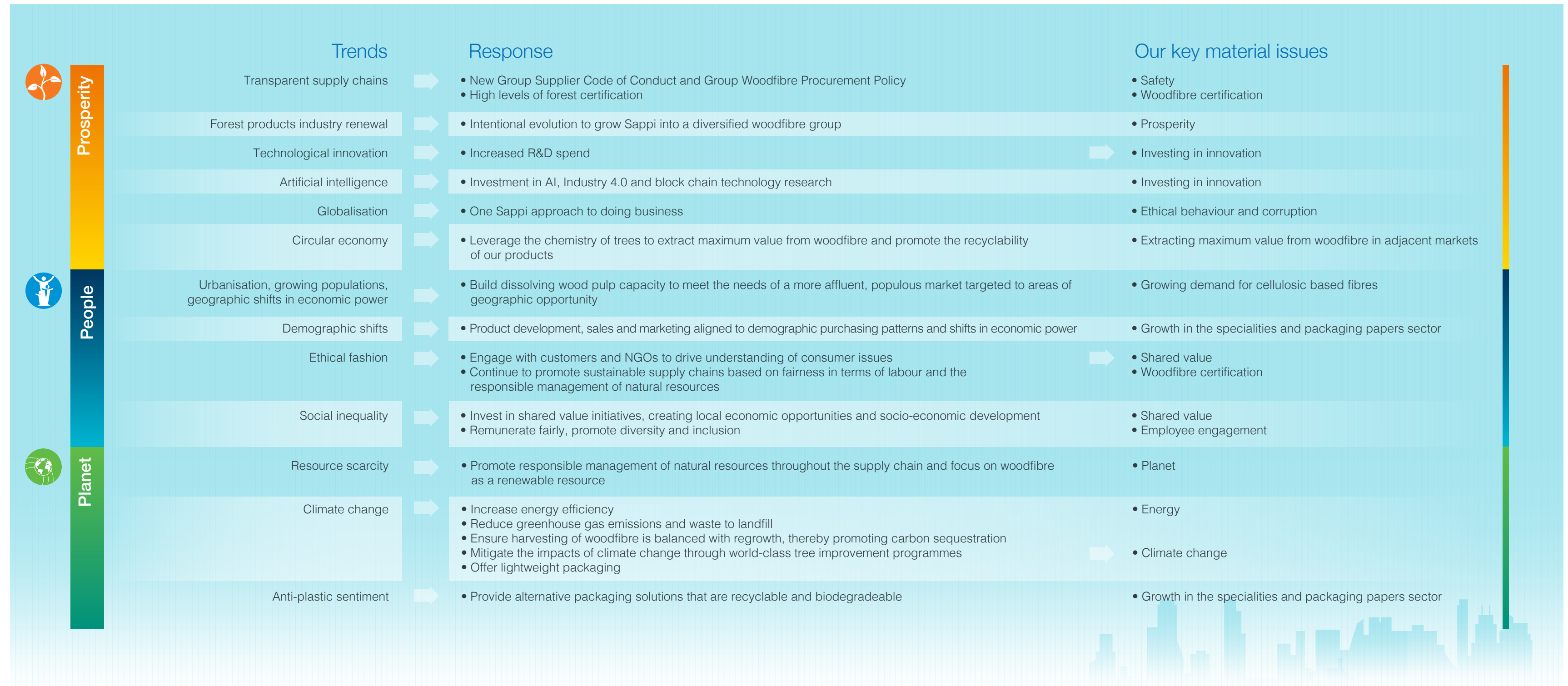
respond

Key material issues

Our ability to prosper depends on our ability to respond to the dynamic world around us.



Strategic trends shaping our business



How we create value

We take an **integrated approach to value creation**. Guided by our values, our six value streams enable the delivery of our mission.



Forests

Our 100% Forest Stewardship Council® (FSC®)¹-certified plantations in South Africa give us a low-cost woodfibre base on which our business depends and are thus a key pillar of competitive advantage. Our leading-edge tree improvement programmes aim to grow better trees faster, thereby ensuring this advantage is maintained and enhanced.

¹ Sappi licence number: FSC-C015022.

100% FSC-certified



Manufacturing excellence

We focus on enhancing machine efficiencies, digitising our processes to make the smart factory a reality, reducing variable costs through new practices in logistics and procurement, as well as implementing go-to-market strategies which lower the cost of serving our customers and increase customer satisfaction.

Operational excellence



Bioproducts

We are unlocking the chemistry of trees and meeting the challenges of a carbon-constrained world by establishing a strong position in adjacent businesses including: nanocellulose, sugars and furfural, lignosulphonates, biocomposites and bio-energy. Extracting more value from each tree is strengthening our core business model.

Xylitol and furfural demonstration plant



Dissolving wood pulp

Dissolving wood pulp (DWP) is a truly sustainable raw material. Our customers transform our DWP into products which meet the needs of people around the globe every day. Products which enable fashion, household comfort, personal beauty and hygiene, as well as a healthy lifestyle.

Launched Verve



Specialities and packaging papers

Our customers use our specialities and packaging papers to add value to niche markets, enable product differentiation and offer environmentally conscious consumers an alternative to fossil fuel based packaging. Our focus on innovation helps our customers to meet and anticipate the challenges of changing market dynamics.

Conversions of Maastricht and Somerset Mills



Printing and writing papers

While the digital age has impacted on the use of paper, our printing and writing papers continue to meet the needs of consumers and marketers around the world. They rely on paper for a tactile, emotional experience no other communication medium can replicate.

Paper remains a relevant advertising medium

Manufacturing excellence, research and development

Marketing and sales

1 Our values

Act with integrity

We strive to consistently deliver goods and services of the highest standards; doing the right thing the right way.

Be courageous

We take full responsibility for all our decisions and actions; operating with conviction and without hesitation.

Make smart decisions

We strive to be easy to do business with and have a 'can-do' attitude, always looking for the better, faster route to create value for all.

Execute with speed

If something is worth doing it is worth doing quickly, right the first time and never cutting corners.

See [Governance](#).

2 Our inputs

Our integrated approach to sustainable development acknowledges that we are dependent on Prosperity, People and the Planet in order to thrive. We rely on certain inputs to create value.

See [Our business model](#).

3 Our value streams

The value streams set out above indicate the manner in which we create value and serve our customers, meeting their needs today, tomorrow and well into the future.

See above.

4 Our strategy

Our ability to deliver sustained value depends on the successful execution of our strategy.

See [Targets](#).

5 Our outcomes

While we acknowledge that our business activities have both positive and negative outcomes, we strive to maximise the positive consequences of our value streams in terms of Prosperity, People and Planet.

See [Our business model](#).

6 Our key relationships

Ongoing engagement with our stakeholders conducted in a spirit of trust and mutual respect enables more tangible business value creation.

See [Key relationships](#).

7 Our global sustainability goals

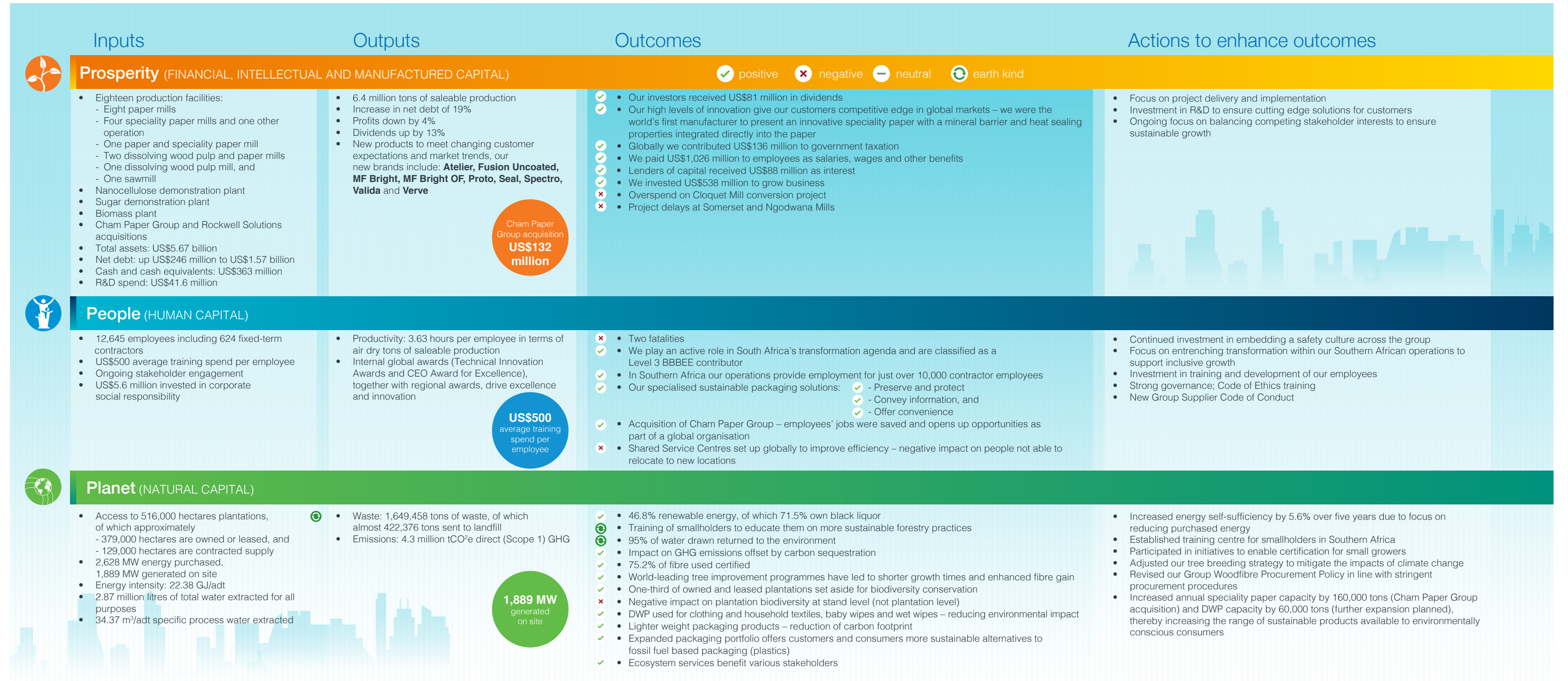
Monitoring and reporting transparently on our ambitious Prosperity, People and Planet targets aligns with our 2020Vision and One Sappi strategic approach.

See [Targets](#).

Our mission

All our activities aim to realise our mission: Through the power of One Sappi—committed to collaborating and partnering with stakeholders—we aim to be a trusted and sustainable organisation with an exciting future in woodfibre.

Our business model



Our key material issues

Our key material issues are those most important to our own growth and prosperity, as well as our stakeholders.



Sappi and the United Nations Sustainable Development Goals at a glance

We work to integrate the principles and aspirations of the **United Nations Sustainable Development Goals (SDGs)** into our everyday business activities.

- Hotlines in each region
- Reporting on calls and outcomes
- Ongoing Code of Ethics awareness and training programmes
- Partnerships with institutions – eg Business Leadership SA
- Transparent supply chain – new Group Supplier Code of Conduct

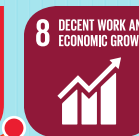
- High levels of certification
- One third of landholdings
- Managed for biodiversity conservation
- Provision of extensive ecosystem services
- Ongoing forestry research

- Forests and plantations from which we source woodfibre – carbon sequestration
- High levels of renewable energy generated – more environmentally friendly than fossil fuel based energy
- Lighter weight packaging products – lower carbon footprint
- New capex investments reduce environmental impact

- Renewable raw materials sourced from responsible managed and certified sources
- Provide smallholders with market opportunities and management assistance
- Raw materials do not compete with food production
- Renewable, recyclable products offer consumers an alternative to fossil fuel based packaging



- Ongoing investment in R&D
- Partnerships with various research institutions
- Founding partner of programme at CISL – artificial intelligence and block chain technology
- Research work on deep-eutectic solvents



- Development promoted throughout the value chain in rural areas in each region where we operate
- Inclusive culture
- Salaries in accordance with, or exceed the minimum wage
- Freedom of association
- Ongoing corporate social responsibility investment to drive shared value
- SSA:
 - Poverty Spotlight implemented in communities
 - Development of local SMMEs and local suppliers



- Project Zero safety drive
- *Own Safety, Share Safety* theme
- Health and wellbeing programmes at all operations
- Community health initiatives
- Reducing emissions



- Internal and external skills development
- Support for external training and scholarship programmes
- SSA:
 - Sponsorship of Programme for Technological Careers centres and a digital resource centre
 - Early Childhood Development
 - Sappi Skills Centres at Saiccor and Ngodwana Mills
 - Training centre for small growers



- 95% of water extracted returned to the environment
- Water and sanitation upliftment programmes in Southern Africa
- Focused riparian management on owned and leased landholdings
- Plantations are not irrigated



- Focus on bio-energy – biomass plant at Ngodwana Mill
- Co-generation at mills enhances energy efficiency

Key material issues

The issues set out on the following pages are those that we believe underpin our strategic risks and opportunities and have the highest potential impact^R positive and negative^T on stakeholder value.

In this section of the report, related information on risks and targets is cross referenced. Where available, we provide links to these sources.

^R See more information about related risks in [Annual Integrated Report](#).

^T See [Targets](#) in this report.

Governance



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.



Strengthen the means of global partnership for sustainable development.



Key material issues

Material issue

➡ Ethical behaviour and corruption

Background


In South Africa, in particular, various incidents in state-owned enterprises and private and public entities have led to outrage and criticism at the lack of governance and ethical leadership at all levels of our society.

⬇ Our response

Code of Ethics

Sappi’s high premium on adherence to ethical behaviour is entrenched in the *Code of Ethics* (Code). In addition to training all new employees during induction, we conduct ongoing awareness training. In the past year this included online or in-person awareness training on various topics covered in the Code. These ranged from dawn raid awareness to the protection of personal information. In addition, all relevant new employees in all regions were trained on anti-fraud and corruption and Competition Law.

Regretfully, notwithstanding these training initiatives, there have been breaches of the Code. We have investigated these incidents with the assistance of our Internal Audit Department and/or external advisors, addressed the issues and where required, took steps to seriously sanction the underlying relationships—an indication of the seriousness with which we view these transgressions.

Sappi continues to provide avenues to stakeholders to communicate breaches or apparent breaches of the Code either through hotlines or via e-mail (ethics@sappi.com). All complaints are registered and investigated by Sappi’s Internal Audit Department and then reported into the Audit and Risk Committee on a quarterly basis  (see [Annual Integrated Report](#)).

During March 2019, we will once again be rolling out the *Employee Engagement Survey*, part of which tests values and ethical leadership as perceived by employees. The results in this area will be a useful guide to understanding the culture of ethical behaviour and conduct in Sappi and where improvements can be made.

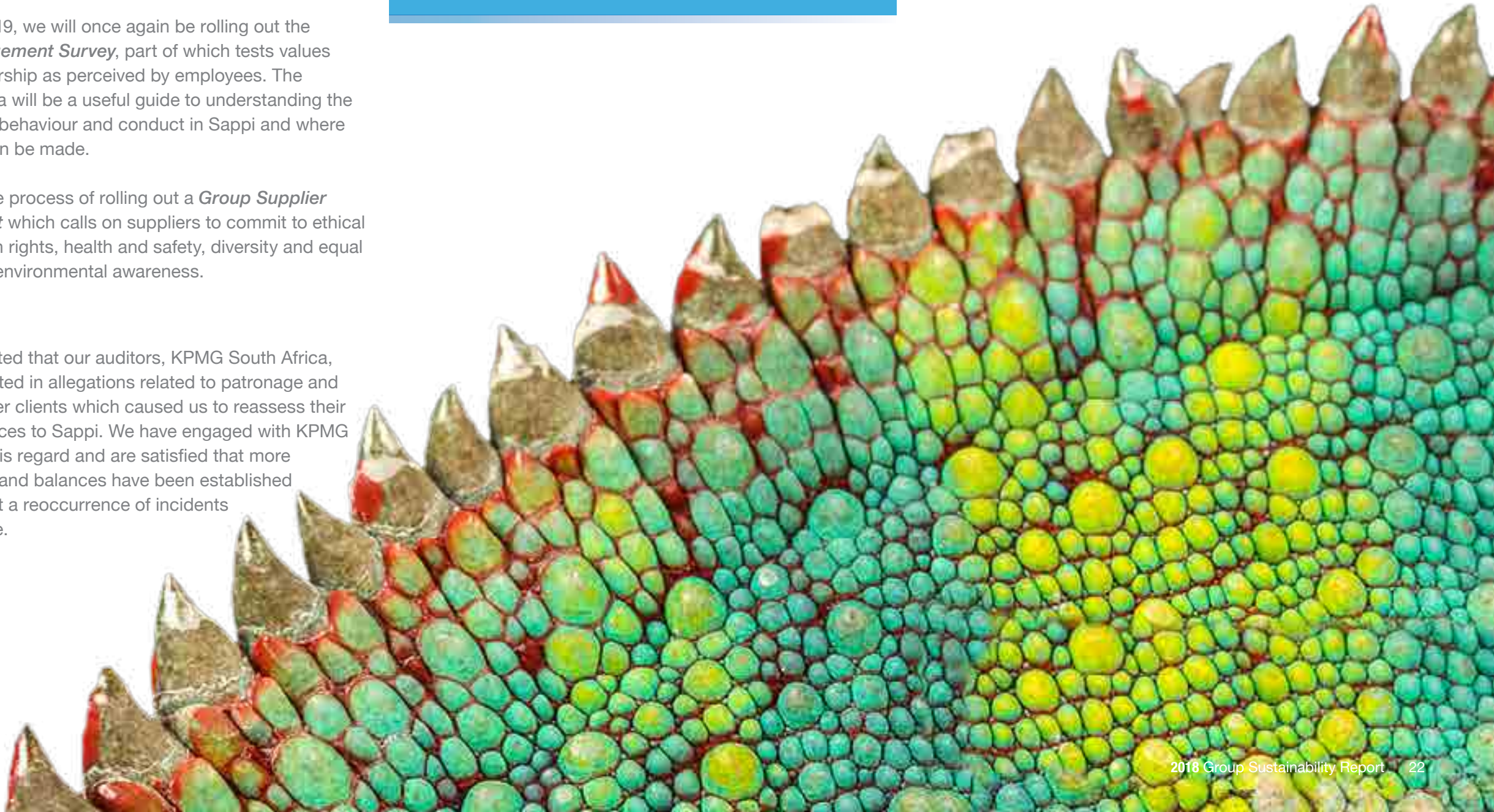
We are also in the process of rolling out a *Group Supplier Code of Conduct* which calls on suppliers to commit to ethical behaviour, human rights, health and safety, diversity and equal opportunity and environmental awareness.

KPMG

In 2017, we reported that our auditors, KPMG South Africa, had been implicated in allegations related to patronage and corruption at other clients which caused us to reassess their provision of services to Sappi. We have engaged with KPMG International in this regard and are satisfied that more stringent checks and balances have been established which will prevent a reoccurrence of incidents of a similar nature.

Value impact

- Greater understanding of the ‘One Sappi’ approach to ethics and human rights.
- More stable and sustainable business.



Key material issues continued



Ensure sustainable consumption and production patterns.



Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

Prosperity



Material issue

See 3 and .

➔ Ongoing investment and cost containment

Background

Ongoing investment and cost containment are strategic pillars of competitive advantage.

⬇ Our response

We continued to make significant investments in line with our 2020Vision, the aims of which include diversifying group EBITDA by remaining an industry leader in printing and writing papers manufacturing, expanding specialities and packaging papers and growing dissolving wood pulp (DWP) capacity.

Ongoing investment

- We completed a capital investment at Cloquet Mill to replace the headbox on PM12. This investment enabled the mill to maintain capacity by adding a state-of-the-art, dilution profiled headbox—the part of the paper machine responsible for spreading the pulp fibres evenly to form the sheet—that produces excellent basis weight profiles.
- In September 2018, we announced the completion of a year-long rebuild of PM1 at Somerset Mill to increase the mill’s annual production capacity to almost one million tons per year. The rebuild has enabled the launch of new paperboard grades (see [Key material issues](#) – New products). which provide luxury packaging and folding carton applications and complement our existing specialties and packaging papers range. We also completed the modernisation of the Somerset Mill’s woodyard.

- We advanced our work on increasing chipping capacity and modernising the Saiccor Mill woodyard. The new equipment for the woodyard is scheduled to be delivered and installed at the end of 2018, with start-up planned in 2019. The woodyard investments will result in cost, quality, environmental and efficiency benefits to the Saiccor Mill and are also a major step towards preparing the mill to expand further.
- We also completed the rebuild of the PM6 at Maastricht Mill. This involved the installation of a new three-layer headbox and metal belt calender. This has facilitated improved board surface quality and reduced costs.

Going forward, investment plans include:

- A €30 million upgrade of PM9 at Gratkorn Mill. The upgrade at this mill, due for completion in 2019, will optimise raw materials to reduce production costs and will also result in reduced energy demand.
- At Lanaken Mill, the PM8 will be rebuilt to support our coated woodfree paper business.
- An investment at Alfeld Mill will add speciality paper capacity of up to 10,000 tons.
- A debottlenecking project at Cloquet Mill, due for completion in 2019, will increase DWP production by around 30,000 tons.
- Significant investment plans in South Africa (see [Prosperity](#) – Our progress in 2018).

Cost containment

We work to lower fixed and variable costs, increase cost efficiencies and invest for cost advantages. Building on the global procurement and efficiency savings drive launched in 2016 whereby we achieved US\$57 million more in savings than target three years ahead of schedule, in 2018 we achieved an additional US\$81 million in group efficiency and procurement initiatives.

We achieved upgrades at Maastricht and Eningen Mills on time and within budget. However, capital costs and timing overran at Somerset Mill, negatively impacting production volumes. We also experienced delayed start-up at both Ngodwana and Saiccor Mills post machine upgrades.

We have analysed the reasons behind the costs and timing overruns and implemented a strategy to ensure that these issues will not be repeated.

Value impact

- Delayed project execution impacted on volumes and income.
- Ongoing investment and cost containment increase investor value.
- Continuous improvement enhances our competitive position.
- Investments at key mills/machines lower costs, supports our existing position in graphics papers. and establishes a strong platform for growth in paperboard packaging.
- Investments have added to the diversification of our packaging line to meet a variety of packaging needs.

Key material issues continued

Material issue

See  4.

➔ Growth in the specialities and packaging papers sector

Background

Growing concerns about the negative impacts of fossil fuel based packaging, in particular its impact on the world's oceans, have resulted in bans on single-use plastics in many countries around the world. At the 2018 World Economic Annual Forum in Davos, 11 industry leaders committed to 100% recyclable packaging by 2025. This is driving demand for paper based packaging, which is set to intensify going forward.

⬇ Our response

We significantly expanded our speciality and packaging paper capacity in 2018, as set out below:

Cham Paper Group

We concluded the acquisition of the speciality paper business of *Cham Paper Group Holding AG (CPG)*. The transaction includes the acquisition of CPG's Carmignano and Condino Mills (Italy) and its digital imaging business located in Cham (Switzerland), as well as all brands and know-how. Significantly, the acquisition has added 160,000 tons of speciality paper to our capacity, supporting our diversification strategy and 2020Vision to grow in higher margin growth segments. In terms of financial impact, the acquisition will add €183 million of sales and approximately €20 million of EBITDA before taking synergies into account.

Sappi Digital Solutions, formed by the acquisition of CPG, was established at the beginning of 2018. The business unit's broad portfolio of dye sublimation papers supports many industries in their quest to meet demand for individualisation and speed to market.

The CPG acquisition has enabled us to:

- Increase our relevance in speciality papers, opening up new customers and markets to Sappi's existing products and generating economies of scale and synergies
- Gain greater share-of-wallet with valued brand owners; thereby accelerating innovation and new product development
- Improve near-term profitability and serve as platform for organic growth and further acquisitions
- Build on the investments currently underway to increase speciality paper capacity at our Somerset, Maastricht and Alfeld Mills, and
- Unlock the growth potential of the CPG speciality paper business.

The value add of the CPG acquisition to our business was highlighted when we presented solutions in the fields of dye sublimation papers, inkjet papers, silicone base papers and containerboard at *FESPA Berlin*. FESPA is a global federation of 37 national associations for the screen-, digital- and textile printing industries.

Here, in addition to our packaging and speciality papers, we showed Transjet dye sublimation transfer papers for textiles previously marketed by CPG, along with a line of wide format inkjet papers. We also showed tear-resistant Scrolljet wide format inkjet paper at the show. This 100% recyclable speciality paper is suitable for use with solvent, UV-curable and latex inks. Its special surface treatment ensures brilliant colour results that provide exceptional luminosity for front- and back-lit applications.

Value impact

- Expanded capacity strengthens our speciality papers business both in Europe and globally by combining CPG's strong brands and assets with Sappi's global reach.
- Increases profitability and unlocks the significant growth and innovation potential inherent within the speciality papers market.
- Helps us to realise our 2020Vision goals.



Key material issues continued

New products

- Following the rebuild of the PM1 at Somerset Mill, we introduced the new packaging grades **Spectro C1S** and **Proto Litho C1S**. **Spectro** is a single-ply paperboard with enhanced optics, making it ideal for premium applications. End-use markets include luxury beverages, cosmetics and perfumes, health and beauty care, covers (books/magazines), greeting cards/folders/lottery, calendars, shopping bags, point of sale (POS) material, menus, direct mail, pharmaceutical, confectionery, fashion and lifestyle, as well as consumer electronics. **Proto** is a lightweight paperboard suitable for displays, mailing envelopes, fashion and lifestyle, consumer electronics, beverage, food packaging, POS material and shelf-ready packaging.
- In 2016, Sappi was the first manufacturer to launch a packaging paper with integrated **Sealing** functionality. This generated considerable market interest and has gradually been developed further, culminating in the launch of **Seal**. Designed to replace hot **Seal** laminates made from plastic with materials containing a high proportion of renewable raw materials, **Seal** is single side coated. A dispersion coating on the reverse side makes it ideal for use as flexible standard packaging in the food and non-food sectors, where hot **Sealing** properties are required. The market includes both primary packaging—sachets, and secondary packaging—flow-wraps for sweets, toys or do-it-yourself (DIY) goods.
- Based on the paper concept for our successful **Fusion Topliner**, we launched **Fusion Uncoated**. With a natural, uncoated surface, the product is an alternative to brown liner papers. Applications include inner packaging such as white corrugated board inserts for high-end perfume boxes as well as food packaging.

- We added to our shopping bag portfolio with **Fashion White** and **Fashion White OF**. Both these uncoated, machine finished grades feature high whiteness and offer good printability in a wide range of virgin fibre grades and grammages between 70 g/m² – 130 g/m². They are both ISEGA-certified for direct food contact and DIN EN 71-certified for toy safety.
- Atelier**, a premium folding boxboard) available in weights from 220 g/m² – 350 g/m². With a brightness level of 100% on the top side, Atelier exceeds the current industry top value of around 92%. On the reverse side, Atelier offers a brightness factor of 98.5% to accommodate the increasing demand for printing on both sides of the board for added impact.

Value impact

- New products meet the need of brand manufacturers and consumers looking for more environmentally friendly, lighter weight packaging.
- Proto** and **Spectro** enable greater product differentiation in a crowded marketplace.
- Seal** meets the needs of changing market dynamics by offering functionality and convenience.
- Fusion Uncoated** targets the high-volume corrugated board market.
- Atelier** folding boxboard introduces a completely unique concept to the paperboard market.

Material issue

See  4.

➔ Growing demand for cellulosic-based fibres

Background

While cellulosic based fibres are globally popular, Asia is the primary market for DWP. Rising urbanisation and higher standards of living in the greater Asian region are driving increasing demand for more comfortable clothing. This trend is set to continue, with the Asian middle-class population and attendant consumer consumption growing rapidly—accounting, by some estimates, for 43% of total global consumption by 2030. Research by Hawkins Wright¹ shows the five-year outlook for DWP expanding at an average annual growth rate of 4.9%.

Demand for DWP could also increase in the short term, given China's imposition of increased tariffs on cotton imported from the United States of America.

⬇ Our response

Textiles are the primary market for our DWP, now branded as **Verve**, which is sold globally for use in viscose staple fibre (rayon) and solvent spun fibres (lyocell). We also supply smaller quantities into other DWP market segments.

Given tight supply in the DWP and the limited new capacity in the medium term, we completed debottlenecking projects at Ngodwana and Saiccor Mills which have added 50,000 and 10,000 tons respectively. A further debottlenecking project at Cloquet Mill, due for completion in 2019, will increase DWP production by around 30,000 tons.

Looking ahead, we have started preparatory work under a project known as **Vulindlela** for the potential expansion of Saiccor Mill to add 110,000 tons of DWP capacity.

Value impact

Capacity growth:

- Entrenches long-established relationships with key customers.
- Establishes capacity to meet current and future demand.

Vulindlela:

- Aligns with the South African government's investment drive.
- Will create significant job opportunities—during the peak period, there will be between 2,500 and 2,800 contractors working on site at one time.
- Will result in CO₂ emissions halving and waste to landfill being reduced by 48%, SO₂ reducing by 35% and water use efficiency increasing by 17%.

¹ The outlook for dissolving pulp: demand, supply, costs and prices, September 2018.

Key material issues continued

Material issue See  7.

➔ **Extracting maximum value from woodfibre in adjacent markets**

Background

The world has moved away from a linear model of value creation that begins with extraction and concludes with end-of-life disposal to a more circular economy. One of the key focus areas of this approach is optimising resource yields.

⬇ **Our response**

In keeping with the approach outlined above, our aim is to extract more value from each tree and in doing so, move into adjacent markets in order to strengthen our overall core business model. The Sappi Biotech business unit, established in 2016, continued successfully to drive innovation and commercialisation in terms of biomaterials and biochemicals.

Hemicellulose sugars

In 2017, in partnership with Valmet, we commissioned a hemicellulose sugar extraction demonstration plant at Ngodwana Mill. After operating for 12 months to demonstrate the extraction of C5 sugars from DWP production, the plant exceeded all efficiency targets for cost, cycle time and yield.

We are now further progressing the development of our biorefinery capacity with the construction of a demonstration plant to further scale up our novel *Xylex* technology—acquired in 2017—for the clean-up of the extracted sugars stream, to allow production of xylose, xylitol and furfural. A low-calorie sweetener, xylitol has positive dental properties and produces no insulin response, so is suitable for diabetics. Furfural is a

versatile green industrial chemical derived from C5 sugars with a diverse range of derivatives.

The Xylex demonstration plant will be located adjacent to the existing sugars extraction plant at Ngodwana Mill, and will be commissioned in 2019. Pending successful results, we may construct commercial xylose, xylitol and furfural plants adjacent to our mills in in SNA and SSA.

The combination of Sappi’s operational excellence and the proposed co-location of the commercial plants at existing mill sites delivers strong integration synergies. In addition, the cost advantages offered by Sappi’s scale and the Xylex technology give us a globally competitive cost base for C5 sugar extraction and beneficiation to xylose, xylitol and furfural.

Going forward, our strategic intent is to enter the xylitol value chain with a world-scale production plant. Furan markets are showing strong market pull for new investments due to growth as well as the phasing out of older and smaller unviable assets. Against this backdrop, sugars extraction from our DWP assets combined with our Xylex capabilities will allow us to pursue various partnerships in either the xylitol or furan chemistry value chains.

Value impact

- Valorisation of C5 sugars produced as a co-product of our DWP production, and from the lignin produced in our global pulp production.
- Product offering of second-generation sugars does not impact food security.
- Meaningful revenue from a new business segment.

Lignin

Sappi Biotech offers *Hansa* and *Collex*, two lignin-based dispersants used extensively in the concrete industry as plasticisers, produced from our lignin sources in SEU and SSA and sold to global markets.

Our *Lignex* product was initially launched at Tugela Mill in 2012. Lignex is used as an effective wetting and binding agent to suppress dust and bind unpaved road surfaces, with many health, safety and cost benefits. It has been used extensively in the mining industry for several years where the benefits of Lignex are now attracting a lot of interest in the agriculture and forestry sectors.

The focus of interest for the forestry industry is the use of Lignex to improve high traffic, unpaved plantation roads, timber depots and woodyards. Mixed into the road materials and/or sprayed onto the road surface it acts as a surfactant which gives excellent dust suppressant properties. The binding power of lignin also aids in binding the aggregate material together and *Sealing* the road. This result in safer, more durable and longer lasting roads with reduced maintenance costs. There is strong interest in using the product in the citrus industry where dust contaminates the fruit, both in the orchards and around the packhouses.

Our *Zewilex* product is aimed at end-use applications in the resin industry, an area where research into lignin modification is an ongoing effort to meet performance and sustainability requirements of customers.

Currently, our research in the lignin area involves assessing the extraction of high value aromatic compounds from lignin using advanced chemical and technical processes for various end-use applications where the common theme is to offer brand owners renewable and sustainable alternatives.

Value impact

As a co-product, lignin increases the value derived from trees and supports the core cellulose business.

Key material issues continued

Valida nanocellulose

Valida is a lightweight, solid substance which is comprised of nano-sized fibrils—the high strength building blocks of cellulose fibres. At our pilot-scale Valida plant at the *Brightlands Chemelot Campus* in the Netherlands, we use woodpulp obtained from various accredited sources as feedstock.

Work progressed at the plant with the development of technology to produce dry redispersible nanocellulose. This high-quality product, which has been branded as Valida, is easily dispersed into a variety of matrices. Valida technology uses an environmentally friendly production process which is also compatible with the requirements of the targeted applications. While naturally hydrophilic, Valida can also be subjected to surface modification to suit hydrophobic applications. Valida is suitable for many applications, including:

- **Biobased composites:** Improves the mechanical properties of plastics, rubber, latex, thermosetting resins, soya protein and starch-based matrices
- **Food:** Used for thickening, stabilising and enhancing the texture of food
- **Cosmetics:** Acts as a powerful, natural rheology modifier in personal and home care products
- **Paper:** Improves paper strength
- **Packaging:** Enhances barrier properties on packaging materials to prolong food shelf life
- **Medicine:** Performs as an advanced excipient in medicines, thereby facilitating drug delivery and active ingredient release, and
- **Paint and adhesives:** Used for thickening and stabilising.

We are conducting third party market development work with prominent global brand owners and technology institutions.

Value impact

Valida:

- Derived from cellulose, the most abundant polymer on earth, and a renewable resource.
- Holds great potential in helping the world shift to materials that do not require fossil based fuels as feedstock.
- Biocompatible and biodegradable.



Symbio

Over many years, Sappi has developed advanced technologies to combine cellulose fibres with other polymers and materials with emphasis on both function and aesthetics. **Symbio**, developed in 2016, is a good example of where we have leveraged our fibre expertise to launch an innovative product.

Symbio is a cellulose fibre plastics composite combining up to 55% high quality cellulose from woodfibre and a polypropylene plastic material. Delivered as granules, it can be injection moulded and therefore deployed in various industrial sectors, including automotive, furniture, appliances and consumer electronics.

We are currently developing **Symbio Vivid**, an exciting new look and feel for uniquely coloured decorative plastic composites.

We are in discussions with automotive original equipment manufacturers (OEMs) regarding the use of Symbio in vehicle applications. The key benefits of Symbio lie in positive touch and feel (haptics), durability and lighter weight. The latter is particularly important in the drive to reduce carbon emissions.

Value impact

Symbio:

- Meets the need for lightweight products with strong environmental credentials:
 - Woodfibre used is FSC®- or PEFC™-certified, and
 - Renewable resource to replace fossil-fuel based sources.



Key material issues continued

Bio-energy

Biomass energy project

In 2018, SSA reached financial close with the Department of Energy to build a renewable energy plant at Ngodwana Mill in Mpumalanga province. The project, whereby Sappi and consortium partners KC Africa and African Rainbow Energy and Power will establish a 25 MW biomass energy unit at the mill, falls under the South African government's Renewable Energy Independent Power Producer Programme (REIPPP).

Sappi will have a 30% stake in the facility, which is expected to contribute to the national grid from July 2020.

The project will use biomass recovered from surrounding plantations and screened waste material from the mill production process. The power plant will burn up to 35 tons per hour of biomass in a boiler to generate steam and drive a turbine to generate electricity which will be fed into the national grid.

Sappi already contributes to the national grid by selling surplus energy from Ngodwana Mill to the state power utility, Eskom.

With this project, Sappi has become one of only a few companies in South Africa to embark on a biomass energy project.

Fuel rods

Some 150 years of intensive coal mining in South Africa have produced about a billion tons of discarded thermal-grade coal fines.

To utilise this energy source, we constructed and tested a small fuel rod manufacturing plant at Ngodwana Mill. The fuel rods comprise a mixture of coal slurry, biomass and lignosulphonate, which can be used as a coal replacement.

Initial fuel rod test results are positive and could lead to reduced greenhouse gas emissions when compared to low-grade coal.

Sappi has entered into a joint venture agreement with the Industrial Development Corporation (IDC) as a strategic equity and debt partner to provide the balance of the capital required for the demonstration plant.

The fuel rods will be tested in one of Sappi's boilers at Tugela Mill for a twelve-month period. The demonstration facility will be upgraded if the test results are positive.

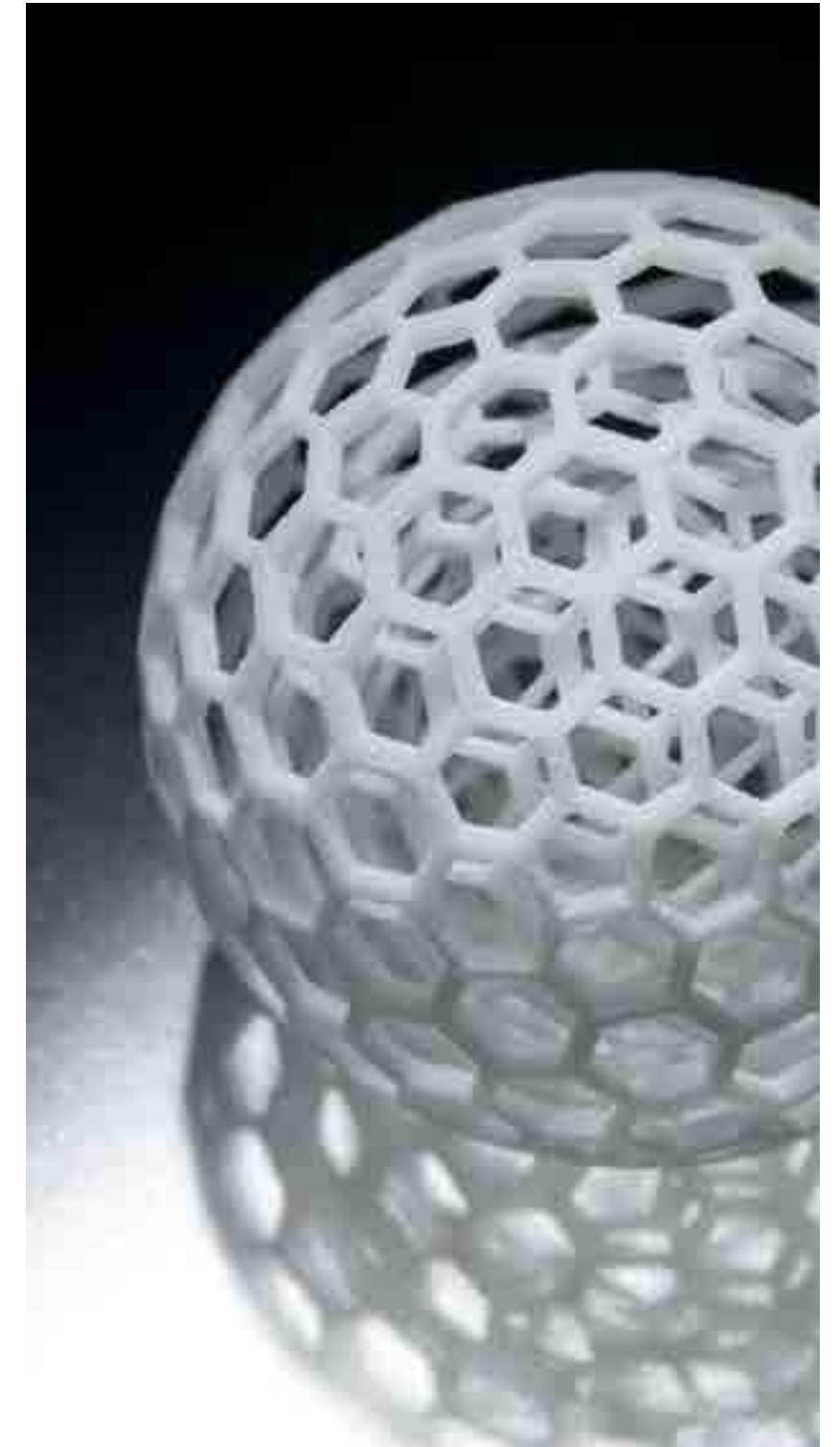
Value impact

Biomass energy:

- Catalyst for energy transition in South Africa.
- Positive monetary, job creation and socio-economic impacts:
 - Financial impact: ZAR13 billion direct value add over 20 years
 - Project will employ 350 South Africans during construction
 - Biomass collection from surrounding plantations will result in 50 new jobs, and
 - Significant empowerment component.

Fuel rods:

- Resolve an environmental issue.
- Create enterprise development opportunities in areas where coal fines are located.



Key material issues continued

Material issue See  2, 4 and 7.

Investing in innovation

Background

The challenge for the pulp and paper industry is how to transform in order to meet the challenges of inclusive growth, industrial transformation and the circular economy.

Our response

Through our focus on innovation, we are developing ways of becoming much more effective tomorrow than we are today, both in our journey towards durable sustainability and to the need for economic vitality and employment for future generations. We live in an age of hyper-innovation and we take responsibility for making it work positively in a number of different ways:

Cambridge Institute for Sustainability Leadership

In 2018, we announced a founding partnership with *The Prince of Wales Global Sustainability Fellowship Programme* at the Cambridge Institute for Sustainability Leadership (CISL). Together with other partners, we are funding research on artificial intelligence and bringing carbon emissions to net zero in the paper and pulp industry.

The three to five-year fellowships of which there are currently eight, will involve academics from around the world in identifying breakthrough solutions to meet the United Nations Sustainable Development Goals (SDGs).

The Sappi-supported fellowship will focus on *SDG9 – Reshaping the future of industry*. It aims to build on Sappi’s current engagement with the CISL by investigating how trends

of innovation and sustainability will come together to reshape the future of industry—looking at the paper and pulp industry as an initial example and examining drivers including the rise of artificial intelligence and the need to bring carbon emissions to net zero.

The CISL continues to support our work with the European industry in issues related to the *Green Growth Platform*. These include the development of a new low carbon pulp technology (deep eutectic solvents), exploring financing options to support industry’s transformation and investigating block chain technology for timber certification. The latter would support risk assessment and Chain of Custody woodfibre audits from forest/plantation to retail shelf. Sappi is representing the paper industry in this project.

Value impact

The Prince of Wales Global Sustainability Fellowship Programme will deliver students with a profound knowledge and understanding of issues which will help drive new solutions for us and others, creating exciting opportunities far into the future.

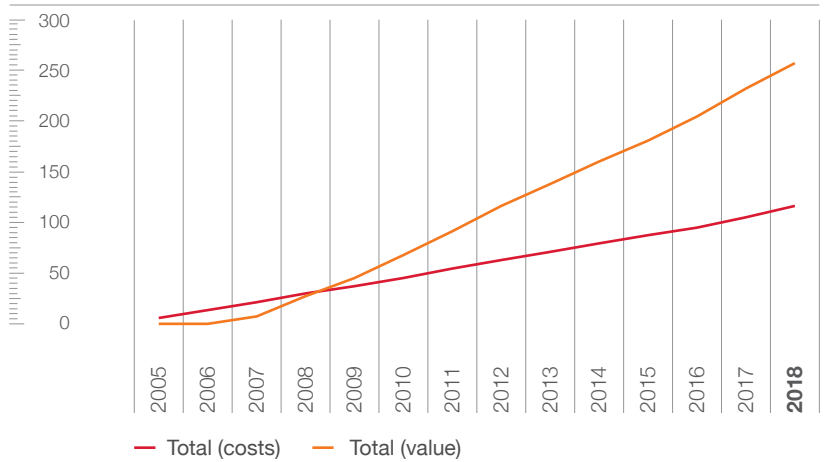
R&D

Technology is a core pillar of competitive advantage in our industry and represents a risk if we do not make ongoing technology investments. With a strong focus on innovation and R&D, Sappi is committed to developing new processes and biomaterials which extract more value from each tree and support our business strategy to move into new and adjacent markets.

Our R&D initiatives focus on consolidating and growing our position in our targeted market segments, driving cost competitiveness and cost reduction, as well as optimising our equipment and forestry assets.

Total R&D spend in 2018 increased significantly from US\$29.5 million in 2017 to US\$41.6 million. This includes spend of approximately US\$11.5 million on our Exciter programme (2017: US\$9.8 million) which focuses on core business (Exciter 1) and new and adjacent business (Exciter II).

Cumulative global value generated versus expenditure (Investment/value delivered – US\$ million)



Core business support (Exciter I) included:

- Cost reduction through novel innovations for the paper industry, latex replacement in particular
- Processing in our pulp and paper mills, particularly the continuous optimisation of the cooking and bleaching processes to achieve cost reduction and increased fibre yields
- Support for packaging grades like *Seal*
- Transferring Rockwell Solutions’ coating concepts to paper substrates
- The evaluation of alternative hardwood species for one of our SSA mills
- Viscose application testing at Saiccor Mill, and
- The ongoing evaluation of new, disruptive technologies.

Work in terms of Exciter II was focused primarily on new technologies in adjacent areas to the current business, including *Symbio*, *Valida* development and applications, as well as work related to biorefinery—notably the scaled-up sugar demonstration plant at Ngodwana Mill.

Value impact

- Market growth.
- Cost reduction.
- Continuous improvement.
- Efficiency optimisation.
- Competitive positioning.

Key material issues continued

1

NO POVERTY

End poverty in all its forms everywhere.

3

GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote wellbeing for all at all ages.

4

QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

8

DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

People

Material issue

See 10 and .

➔

Safety

Background

Unsafe practices and conditions can have devastating consequences—the impact of human loss and suffering on individuals and those around them is immeasurable.

⬇

Our response

Our ongoing **Project Zero** campaign highlights our commitment to zero injuries. Our target remains a zero Employee (Own) and Contractor combined Lost Time Injury Frequency Rate (LTIFR) with a minimum of a 10% improvement year-on-year.

We keep safety at the top of employees’ minds with relevant, actionable programmes that challenge them to proactively identify potential hazards and make safe choices. Once potential hazards are identified, teams seek first to understand them and then control and minimise exposures within our operations. We have a zero-tolerance approach to safety, both in terms of our own employees and contractors and believe it is unacceptable that a single life should be lost in the course of our business.

Globally, satisfaction with our safety performance, particularly in **SNA**, must be tempered by our collective shock, regret and grief at two fatalities in 2018: At Ehingen Mill in **SEU**, an employee was cleaning the conveyor belts leading from the woodchip silos to the digesters when he was pulled in between a guiding roll and a conveyor belt and killed. In Sappi Forests (**SSA**), a contractor lost control of his vehicle which left the road, resulting in his death.

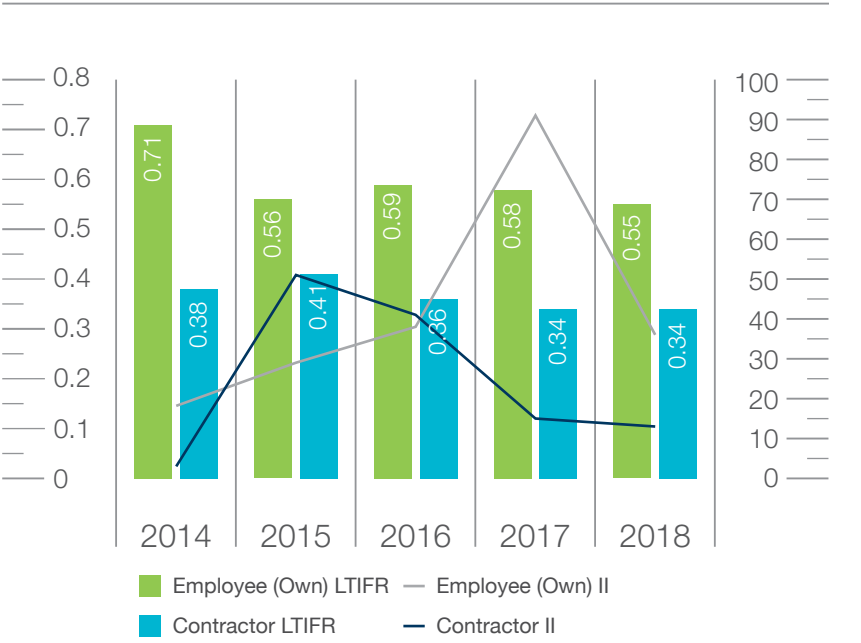
Regrettably, the start of the 2019 year was marred by two contractor fatalities, one at Ngodwana Mill and at one at Sappi Forests in KwaZulu-Natal. Sappi people around the world have joined the CEO and board in supporting the families, friends and colleagues of those who tragically passed away.

In terms of regional safety performance:

- SNA** had the best-ever Employee (Own) LTIFR on record and the severity rate in this region declined significantly.
- Although there was no improvement in the LTIFR for Employee (Own) in **SEU**, which stayed constant, this figure was somewhat skewed by the recent integration of new business units. On average, with some exceptions, the existing business units improved safety performance, however, all the new entities were at a lower safety level with actions plans put into place to reverse this trend. Ehingen Mill took immediate action following the fatality:
 - Activities previously classified as low risk were reassessed
 - Mill representatives participated in a workshop in South Africa held with external service providers, and
 - Works Council members and safety representatives travelled to Cloquet Mill to share best practices.
- In **SSA**, Employee (Own) LTIFR was the best ever, with the Contractor LTIFR just above the best ever figure. We believe these achievements are the result of safety initiatives launched in 2018 following three fatalities in 2017:
 - A team from an internationally recognised safety consultancy was tasked to perform a safety culture review and suggest mitigation actions
 - Sappi Forests initiated the **Stop and Think Before You Act** safety initiative underpinned by an intense communication programme supported by graphic materials, and

- We established a forum that involves contractors in safety plans and programmes and emphasises their inputs.

Sappi group
Employee (Own) and Contractor LTIFR



In support of the Sappi’s 2020Vision goals, all regions have set specific safety targets to be achieved by 2020 and each region has compiled specific action plans to achieve these targets (see [People](#) – Training initiatives).

Value impact

The safety and wellbeing of employees and contractors.

Key material issues continued

Sappi Forests'

Stop and Think Before You Act

safety initiative, which adopted a storytelling approach, won a *Gold Quill Award of Excellence for Safety Communication Management* from the *International Association of Business Communications (IABC)* in 2018. In addition, the work was also selected as one of eight *Best of the Best* entries from 258 awarded entries. In total, 699 entries from 27 countries were judged.

The 13th *Global Safety Awareness Week* was held in June 2018. The theme,

Own Safety, Share Safety

highlighted the message that every individual should be responsible not only for their safety, but also for their colleagues' and family's safety. The initiative was well supported with senior managers visiting and participating in events at all the Sappi sites. The safety theme for 2019 is *We Value Safety*. This aims to reinforce the direct link to our values and the engagement of all within our group—I value my safety, I value your safety and Sappi values our safety.



Material issue

See 10 and .

Employee engagement

Background

When employees are engaged at work, they feel a connection with the company. They believe that the work they're doing is important and therefore work harder. This has obvious implications for productivity, career development and overall job satisfaction.

Our response

We hold an *Employee Engagement Survey* every two years, with the last one rolled out in September 2017. The objectives of the survey are to measure:

- Changes in employee opinions and perceptions of Sappi as a place to work since the first baseline survey conducted in 2013
- The evolution of *Sustainable engagement* within Sappi globally in order for us to understand what drives *Sustainable engagement* among employees at Sappi, and
- The *Employee Value Proposition* to understand what motivates and drives our employees to work within this organisation.

The 2017 results were compared to industry benchmarks (global manufacturing norm), best in class benchmarks (high performing companies norm) and cultural benchmarks. Sappi's global participation rate was 85%—a significant 15% increase from 2015. The global manufacturing norm participation rate is 83% and the response rate for high performing companies norm is 87%. There was an overall

improvement in all categories that were measured in the survey when compared to the 2015 results.

Globally the most improved scores were for *Leadership and direction*, *Operational efficiency* and *Talent and recognition*. Areas that require focus were identified as *Image and customer focus* and *Safety and wellbeing*.

Value impact

- Reduced staff turnover.
- Improved productivity and efficiency.
- Higher levels of customer retention and profitability.

In 2018, we spent an average of

US\$500 on training per employee.

Internal training is supported by external training initiatives in each region (see [People – Training initiatives](#)).

Key material issues continued

Material issue See  10.


➡ Labour relations

Background
Sound labour relations underpin the ongoing production and ability to generate income for any business.

⬇ Our response

The Sappi employment landscape includes interaction with trade unions at all our manufacturing sites across the group. This interaction is based on transparent communication and mutual respect.

We endorse the principles entrenched in the *United Nations Global Compact (UNGC)* and the *Universal Declaration of Human Rights*. In many areas, at a minimum, we conform to and often exceed the labour legislation requirements in countries in which we operate. We also promote freedom of association and engage extensively with representative trade unions. Globally, approximately 62% of Sappi’s workforce is unionised, with 70% belonging to a bargaining unit.

Overall, 2018 was characterised by very tough negotiations, particularly in South Africa, but relatively good relationships with organised labour across the geographies. However, community unrest is starting to impact on businesses across  South Africa (see [Key material issues](#) – On our watchlist).

In [SEU](#), approximately 67% of employees are members of a union and are represented through Works Councils. European Works Council meetings at which Sappi is represented by the Chief Executive Officer and Human Resources Director, take place twice a year. There were no major disputes in this region

and we concluded collective labour agreements (CLAs) at Alfeld, Ehingen, Stockstadt, Lanaken, Kirkniemi, Carmignano and Condino Mills. At Maastricht Mill, the current CLA is in place until November 2019.

In [SNA](#), approximately 64% of employees are unionised. SNA has 11 collective bargaining agreements with its hourly paid employees. The overall industrial relations climate in SNA remained good with no major disputes. We satisfactorily reached labour agreements with two unions at Cloquet Mill, while negotiations with one union at Somerset Mill are ongoing. SNA also has a number of negotiations planned for 2019.

In [SSA](#), 56% of our employees belong to a trade union. While the industrial relations climate has been volatile, with trade unions competing amongst each other for improved membership and existence, we have continued to maintain a stable industrial relations environment across our operations—the result of our proactive engagement strategy and initiatives. We continue to engage with trade union leadership.

Wage negotiations were tough, but amicably settled. The Pulp and Paper Chamber is currently reviewing its future of the chamber given the fact that no industry agreement has been reached over the last two years. This will then assist the SSA leadership decision on how to approach the 2019 collective bargaining process.

We expect another tough wage negotiation process in 2019, with the country preparing for election and the majority union continuing to operate under pressure from other trade unions.

Value impact

- Increased levels of engagement.
- Enhanced productivity.
- More harmonious working environment.



Key material issues continued

Material issue

Shared value

Background

Creating shared value (CSV) is not about philanthropy or even corporate social responsibility. It is about creating meaningful economic and social value that benefits companies, communities and individuals.

Our response

Our revised *Group Corporate Citizenship Policy* (see www.sappi.com/policies) recognises the importance of CSV in securing sustainable communities and increased profitability.

We take a very active approach to CSV both regionally and globally, driving key initiatives in support of our three primary stakeholder groups—employees, customers and the local communities in which we operate. Projects are aligned with and support business priorities and needs, taking into account feedback from our stakeholders.

The fact that Sappi is headquartered and listed in South Africa, coupled to the significant development needs of the country, dictates a higher focus on CSV activities by [SSA](#).

While each region has its own programmes, they conform to common themes that are aligned with our business needs and priorities, including education, local community support, the environment and health and welfare. We encourage employees to participate in outreach and community projects.

For detailed information about our CSV initiatives, see [People](#) – Sharing value, but a snapshot of initiatives in each region below gives some idea of our approach.

In [SEU](#), our focus is on adding to the wellbeing, safety and health of our communities. Each Sappi mill and sales office supports various local education, cultural and environmental projects based on annual requests and identified needs.

In [SNA](#), to encourage more engagement and involvement from employees, we have implemented a staff version of the long-standing *Sappi Ideas That Matter (ITM)* programme known as *Employee Ideas that Matter*. We established ITM, 19 years ago to fund designers who apply their creative talents to causes that address significant issues facing our society. The employee programme operates on similar principles whereby US\$25,000 is made available to staff for worthy causes close to their hearts. In 2018, 50 entries were received and 11 projects were supported. Each business unit in this region has a *Community Connections Group* to channel local support.

One of the *Employee Ideas that Matter* projects that received funding was a book called

The Rainbow Rescue

written by a retired Sappi employee. The book aims to teach children about diversity and acceptance. The book is being used to promote literacy in the Westbrook area through the Westbrook Children’s Project, a programme of the United Way of Greater Portland that brings community resources together to help children through their school years. A number of copies have been donated to the Westbrook Community Centre and Westbrook schools. Additional copies will also be donated to other school libraries in the area.



In [SSA](#), *Employee Wellbeing Committees* at each Sappi mill support local community projects based on annual requests and identified needs. These are coordinated via the annual *Mandela Day (67 minutes)* initiative.

In 2018, our *Alien Vegetation Removal Programme* at our mills in KwaZulu-Natal (KZN) province in collaboration with the non-governmental organisation Wildlife and Environmental Society of SA (WESSA) is a good example of our approach to CSV.

It involves the removal of alien vegetation on the land surrounding our mills—important to us as weeds have been identified as one of the biggest threats to biodiversity. A total of 20 community members per mill are being trained and employed through the programme, with the goal of establishing viable businesses which would ultimately serve other customers.

First established in KZN in 2015, the *Abashintshi* (isiZulu for ‘change agents’) programme includes life skills training for the youth, the *Ifa Lethu* programme for the elderly (protecting cultural heritage), holiday programmes for school children and *Asset Based Community Development (ABCD)*.

The latter is based on the premise that communities can drive development process themselves by identifying and mobilising existing, but often unrecognised assets.

The programme has been expanded to 65 Sappi communities across the KZN and Mpumalanga. 117 Abashintshi are now involved. They are generating an income for themselves through their own businesses and they are helping community members to improve their own businesses.

During 2018, 190 micro- and small businesses were started or rejuvenated, earning an income for 268 people.

Key material issues continued

Social investment spend per region

| Region | 2018 |
|--|-----------------------------------|
| Sappi Europe | €100,000 |
| Sappi North America (ITM US\$250,000) | US\$550,000 |
| Sappi Southern Africa Spend by Sappi Forests on water, sanitation and general upgrades to villages | ZAR64.3 million ZAR8.3 million |

Value impact

- Greater understanding of community issues.
- Socio-economic upliftment.
- Expanded channels of communication.
- Enhanced licence to trade.



Key material issues continued



6 CLEAN WATER AND SANITATION
Ensure availability and sustainable management of water and sanitation for all.



7 AFFORDABLE AND CLEAN ENERGY
Ensure access to affordable, reliable, sustainable and modern energy for all.



13 CLIMATE ACTION
Take urgent action to combat climate change and its impacts.



15 LIFE ON LAND
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Planet

Material issue

See 10 and .

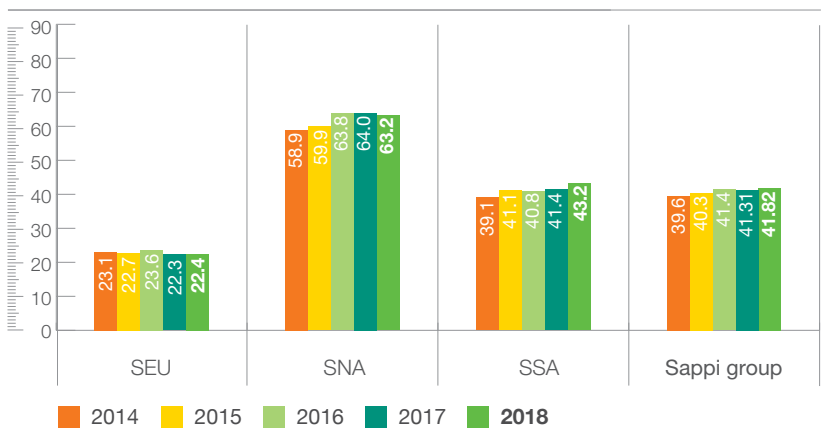
Energy

Background

Given the high energy intensive nature of our industry, the cost and availability of energy is a key consideration for the pulp and paper industry.

Our response

Energy self-sufficiency (%)



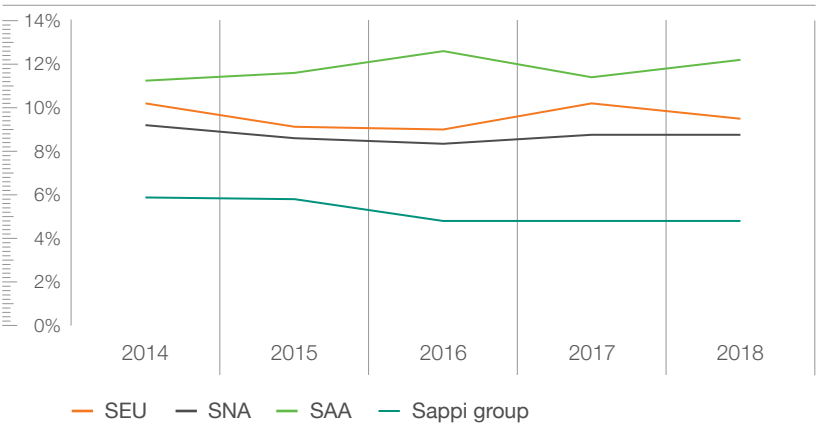
We leverage the significant opportunities inherent in our business and processes to help us reduce energy usage and impact:

- Using a high proportion of renewable energy as a fuel source, most of it self-generated in the form of black liquor
- Operating combined heat and power (CHP) plants in many of our mills. These plants not only generate electricity but also heat, which is used at the paper machines to dry the paper. Such efficiencies mean our CHP units are twice as energy efficient as conventional power plants

- Improving the energy efficiency of our mills, and
- Selling surplus electricity from Alfeld, Ehingen, Gratkorn, Maastricht and Stockstadt Mills in **SEU**; Cloquet, Somerset and Westbrook Mills in **SNA** and Ngodwana Mill in **SSA**.

We track purchased energy costs as a percentage of cost of sales to assess whether we are succeeding in this regard. In 2018, globally energy costs in relation to cost of sales remained stable, largely due to reduced global energy costs in **SEU** which offset the sharp increase in **SSA**.

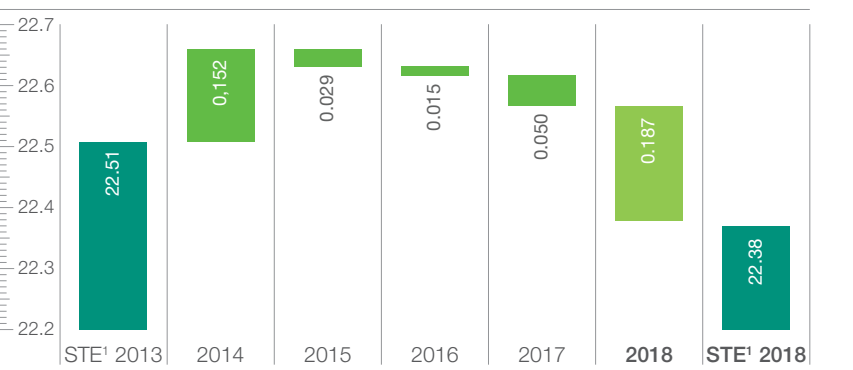
Purchased energy costs as a percentage of cost of sales.



Our focus is on reducing externally purchased power to reduce costs and also on reducing our reliance on fossil fuels. Over time, we have slowly but steadily reduced our use of purchased energy (electricity and fossil fuel) and also reduced specific energy intensity. Globally, over five years, energy self-sufficiency has increased by 5.6%.

In addition, we have increased our use of renewable energy—an approach which ultimately results in a reduction in greenhouse gas (GHG) emissions and has positive economic implications. Our use of renewable energy in 2018 was 46.8%, of which 71.5% was own black liquor. This not only help to reduce GHG emissions, but also separates our operations from the volatility of energy prices. We are committed to increased use of renewable energy, but we are constrained by own black liquor availability which is our main renewable fuel source.

Reduction of specific energy consumption (GJ/adt)



¹ Specific total energy (STE).

Value impact

We acknowledge that our industry is energy-intensive and that we generate GHG emissions, we believe that this is mitigated by the carbon sequestration of the plantations and forests from which we source woodfibre.



Key material issues continued

Material issue See  7 and .

➔ Woodfibre certification

Background

Forestry and mill Chain of Custody certification assures consumers that the forest products they buy originate from legally harvested and sustainably managed forests and plantations.

⬇ Our response

With only 10% of the world’s forests certified, we work hard to expand our certified woodfibre basket and have targets in each region, as well as a global target in place to achieve this. Globally, 75.2% of fibre supplied to our mills is certified.

In [SEU](#), all mills are FSC®- and PEFC™-certified. In [SNA](#), Sappi includes fibre sourced from the Certified Logging Professional and Maine Master Logger programmes. Cloquet, Westbrook and Somerset Mills are FSC-, SFI®- and PEFC Chain of Custody-certified. We source only from controlled, non-controversial sources and 100% of wood and pulp is purchased in according with the SFI Certified Sourcing Standard. The standards we use are a critical element of Sappi’s due diligence for Lacey Act compliance. In South Africa, 100% of Sappi’s owned and managed plantations are FSC-FM-certified, while Ngodwana, Saiccor, Stanger and Tugela Mills and Lomati Sawmill are FSC Chain of Custody-certified.



In [SSA](#), we recognised that we needed to obtain certification over and above the FSC Group Scheme certification, based on the difficulty of getting small growers certified and on customers’ requests for PEFC labelled products. PEFC endorses national certification schemes, which meant South Africa had to develop a new certification scheme including a forest management standard. This is now known as the *South African Forest Assurance Scheme (SAFAS)*. We await the finalisation of our SAFAS certification and as soon as PEFC endorses SAFAS, we will be able to label our woodfibre as being PEFC-certified.

Value impact

- Ensures strong environmental credentials and promotes environmental responsibility.
- Enhances reputation.
- Meets customer needs.
- While certification undoubtedly adds value, the drive for certification can negatively impact on small growers, who help to promote healthy forest and plantation landscapes, but for whom the costs of certification are onerous.

Key material issues continued

Material issue See  7.

➡ Climate change

Background

The fifth IPCC assessment report indicates that each of the last three decades has been successively warmer at the Earth’s surface than any preceding decade since 1850. The globally averaged combined land and ocean surface temperature data, as calculated by a linear trend, show a warming of 0.85 (0.65 to 1.06) °C over the period 1880 to 2012. Anthropogenic GHG emissions have increased since the pre-industrial era to levels that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century. The effects of climate change are already noticeable in changing weather patterns.


⬇ Our response

In 2018, there were record high temperatures in Europe. There were also major wildfires in northern England, Sweden and Greece. The 2017 fire year in the United States of America (USA) was one of the most destructive on record and the most expensive in USA history, with damage estimates topping US\$10 billion. To date, the damage in the 2018 season has also been extensive, with extreme temperatures across large parts of North America.

While our business is wholly dependent on woodfibre, given SEU’s general risk mitigation strategy of sourcing pulp and woodfibre from a variety of sources and regions, we do not anticipate any material impact to raw material supply from climate change in the short- to medium term. In SNA, our operations do not currently face material risks associated with climate change. With the exception of fibre from Brazil for Westbrook Mill, we source from northern hardwood and softwood baskets that have not suffered under any drought conditions or from fire.

However, the situation is different in **SSA**, where Sappi Forests owns and leases 379,000 hectares of land, with contracted supply covering a further 129,181 hectares. Climate change has already impacted some of our plantations and has the potential to significantly impact our woodfibre base.

Accordingly, we take concerted action to mitigate the risk, beginning with understanding where the largest risks of climate change will be to Sappi, how climate is likely to change further into the future and to formulate a multi-pronged response which involves:


- **Climate change investigations:** To determine which plantations are most at risk, and also to identify which climatic variables are likely to change, as well as the magnitude and direction of such change. A preliminary study showed that maximum temperatures are more likely to increase than minimum temperatures, especially during spring and summer. It is also likely that spring rainfall will decrease, with more high-intensity rainfall during summer. The combined effect of higher temperatures and lower rainfall in spring is likely to exacerbate tree stress, thereby increasing susceptibility to pests and diseases, as well as  fire (see [Planet](#) – Mitigating climate change).

- **Replacing pure species with hybrids:** On the Mpumalanga highveld, Sappi experienced the impact of the changes described above with *Eucalyptus (E.) nitens* becoming unsuitable due to pest and disease issues, on plantations with the highest risk of climate change. *E. nitens* has a very narrow ideal temperature range and is very sensitive to changes in temperature. Subsequently, after evaluating management options and associated risks across the entire value chain, the decision was taken to replace *E. nitens* in KZN by replacing it with *E. grandis x E. nitens* hybrid varieties.
- **Adjusting and directing our tree breeding strategy:** Through the use of modelled future climate data. Traditional tree breeding is a relatively slow process and in order to keep up with environmental changes, Sappi’s tree breeding programme is producing and selecting the most optimally suited hybrid varieties for each climatic zone. Our tree breeding division has a target of developing a hybrid varietal solution for all our sites by 2025. We are also making use of genetic tools, like DNA fingerprinting, to enhance and accelerate their breeding and selection process.
- **Facilitating the production of more rooted cuttings:** As pine and eucalypt hybrids are more successfully propagated through rooted cuttings rather than seed, a strategy is being rolled out to meet future requirements. In addition to the recent construction of Clan Nursery and the re-build of the Ngodwana Nursery, we plan to upgrade Richmond Nursery in 2023 to enable the production of additional hybrid cuttings as well as seedlings.



Key material issues continued

- Implementing rapid detection techniques:** Together with rapid understanding of the relative tolerance/susceptibility of our growing stock to newly introduced pests or disease, these techniques are critical in successfully managing the viability of our woodfibre base. Accordingly, we have instituted a series of *Sentinel* trials across various climatic regions. These trials are made up of many genotypes—both currently commercially planted and also pre-commercial varieties. In addition to different genotypes, different ages (life stages) of trees are also represented. Using these trials, our objective is to rapidly identify a new pest or disease, and immediately determine which genotypes are susceptible or tolerant, and also which life stage of the tree is impacted. This puts us in a position to react very quickly.
- Long-term soil monitoring:** Under hotter and drier climatic conditions, the importance of soil organic matter will increase because of its ability to reduce soil temperature, and also to increase the soil water infiltration rate soil water holding capacity. A major barrier to monitoring slow-changing soil attributes is the scarcity of long-term data sets. Against this backdrop, in 2018, Sappi Forests established long-term soil monitoring plots through a collaborative research project managed by the Institute for Commercial Forestry Research. These monitoring plots will form part of the current inventory plot network (permanent sample plots) and will be used to interpret and relate changes in soil quality parameters to stand productivity and site management.

In addition to these trials, we have recently completed a pilot study on the use of automated change detection using satellite imagery focused on rapidly detecting and reacting to damage—drought, pests, diseases, etc—to our plantations. The study entailed acquisition of *Sentinel 2* imagery which gives a new image every five days. Newly acquired images are compared to the previous images via cloud processing using complex change detection algorithms. The resultant change is fed live to the Sappi GIS system, and integrated with enterprise data (age, species, tree size, etc). Given the success of the project, we are now rolling it out to all our plantations, while making use of the higher resolution and daily Planet  satellite images (www.planet.com) which offer daily change detection.

Value impact

- Potential to impact our woodfibre base if we do not take concerted action.
- Sappi Forests:
- Rapid response to climatic conditions.
 - Enhanced soil and woodfibre productivity.
 - More sustainable woodfibre base.



Critical to the sustainable production of timber is the impact that management operations have on the environment, and specifically the soil in which the trees grow. Because of its effect on physical, chemical and biological properties, soil organic matter exerts a dominating influence on crop productivity and environmental quality. The objective of our long-term monitoring programme is to overcome the scarcity of long-term data sets key to analysing forest site productivity questions.

Long-term monitoring provides an opportunity to assess changes across rotations and is an essential requirement for monitoring attributes that may change slowly or that are cumulative over time. A number of international forestry research organisations and companies have implemented long-term monitoring plots.

During June to August 2018, the first five long-term soil monitoring plots have been initiated on Sappi land holdings through a collaborative research project

managed by the *Institute for Commercial Forestry* research based in Pietermaritzburg. The goal is to establish 10 twin-plots per year (five on Sappi land and five on land owned by other collaborating members). On one plot, harvest residue will be removed and on the other plot harvest residue will be retained. The inclusion of this treatment will allow evaluation of the effect of biomass removal on growth and soil properties of the sites, providing additional information on site nutritional resilience and will assist with the extrapolation of results from a separate set of nutrient depletion studies.

These monitoring plots will form part of the current inventory plot network (permanent sample plots). Data from this monitoring network will be used to interpret and relate changes in soil quality parameters to stand productivity and site management. More detailed studies will be conducted at selected sites which will be aimed at developing a better understanding of the process that can be used to further refine indicators.

Key material issues continued



Lanaken Mill

Material issue

See  7.

Water

Background

Our operations are highly dependent on the use and responsible management of water resources. Water is used in all major process stages, including raw materials preparation (woodchip washing), pulp washing and screening, and paper machines (pulp slurry dilution and fabric showers). Water is also used for process cooling, materials transport, equipment cleaning and general facilities operations.

Our response

Most of our mills are situated in the vicinity of rivers from which they draw water. Withdrawal from surface sources (mostly rivers) accounts for the largest percentage of water use. This withdrawal is subject to licence conditions in each area where we operate.

The *World Resources Institute* has identified South Africa and Belgium as having high levels of water stress. We have embarked on a number of water efficiency projects in South Africa and in terms of Saiccor Mill, by having access to the Sappi-owned Comrie Dam where we completed a project to raise the dam wall in 2016 (see [Planet](#) – Using water responsibly, for more information and for our response in terms of Lanaken Mill (Belgium).

In **Europe**, exceptionally low water levels in most of the region’s rivers are not affecting our mills directly, but are having an impact on transport logistics.

In **North America**, our mills draw water from surface sources (rivers and lakes) and return treated water to the same primary sources. The areas in the two states where our mills operate have been identified as having low levels of water stress.

It is important to note that globally, 95% of the process water we use is returned to the environment. While it is difficult to improve this metric due to the nature of our processes, over five years specific water extracted has reduced by 3.8%.

Water used for pulp and paper production is mostly recycled in the system. However, minerals from woodfibre make it necessary to discharge some amount of water which is purified in high-end waste water treatment facilities.

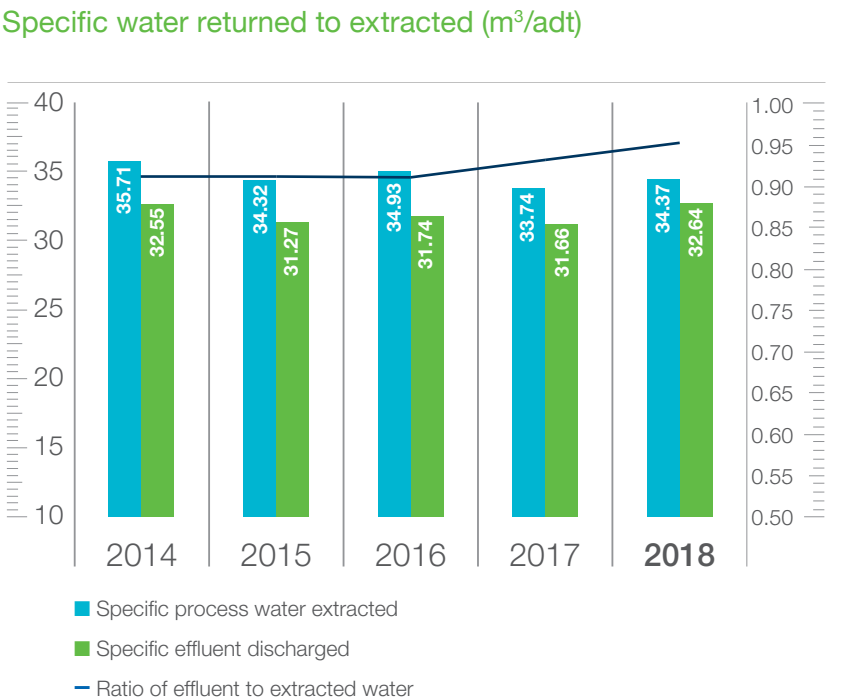
Water and effluent testing are routinely conducted at mill sites.

Across the group, over five years, we have achieved a positive result in effluent concentration by reducing chemical oxygen demand (COD) by 5.2% and total suspended solids (TSS) by 17.2%. In accordance with previous years, Saiccor Mill has been excluded from the global trend COD reporting. The mill is building up the biodispersion COD dataset, which will be used for future reporting. This value, tested in the marine environment, supports the historical environmental impact studies and the recently conducted biodegradation test, performed on the waste water. The use of this value was also endorsed and used by Quantis for a recent lifecycle assessment (LCA) (see [Planet](#) – Improving effluent quality).

In terms of our plantations in **South Africa**, these are not irrigated and fertiliser use is kept to a minimum—being used only once in each rotation. This limits the potential impact on water sources in terms of nutrient load. In addition, our minimal use of pesticides is strictly controlled by the forest certification systems to which we conform.

Value impact

We do have an impact on water sources from which we draw and return water. However, this has to be offset against the high level of economic value added by our water usage and by the percentage of water (95%) returned to the environment.



Key material issues continued

On our watchlist

Land restitution

Sappi is currently engaged in 65 land claims in South Africa. Six claims have been settled and the extent of the land agreed, but we are waiting for finalisation from the KZN and Mpumalanga regional land claims commissioners. To date, 20 claims have been agreed to but the extent of the land still has to be finalised with the regional commissioners or claimants. Of the 65 claims, twenty have been referred to court, either because we questioned their validity or the extent of the claim. In the past ten years, we have settled 37 claims involving 8,151 hectares in which claimants took ownership of the land and claims for 11,629 hectares in which claimants preferred to seek compensation.

For many of the land claims in which we have been involved, and where there has been a change in ownership, we continue to buy the timber and help to manage those plantations.

While we support the land claims initiatives generally, we have been frustrated around the implementation of the policies and slow levels of bureaucracy. The forestry industry is a key driver of rural growth. If government could unlock some of the bureaucratic lagging, the attendant benefit will flow directly to rural communities

Social unrest

There have been incidents of social unrest in South Africa, the result of a disaffected population who are protesting about lack of service delivery and job opportunities. Officially, the country's unemployment is standing at 27.5%. In certain regions of the country, particularly the rural areas, it is much higher.

We played a role in helping to alleviate the situation by spending ZAR8.3 million on upgrading infrastructure in villages close to our forests in 2018. We also promote socio-economic development in rural areas, in particular through our *Abashintshi* programme (see *People* – Sharing value) and our enterprise development initiative, *Sappi Khulisa* ('Khulisa' means 'to grow' in isiZulu). The latter initiative, which began in 1983, is aimed at community tree farming and has successfully uplifted impoverished communities in KZN and the Eastern Cape. The total area currently managed under this programme amounts to 27,080 hectares. In 2017, under the programme 483,359 tons (2017: 448,221 tons) worth approximately ZAR387 million was delivered to our operations. Since 1995, a total volume of 3,796,940 tons to the value of ZAR2.1 billion, has been purchased from small growers in terms of this programme.

As rotation times, and the associated cash flows in forestry are long, growers receive advances. In addition, qualified extension officers advise on all aspects of tree farming.

In recent years, we have expanded *Sappi Khulisa* beyond the borders of KZN to the Eastern Cape. We believe the government's expedition of planting licences in this area where 100,000 hectares are available for planting would play a significant role in promoting rural development.

We are intensifying our focus on enterprise development to cover other areas apart from forestry and have appointed a specialist to drive this forward.



redefine

Key relationships

We believe that building relationships with our stakeholders in a spirit of trust and mutual respect enables more tangible business value creation.



Key relationships



Strengthen the means of implementation and revitalise the global partnership for sustainable development.

We view stakeholder engagement not as a once-off annual intervention but as an ongoing dynamic process which enables us to respond to the changing nature of shared priorities of parties who are interested in, and affected by, our business.

Our approach to engagement with all stakeholder groupings is based on inclusivity and the principles of:

- **Materiality:** Identifying the legitimate interests and material concerns of stakeholder groupings
- **Relevance:** Focusing on those issues of legitimate interests and material concerns to our stakeholders and to Sappi and identifying how best to address them for our mutual benefit
- **Completeness:** Understanding the views, needs, performance expectations and perceptions associated with these legitimate and material issues and assessing them against prevailing local and global trends, and
- **Responsiveness:** Engaging with stakeholders on these issues and giving regular, comprehensive, coherent feedback.

Our stakeholder work is aligned to the governance outcomes of the King IV Code, namely ethical culture, performance and value creation, adequate and effective control and trust, good reputation and legitimacy.

Key relationships – Employees

We invest in future talent while challenging our people so that they are able to leverage the opportunities presented by global megatrends.

Shared priorities

- Making resources available to enable our people to grow intellectually, fulfil their potential and drive innovation within Sappi.
- Creating an ethical culture.
- Connecting our people to our strategic goals.
- Focusing on safety, health, wellness and recognition programmes.
- Promoting corporate citizenship.

Our response

- Training targets and initiatives are aligned with the needs of each region (see [People](#) - Training initiatives).
- **Code of Ethics** communication and training is ongoing in all regions (see [Key material issues](#) – Ethical behaviour and corruption).
- **Employee Engagement Surveys** held every two years measures engagement levels.
- All our people are involved in our safety drive.
- Recognition programmes at group and regional level.

- **Eco-effectiveness** campaign (SEU) highlights how we generate results to make our business more sustainable.
- **Encouraging employee volunteerism** through initiatives like the **Employee Ideas that Matter** initiative through which we provide grants to employees to fund their individual projects to support good in local communities (**SNA**); support of various local education, cultural and environmental projects based on annual requests and identified needs (**SEU**); **Employee Wellbeing Committees** at each mill support local community projects and also support **Mandela Day** (**SSA**).

Our recognition programmes

- Sappi Limited:
 - **Technical Innovation Awards**
 - **CEO Award for Excellence**
- SEU: Annual **Coryphaena Award**
- SNA: Quarterly **Risk Taking and Ingenuity Awards**
- SSA: **Excellence in Achievement Awards (EAA)**
- Sappi Trading: **SMART Awards**

In SSA we offer our people

scholarships and bursary programmes.

We also offer

apprenticeship learning programmes

in SEU and SSA, as well as graduates in training programmes (management, manufacturing and sales) in SEU, SNA and SSA.

Value add of engagement

- Employees who understand and buy into our 2020Vision are pivotal to the success of our business—alignment with our strategic direction enables our people to contribute more positively to the business as well as their personal and career development.
- By building our human capital, we establish a base of the technical skills needed by the industry.
- An increased commitment to safety delivers benefits at personal, team and operational levels.
- By establishing an ethical culture where corporate citizenship is promoted, we ensure the ongoing viability of our business, enhance reputation and become an employer of choice.

Key relationships – Unions

Given today's extremely challenging global economic conditions and the current socio-economic dynamics in the South African labour market, we prioritise our relationship with our employees and their representatives.

Shared priorities

- Freedom of association and collective bargaining.
- Safety and wellness initiatives.
- Remuneration, working hours and other conditions of service.
- Resolution of grievances.
- Engagement on strategy.

Our response

- We recognise the rights of our employees to associate freely and bargain collectively, consistent with regional laws and regulations.
- Unions are involved in health and safety committees at each mill.
- **SEU:** Collective labour agreements.
- **SNA:** Collective bargaining with hourly paid employees and labour agreements with various unions.
- **SSA:** Employees (collective bargaining); forestry workers (sectoral determination/consultation).
- Well-established grievance channels and disciplinary procedures.
- Engage with unions on economic conditions, market dynamics and growth plans.

Value add of engagement

Meaningful engagement on a number of issues affecting both business and employees results in:

- Improved relationships
- More stable labour force, and
- Enhanced productivity.



Key relationships – Communities

We work to incorporate the communities close to our operations into our journey of intentional evolution, which recognises the importance of sharing value with all our stakeholders; conserving natural resources and uplifting people so that they are well positioned to thrive in our increasingly inter-connected world. We launched a new **Ⓢ Group Corporate Citizenship Policy** (see www.sappi.com/policies) in 2018.

There are various formats of community engagement meetings held by our mills in the regions where they operate. These range from broad liaison forums for business, local government and communities to legally mandated environmental forums which form part of the licensing conditions of mills. In South Africa, there are local

farmer and community forums related to our forestry communities.

Shared priorities

- Community support including employment, job creation, business opportunities, economic and social impacts/ contributions and community support.
- Environmental issues relating to biodiversity conservation as well as water usage and quality, effluent quality and air emissions.

Our response

Sappi Europe

- Mills offer support and financial sponsorships to local schools, sport and hobby clubs, forest products industry students, local safety/environmental organisations and also support local charities. At one mill in SEU, 2% of the savings created through continuous improvement were donated to local charities selected by staff.
- Kirkniemi Mill is a partner of the *Association for Water and Environment of Western Uusimaa (LUVY)* which works with water conservation, environmental protection and environmental health in southern Finland.

Sappi North America

- Each business unit has a lead sustainability ambassador who is responsible for supporting sustainability communication, conducting training and fostering community engagement through local projects.
- Education programmes are supported at targeted colleges and universities as are programmes to encourage study in fields relevant to our operations.
- Our employees support initiatives like *Living Lands and Waters* and the *Charles River Watershed Association* focused on environmental stewardship and education.
- The *Ideas that Matter* programme continues to recognise and reward designers who support good causes.

CASE STUDY

Regarded as the world’s most respected accolade of excellence in printed communications,

the SNA Printer of the Year award

recognises superior innovation and creativity in print for work produced on Sappi papers. A total of 1,500 entries were received in 2018 with 11 gold award winners, and Classic Color, honoured as the 2018 Printer of the Year. This printer was selected for the book *Baron Wolman Presents The Rock & Roll Revolution*, featuring photographer Baron Wolman, best known for his work with Rolling Stone photographing concerts in the late 1960s. Printed on Sappi Opus Gloss Text, the book features candid photos of some of America’s greatest rock stars.

Key relationships – Communities continued

Sappi Southern Africa


Given South Africa’s significant development needs, community support is mainly focused in this region and includes: (see [People](#) – Sharing value – Sappi Southern Africa.)

- *Sappi Khulisa*, our enterprise development scheme
- The *Abashintshi* programme
- *Early Childhood Development*
- Education, including *Khulisa Ulwazi*, our training centre for small growers and two *Sappi Skills Centres* for local unemployed youth, one at Saiccor Mill and the other at Ngodwana Mill
- The *African Honey Bee* project, and
- Support for local tourism through our mountain biking sponsorships and promotion of recreational riding on Sappi land.

Value add of engagement

- Enhances our licence to operate.
- Promotes socio-economic development which could in the long term, lead to increased demand for our products.
- Initiates real social mobilisation and change for the better.

CASE STUDY



Our support of the

African Honey Bee (AHB) project,

which is positively impacting on communities in KwaZulu-Natal (KZN) province (South Africa), aligns with our approach of helping communities to help themselves. The AHB project is a social enterprise enabling families from disadvantaged rural communities to build sustainable micro-beekeeping businesses by leveraging the natural resources available to them. Over the past two years, AHB has trained 1,482 people in KZN. Of this number, 962—and counting—are actively keeping bees and producing and selling honey.



Key relationships – Customers

We adopt a partnership approach, whereby we develop long-term relationships with global, regional and local customers. We also accommodate more transactional customers. Where relevant, we will conduct R&D and develop products to suit customers' specific needs.

In addition to the usual avenues of engagement, we engage through initiatives like the Sappi Football Cup, now in its eighth year (SEU), Printer of the Year (SNA) and by sponsoring the Citrus Research Symposium (SSA).

Shared priorities

- New or enhanced products that meet rapidly changing market demand.
- Support in terms of paper, packaging, dissolving wood pulp (DWP) and sustainability goals.
- Information and campaigns to promote print as a communication medium and encourage the use of packaging.
- Information about the fibre sourcing and production processes behind our brands.
- Provision of technical information.

Our response

Products

In 2018 we branded our DWP range as **Verve** and also launched other new products:

- **Seal**: A packaging paper with integrated **Sealing** functionality
- **Spectro C1S** and **Proto Litho C1S**: New packaging grades
- **Fusion Uncoated**: A white topline
- **Fashion White** and **Fashion White OF**: For shopping bags, and
- **Atelier**: A premium folding boxboard.

We also established Sappi Digital Solutions, focused on the dye sublimation papers market.

Support

- In terms of DWP, **Technical Centres of Excellence** are located at Saiccor and Cloquet Mills.
- Customers can make use of the **Competence Centre for Speciality Papers and Paper Laboratory** at Alfeld Mill.
- In **SNA**, the **Sustainability Customer Council** provides candid feedback, identifies emerging issues and helps to establish goals.
- In 2018, **SNA** launched:
 - **True or False**: An informative guide about coated and uncoated paper myths and facts, and
 - **The Five Second Rule**: A promotional resource focused on direct mail.

CASE STUDY

Filled with entertaining urban legends and popular misconceptions, SNA's new

True or False

booklet challenges frequently heard myths such as, "humans only use 10% of their brains" and "lightning never strikes the same place twice." It also refutes the widespread belief that uncoated printing papers cost less than coated. In addition to comparing costs, performance capabilities and environmental benefits between coated and uncoated sheets, **True or False** presents an actual side-by-side demonstration of the same image printed with the same press settings on McCoy Matte and Silk and two comparable uncoated grades, so readers can see the tactile and visual differences for themselves.

Key relationships – Customers continued

Information and campaigns

- We showcased our brands at *Fach Pack* (where we launched *Atelier*); *LUXE PACK MONACO*, *SGIA*, *FESPA Berlin*, *HOW Design Live*.
- Globally we continue to participate in industry initiatives like *TwoSides*.

CASE STUDY

We exhibited for the first time at


LUXE PACK MONACO,

where we met with converters, designers, brand owners, printers, finishers and others. We shared information on the positive impact the premium solid bleached boards of our Algro Design family could make in terms of shelf appeal and total consistency in communication for branded products including cosmetics, perfume, confectionery, luxury drinks, lifestyle and fashion.

Information about fibre sourcing and production processes

- At the request of our customers, we participate in *EcoVadis* and *Sedex*.
- In [SEU](#) and [SSA](#), we publish *Paper Profiles* and information sheets for our papers.
- In [SNA](#), we use *GreenBlue's Environmental Performance Assessment Tool (EPAT)* which enables buyers to evaluate our performance on a mill-by-mill basis.

Technical information



- A series of technical brochures is available on our  website www.sappi.com.

In addition, there are specific initiatives in each region:

Sappi Europe

- The *Sappi Houston* online knowledge platform.

Sappi North America

-  The newly launched *POP* site (www.sappipops.com) is aimed at marketers, creatives, designers and printers looking to innovate in their categories.
-  *Sappi etc* (www.sappi.com/sappietc) is an educational platform for designers and printers.

Sappi Southern Africa

- Our paper and paper pulp product offerings are supported by strong technical teams at each mill and the *Sappi Technology Centre* in Pretoria.

CASE STUDY

Octoboost is Sappi's cloud-based high-tech solution which supports printers along the digital transformation. Through its *E-Commerce Module*, it allows printers to set-up and scale up Web-2-Print portals with Magento 2.2 technology easily and cost-efficiently. It also offers a *Print Efficiency Module*, which provides powerful print intelligence insights and drastically reduces print costs through dynamic planning and gang run printing. Subscription to the software is starting to grow, with 25 printers in the first early adopter wave as at year-end. *Octoboost* has recently been nominated for the *Innovation of the Year* prize by the German magazine, Druck+Medien.

Value add of engagement

- Meet customer needs for products with an enhanced environmental profile.
- Innovate to align with evolving market trends.
- Increase awareness of the importance of sustainability.
- Promote our customers' own sustainability journeys.
- Keep abreast of market developments.
- Showcase our products and promote the Sappi brand.

Key relationships – Customers continued

CASE STUDY

Sappi Football Cup

SEU's *Sappi Football Cup* is an annual event for Sappi customers, printers and publishers. Once again in 2018, SEU welcomed 12 qualifying teams from an original pool of 180 teams to Brussels (Belgium) to compete for the *Sappi Football Cup* table football tournament title. The three winning teams representing France, Germany and Poland, won tickets to the 2018 UEFA Champions League Final in Kiev on 26 May 2018.



CASE STUDY

Seal

With brand manufacturers and consumers looking for alternatives to plastic packaging materials, our new product, *Seal*, will contribute to the use of more resource efficient and renewable materials for flexible packaging.

Seal was developed for use as flexible standard packaging in the food and non-food sectors, where hot *Sealing* properties are required. This includes primary packaging, such as sachets, but also secondary packaging, such as flow-wraps for sweets, toys or DIY goods. In addition to its excellent hot *Sealing* properties, *Seal* also provides a good barrier against water vapour. The new speciality paper is also recyclable within the paper waste stream.

Seal can be opened easily and smoothly, without uncontrolled tearing. Its homogeneous and light surface provides good printability and finishing properties with all common finishing techniques. Its natural appearance and pleasant feel ensure an eye-catching brand presence. *Seal* is available with FSC®- and PEFC™-certification and was produced according to the requirements of recommendation BfR XXXVI (Bundesinstitut für Risikobewertung – Federal Institute for Risk Assessment). *Seal* is available in 67 g/m².

CASE STUDY

Following extensive market research to determine what the market was looking for, where the gaps were, and what would constitute a breakthrough product for the folding boxboard (FBB) market, we launched

Atelier

In our solid bleached boards Algo Design line, the bright white, silky smooth finish has been a resounding success, and we wanted to duplicate that in FBB. But we also needed to ensure the market-leading rigidity, bulk and strength necessary for an FBB product.

Atelier meets all of those specifications and more. It is a convergence of ideas and craftsmanship that will clearly set us—and our customers—apart in the FBB world.

With a brightness level of 100% on the top side, *Atelier* exceeds the market standard compared to a current industry top value of around 92%. On the reverse side, *Atelier* offers a brightness factor of 98.5% to accommodate the increasing demand for printing on both sides of the board for added impact.

CASE STUDY

Building on the highly successful *Fusion Topliner*, we launched

Fusion Uncoated,

a fully bleached fresh fibre liner, thereby expanding our product offering for the high-volume corrugated board market. Ideal applications include corrugated board and carton packaging requiring a high white appearance for the topline, inner liner and fluting. *Fusion Uncoated* is approved for direct food contact and is recommended for use when branded product manufacturers, designers and corrugated board processors are seeking an alternative to brown liner papers. These applications include inner packaging such as white corrugated board inserts for high-end perfume boxes as well as food packaging. These often-unprinted cartons present a luxury surface finish thanks to their high level of whiteness. Other application's include display and shelf-ready packaging, for which uncoated paper finishes are often the preferred option.

Key relationships – Industry bodies and business

We partner with industry and business bodies to provide input into issues and regulations that affect and are relevant to our businesses and industries.

We also support and partner with industry initiatives aimed at promoting the use of our products.

Sappi has been a signatory to the United Nations Global Compact since 2008.

Shared priorities

- Issues that affect the sustainability of our industry—woodfibre base, carbon taxes, energy and emissions etc.
- Ethical issues impacting business.
- Energy issues in general and in particular government proposals on carbon taxation.
- The impact of increased regulations on business.
- The benefits of our industry and our economic contribution to society.
- Social and environmental credentials of our products.

Our response

In 2018, we:

- Became a founding partner of *The Prince of Wales Global Sustainability Fellowship Programme* at the University of Cambridge Institute for Sustainability Leadership's (CISL). Work here will include examining drivers including the rise of artificial intelligence and the need to bring carbon emissions to net zero.

Sappi Europe

- Continued to actively contribute to the development of an industry standard for delivery of chemical information through the paper and pulp supply chain. Sappi is chairing the working group with BASF as vice chair.
- Continued to participate in work related to deep eutectic solvents within the *Biobased Industries Initiative*, with the goal of significantly reducing CO₂ emissions in pulp- and papermaking.

Sappi North America

- Active board-level participation in the *Paper and Packaging Board*.
- Joined the Recycling Partnership as a funding partner.

Sappi Southern Africa

- Under the PEFC™, Sappi Forests helped to finalise the *South African Forest Assurance Scheme (SAFAS)* standard.
- Joined the *South African Ethics Institute* to benefit from the various activities and materials they provide to members in advancing ethical behaviour.
- Signed the *Business Leadership South Africa Integrity Pledge*, thereby committing ourselves to actively combating corrupt practices wherever encountered, preventing anti-competitive behaviour, adopting a zero-tolerance approach to corrupt behaviour and protecting whistle-blowers.

Extract from *Business Leadership South Africa Integrity Pledge*

We shall

actively combat corrupt practices

wherever we encounter them.

We shall

not act anti-competitively.

We shall have

zero tolerance for corruption

in our midst.

We shall

protect whistle-blowers

and provide information.

Value add of engagement

- Work with industry and business bodies through collective initiatives to support societal change and deal with societal challenges.
- Promote an ethical culture.
- Collaborate on legislative trends such as carbon tax and carbon budgets.
- Maintain and expand markets for our products.
- Demonstrate the value add of the forest products industry.
- Dispel myths and promote understanding of our industry.



Key relationships – Industry bodies and business continued

Our membership of industry associations

Sappi Limited

TAPPI (Technical Association of the Pulp and Paper Industry) • Business Leadership South Africa • The CEO Initiative

SEU

Confederation of European Paper Industries (CEPI) • Eurograph • European Joint Undertaking on Bio-based Industries • Print Power • Save Food • The Alliance of Energy-Intensive Industries • The Two Team Project (focusing on breakthrough technology concepts in the industry which could enable a more competitive future) • TwoSides

SNA

American Forests and Paper Association (AF&PA) • Paper and Paper Packaging Board • Agenda 2020 Technology Alliance • Forest Products Working Group • Forest Stewardship Council® (FSC®) • Sustainable Packaging Coalition (SPC) • The Recycling Partnership • TwoSides

SSA

Business Unity South Africa • Energy Intensive Users' Group • Fibre Processing and Manufacturing Skills Education and Training Authority (SETA) • Forestry South Africa • Forest Stewardship Council® (FSC®) • Packaging SA • Paper Manufacturers' Association of South Africa (PAMSA) • Recycle Paper ZA • Printing SA (PIFSA) • Manufacturing Circle • South African Chamber of Commerce and Industry (SACCI) and local chambers of commerce and industry • TwoSides • National Business Initiative (NBI)

Sappi Forests

Institute for Commercial Forestry Research (ICFR) • Founding member of the Tree Protection Co-operative Programme (TPCP) • BiCEP (Biological Control of Eucalypt Pests) (www.bicep.net.au) • Eucalyptus Genome Network (EUCAGEN) • CAMCORE



Somerset Mill

Key relationships – Investors

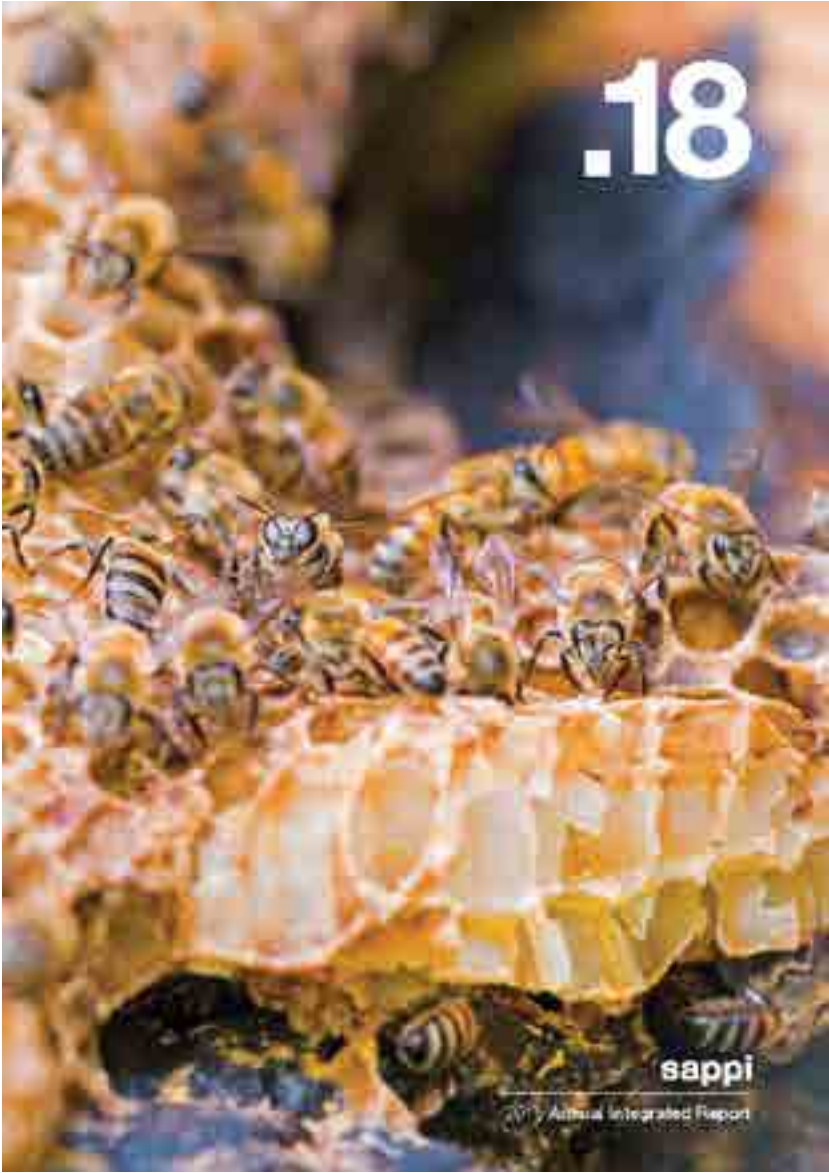
Our aim is to provide investors (shareholders and bondholders) and analysts with transparent, timely, relevant communication that facilitates informed decisions.

Shared priorities

- Information on Sappi's strategy.
- Return on investment.
- Transparent information about risks, opportunities and environmental, social and governance (ESG) performance.

Our response

- Our Investor Relations (IR) Department engages with shareholders and analysts on an ongoing basis. Our Chairman also engages with shareholders on relevant issues.
- We engage with various ratings agencies, particularly in terms of ESG performance.
- We conduct ad hoc mill visits and road shows, and issue announcements through the *Johannesburg Stock Exchange (JSE) – Stock Exchange News Services (SENS)*, in the press and on our website (S) (see www.sappi.com/SENS).
- We publish our *Annual Integrated Report* (see (S) www.sappi.com/annual-reports) and sustainability (S) reports (see www.sappi.com/sustainability) on the group website.
- Shareholders can attend and participate in the Annual General Meeting (AGM) as well as the four quarterly financial results briefings.
- Our Chief Financial Officer and Head of Treasury engage with bondholders, banks and rating agencies on an ongoing basis regarding the performance of the company.
- We participate in the *Carbon Disclosure* and *Forest Footprint Disclosure* projects every year, making our submissions publicly available.



Value add of engagement

- Understanding of our strategic direction.
- Enhanced reputation.
- Greater investment confidence.
- Broader licence to invest.

Key relationships – Suppliers and contractors


We are committed to establishing mutually respectful relationships with our suppliers and encouraging them to join our commitment to economic, social and environmental responsibility and to creating an environment that shares our commitment to doing business with integrity and courage; making smart decisions which we execute with speed. We aim to build long term value partnerships.

Shared priorities

- Safety.
- Transparency.
- Increased value and decreased costs, security of fibre supply, certification, income generation and job creation.

Our response

Given our focus on zero harm in the workplace, we work with our contractors to ensure that they follow Sappi’s safety systems. In South Africa, Sappi Forests worked closely with contractors and their workers to develop and implement its innovative **Stop and Think Before You Act** safety initiative.

We revised our **Group Woodfibre Procurement Policy**  (see www.sappi.com/policies) to align with stakeholder concerns and our stringent woodfibre sourcing requirements.

Shortly after year-end we adopted an updated **Group Supplier Code of Conduct** which incorporates safety.

- **SEU:** A joint sourcing partnership assists in negotiating better terms with timber and other suppliers. In addition, the Confederation of European Paper Industries (CEPI), of which SEU is a member, participates in actions supporting and promoting the development of sustainable forestry management tools—including forest certification—all over the world, particularly in less developed countries.
- **SNA:** The **Sappi Maine Forestry Program** and the **Sappi Lake States Private Forestry Program** assists forest landowners to meet their objectives for managing their woodland. Sappi’s trained foresters are able to develop a forest management plan geared to the interests of the landowner including wildlife management and aesthetics, marketing of timber to generate maximum return and providing an extensive network of environmental and marketing resources.
- **SSA:** Qualified extension officers provide growers in our **Sappi Khulisa** enterprise development scheme with ongoing growing advice and practical assistance.

Value add of engagement

- Security of woodfibre supply.
- Improved supplier relations.
- Better understanding of the requirements of the Sappi group.
- Expanded basket of certified fibre.
- Support for local economic development.
- Support for emerging supplier/contractor development.

Key relationships – Civil society (and media)

We maintain an open relationship with the media, believing that an informed media is better able to serve public reporting and debate on any issue.

We continue to update the media regarding our strategic shifts to extract value from woodfibre in line with future trends. We engage with civil society organisations on issues of mutual interest and belong to key organisations relevant to our operations. We engage with various civil society groups regarding our societal and development impact.

In Europe and North America, close engagement is maintained directly and through the respective industry bodies CEPI and AF&PA with the FSC® and WWF International. In Europe, also with the PEFC™. In North America, Sappi is a member of the economic chamber of both FSC US and SFI® and actively engages with these organisations through a variety of working groups and committee activities. In South Africa, Sappi is a member of the local WWF organisation as well as FSC.

www.sappi.com

Shared priorities

- Business developments.
- The future of our industry.
- Our impacts on our communities.
- Protecting the environment.

Our response

- We join key credible organisations as members.
- We develop personal relationships and engage on an ongoing basis.
- We provide support to and sponsorship for key organisations on issues of mutual interest.
- In terms of civil society, in South Africa, our forestry operations belong to a number of fire associations, given that fire is a key risk on our plantations. Our innovative *Abashintshi* project continued to gain traction, helping to prevent the spread of fires. This has also been helped by the *African Honey Bee* project on our plantations. (See *Sappi Southern Africa Sustainability Report* on www.sappi.com/resources.)

Value add of engagement

- Opportunity to inform and educate media.
- Transparent, two-way communication and opportunity for dialogue.

CASE STUDY

The town of

Ehingen declared itself as *Sustainable City* (*Nachhaltige Stadt* *Ehingen*)

in 2013 to align with the UN's Agenda 21 which seeks to promote sustainable development. The main objective is to provide the city's households with energy generated on an efficient, sustainable and local basis in order to contribute to mitigating the impacts of climate change. Another objective is to strengthen public participation on municipal issues.

Ehingen Mill is one of the municipality's cooperation partners.



Ehingen Mill

Key relationships – Government and regulatory bodies

We engage with government departments and regulatory bodies to provide input into issues and regulations that affect our industry. We also engage with regional and local governments and local authorities to obtain support for our operations and show how our activities contribute to local economic and social development.

Shared priorities

- Energy issues in general and in particular government moves on carbon taxation.
- The impact of increased regulations on business.
- The social and economic benefits of our industry nationally as well as at a local level.
- Increased investment.

Our response

- Consultations take place on an ongoing basis with government departments and regulatory bodies in each region. In Europe we also regularly engage with the European Commission.
- We undertake briefings to legislators.
- We support specific government initiatives, including in South Africa the renewable energy push—our biomass project at Ngodwana Mill achieved financial close (see [Key material issues](#) – Bio-energy) and our group CEO participated in and made commitments at the investment conference hosted by the South African President.

Value add of engagement

- Promote understanding of issues and challenges.
- Have governments understand the strategic value of our industry.
- More receptive regulatory and policy environment.



recalibrate

Prosperity

Our efforts to recalibrate and reposition our business in line with our 2020Vision are paying dividends.



Prosperity 2018 – at a glance



Prosperity 2018 highlights – at a glance

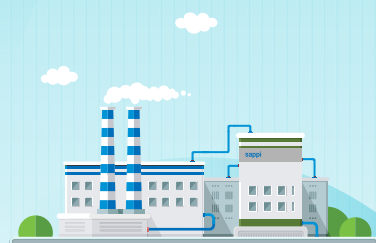
EBITDA excluding special items
US\$762 million
(2017: US\$785 million)

Profit for the period
US\$323 million
(2017: US\$338 million)

EPS excluding special items
60 US cents
(2017: 63 US cents)

Net debt
US\$1,568 million
(2017: US\$1,322 million)

Dividend of
17 US cents
(2017: 15 US cents)



Three major expansion projects concluded –
Saiccor, Ngodwana and Somerset Mills.

Our **2020Vision** encapsulates the concept of **One Sappi**, maximising the value of our global brand.

2020Vision

Sappi will be a **diversified woodfibre** group targeting a substantial increase in EBITDA through an **expanded product portfolio** with **increased margins**, providing **enhanced rewards** to all its stakeholders.

Printing and writing papers
25%
of EBITDA

Specialities and packaging papers
25%
of EBITDA

Dissolving wood pulp
40%
of EBITDA

New business opportunities
10%
of EBITDA

sappi | **Verve**

Launched **Verve** as the umbrella brand for our DWP products.

Steady demand for DWP.

Expanded DWP capacity by **60,000 tons**.

Established **Sappi Digital Solutions** – focused on dye sublimation papers.

Acquired Cham Paper Group, adding **160,000 tons** of speciality paper to our capacity – returns after seven months **ahead of expectations**.

Ongoing demand for specialities and packaging papers in each region and across all major product categories.



US\$81 million savings through group efficiency and procurement initiatives.

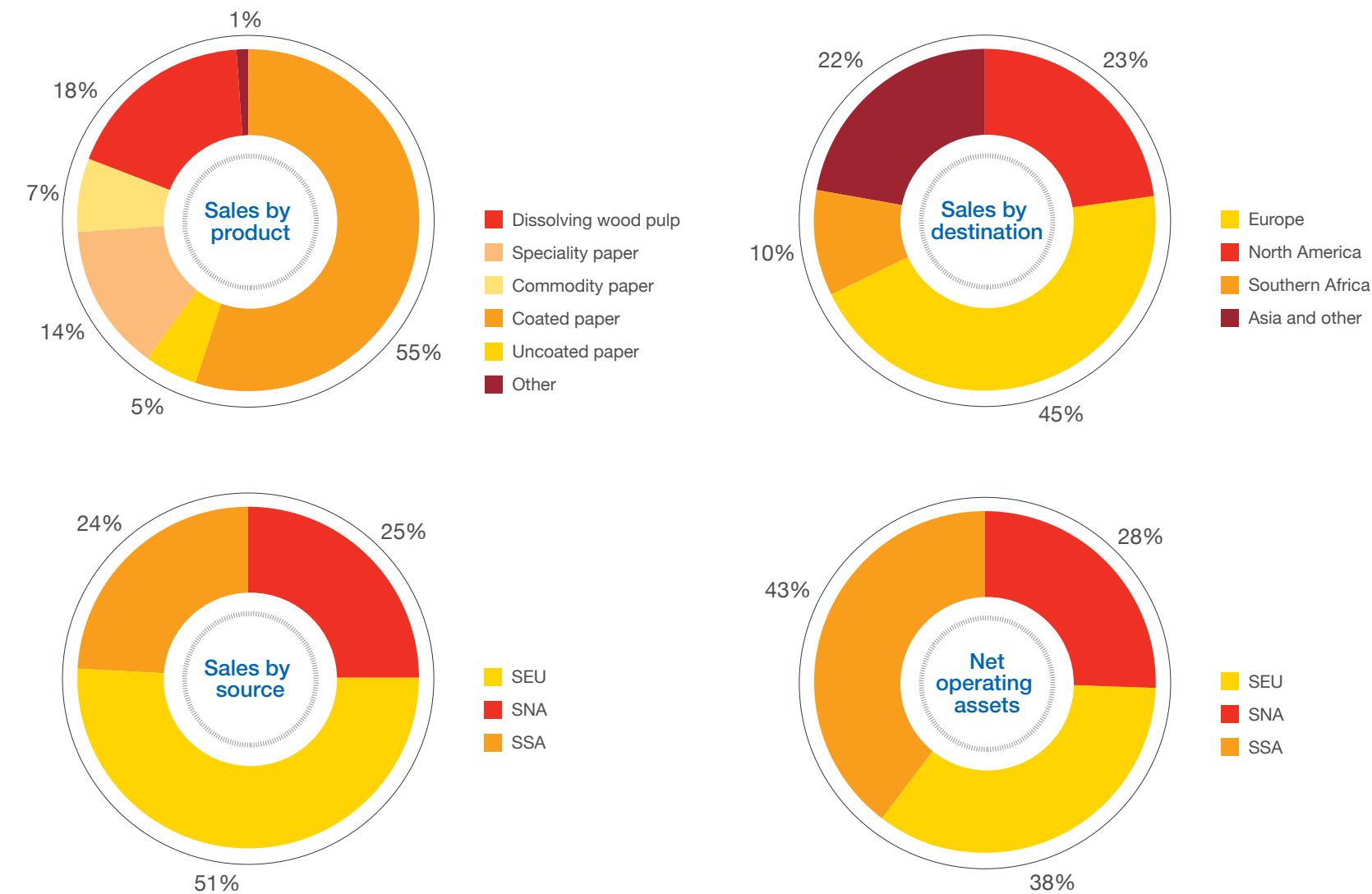
Our production operations across the globe are supported by **STRONG R&D** and a worldwide sales network.

US\$41.6 million
R&D investment in 2018.

Our approach to Prosperity

NOTE: The information on the following pages aims only to give a snapshot of our financial performance in 2018. A detailed review can be found in our

[Annual Integrated Report](#).



¹ From 2018, we are including production figures from Lomati Sawmill.

Our management approach

Our ability to deliver value creation for our shareholders by focusing on **Prosperity** through improved profit, strategic positioning and debt reduction, lies at the heart of our commitment to sustainability.

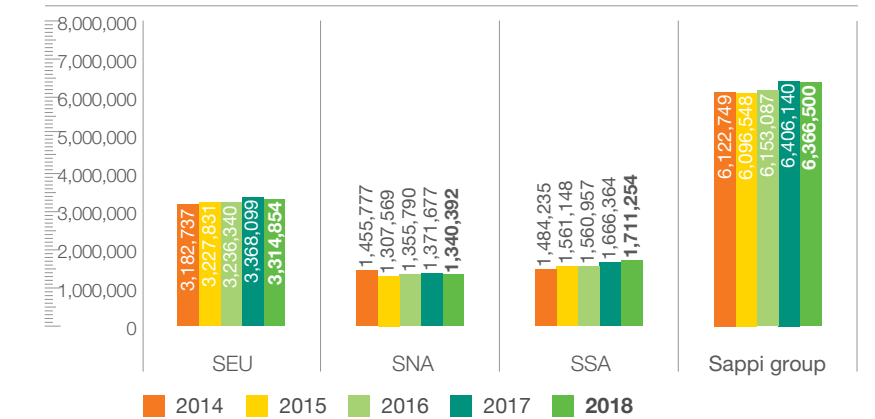
Our industry stands on the cusp of renewal as plantation- and forest-derived bioproducts emerge as a global game changer in a carbon constrained future. The success of our drive to adapt our business to these and other global megatrends that are reshaping the world around us was evident in our financial performance over the past year.

Through intentional evolution, we are growing Sappi into a profitable and cash-generative diversified woodfibre group based on the following:

- Selective capital spending in adjacent, growing and more profitable businesses, and
- Continuing to generate cash from our paper business to fund growth in:
 - Cellulose-based solutions
 - Specialities and packaging papers, and
 - Adjacent products.

Going forward, we will continue to accelerate value for shareholders through debt reduction, improved profit and strategic positioning.

Saleable production (adt/a)



Comment: Saleable production (adt/a)¹

In global terms, production was stable. In **SEU**, although most of the mills had a full order book in Q1 – Q3, production figures lowered due to a weaker market in Q4. There was a slight decrease in **SNA**, due to the PM1 rebuild and operational issues (boiler pH excursion) at Somerset Mill. In **SSA**, there was a slight increase, with paper production above business plan. However, dissolving wood pulp (DWP) production was negatively affected by new equipment installation issues associated with the DWP debottlenecking projects at Ngodwana and Saiccor Mills. These projects, due to be fully completed shortly after year-end, will add 50,000 tons of additional capacity at the two mills.

Our progress in 2018

Rationalise declining businesses

In 2018, DWP represented 52% of operating profit, specialities and packaging papers – 32% and printing and writing papers – 16%.

Recognising the declining demand for printing and writing papers, we manage our capacity to strengthen our leadership position in these markets, realising their strategic importance to the group and maximising their significant cash flow generation. **Actions we have taken in this regard include:**

- Progressively transitioning Lanaken Mill to coated woodfree paper production in line with the downturn in the coated mechanical paper market, and
- Reducing coated woodfree paper exposure at Maastricht, Ehingen and Somerset Mills.

Maintain a healthy balance sheet

We have made good progress in our aim of having a cleaner, stronger balance sheet in order to accelerate our growth in adjacent businesses. Currently our net debt is US\$1,568 million, which is a leverage ratio of 2.1 times our EBITDA—a level we are comfortable with.

Our success in bringing our debt levels to within range of the targeted leverage ratio of less than two times net debt to earnings before interest, tax, depreciation and amortisation (EBITDA) has enabled us to increase our investments in growth projects.

Our debt reduction validates our strategy in the past decade to refocus operations away from the dwindling printing and writing papers market to the higher margin and growing DWP and specialities and packaging papers markets. Our capital expenditure programme reflects the increased focus on these market sectors.

We remain committed to maintaining our leverage to below two times net debt to EBITDA. Our capital expenditure plans take into account this leverage cap, as well as our intention to pay a reliable dividend at a long-term average cover ratio of three times. We focus on capital projects that achieve our strategic objectives and, as a minimum, beat our cost of capital. Typically, however, expansionary projects should earn a return on capital employed of at least 12%.

Our total capital expenditure for the 2019 financial year is forecast at US\$590 million.

Our focus on having a cleaner, stronger balance sheet is helping to accelerate our growth in adjacent businesses. Significant developments in adjacent businesses included:

- After our hemicellulose sugar extraction demonstration plant, established in 2017 at Ngodwana Mill, exceeded all efficiency targets for cost, cycle time and yield, we are now further progressing the development of our biorefinery capacity with the construction of a demonstration plant to further scale up our *Xylex* technology.
- We established a 25 MW biomass energy unit at Ngodwana Mill, together with consortium partners KC Africa and African Rainbow Energy and Power under the South African government's Renewable Energy Independent Power Producer Programme (REIPPP). We have a 30% stake in the facility, which is expected to contribute to the national grid from July 2020.

Achieve cost advantages

We work to lower fixed and variable costs, increase cost efficiencies and invest for cost advantages. Cost advantages are also achieved through our ongoing continuous improvement programmes.

Building on the global procurement and efficiency savings drive launched in 2016 whereby we achieved US\$57 million more in savings than target three years ahead of schedule, in 2018 we achieved an additional US\$81 million in group efficiency and procurement initiatives.

We continue to debottleneck pulp capacity in **SEU** and expect our €30 million upgrade to Gratkorn Mill's PM9 and our expansion at Saiccor Mill to lead to lower variable costs.



Our progress in 2018 continued

Accelerate
growth in
high margin
products

Dissolving wood pulp

Demand for dissolving wood pulp (DWP) continued to show steady growth. Both cotton, which competes with viscose, and cotton linter pulp, an alternative feedstock to the viscose staple fibre (VSF)

industry, experienced either diminishing or, at most, stable supply over the past few years. This has facilitated increased demand for VSF and consequently DWP. Our VSF customers have increased demand during this time, and have additional expansion plans over the next five years or more.

In 2018, we made large-scale capital investments in our DWP business. We completed debottlenecking projects at Ngodwana and Saiccor Mills in Southern Africa, adding approximately 50,000 tons of capacity towards the end of the year. A further debottlenecking project planned for Cloquet Mill in 2019 will increase our capacity by 30,000 tons. During 2018, we also announced an expansion plan to increase our capacity at Saiccor Mill by 110,000 tons to meet strong projected demand growth.

Environmental approval for this expansion project was granted by the relevant authorities at the end of 2018, and construction has now commenced.

Specialities and packaging papers

Part of our 2020Vision goals are to expand and grow our specialities and packaging papers segment to 25% of group EBITDA. Against this backdrop, in 2018, Sappi acquired the Cham Paper Group (CPG), a Swiss-based speciality paper producer, and completed two conversion projects with the aim of growing into these adjacent markets that exhibit good demand growth and higher average margins.

The acquisition of CPG supports our diversification strategy by adding three new paper grades under the Sappi portfolio which broadens our offering to customers and earning greater share of wallet with valued brand owners. These new products increase our relevance to more customers, enabling us to bundle both volumes and customer service, providing economies of scale and synergies.

Demand for Sappi's wide range of products continues to grow in the specialities and packaging papers market, reflecting the increasing needs from customers for more sustainable and environmentally friendly packaging solutions.

In 2018, 19% of Sappi's sales were specialities and packaging papers, up from 16% last year.

Two conversion projects and a machine upgrade were completed this year with the aim of matching supply and demand in the printing and writing papers market, as well as in the specialities and packaging papers market:

- We converted the paper machine at Maastricht Mill to ramp up production over three years to approximately 150,000 tons of folding boxboard, with the balance of the capacity on the machine dedicated to coated woodfree paper.
- A machine upgrade at Ehingen Mill has enabled us to expand our white top liner offering from the mill.
- We converted the PM1 at Somerset Mill to ramp up paperboard volumes over three years to capacity of 350,000 tons. As orders for paperboard grow, we will continue to fill the machine with legacy coated woodfree paper as we match supply demand in both grades. Taken together, over three years, our plans call for an additional 560,000 tons of paperboard, folding boxboard, white top liner and a number of other speciality papers while we reduce our overall exposure to the coated woodfree paper market by approximately 350,000 tons.

About our Cham Paper Group (CPG) acquisition

In 2018, we acquired two mills in Italy and the digital imaging business based in Switzerland, from CPG.

Carmignano Mill in Italy is a non-integrated paper mill with two paper machines with annual capacity of 100,000 tons of paper. Paper grades include C1S FlexPack, C1S label papers, wet glue and self-adhesive applications, as well as base paper for metallisation.

Condino Mill in Italy is a non-integrated paper mill, with one paper machine with annual capacity of 60,000 tons of paper. Paper grades include glassine (silicone base paper) and supercalendered, uncoated flexible packaging papers.

The digital imaging business is located in Cham (Switzerland), where base paper from the Condino and Carmignano Mills are converted to produce 12,000 tons of inkjet papers.

Our progress in 2018 continued

Introducing Verve

Previously, DWP sold by Sappi was unbranded and industry generic names were used as product names. This did not reflect the specific benefits differentiating Sappi's DWP.

Recognising that brands, including industrial business-to-business brands carry tremendous value, not just to customers but to the whole value chain, in 2018, we launched *Verve* as the umbrella brand for our DWP. This has created a very specific identity within the DWP market.

Verve gives recognition to our enviable reputation in the DWP industry and the value we offer this market. *Verve* represents our commitment to the entire value chain from brand owners through to the cellulosic fibre

producers—our commitment to producing a natural fibre sourced from sustainably managed forests.

The majority of DWP is consumed in the viscose industry who convert it through the value chain to yarn and ultimately textiles providing naturally soft, breathable fabrics which is smooth to the touch, hold colour well and drape beautifully. DWP cellulosic fibre is also used for a myriad of household, industrial and pharmaceutical applications including tablets, personal hygiene, cellophane, washing sponges etc.

As a fibre produced from natural and renewable resources, *Verve* provides the value chain with a sustainable choice not only within the broader textile sphere which includes cotton and polyester, but as a preferred sustainable choice within the DWP market.



Our investment case

Market leader

- Leading European coated paper producer.
- Leading North American coated woodfree paper producer.
- Leading South African printing and writing paper and packaging paper producer.

• #2 global producer of coated woodfree paper.

- #1 global producer of DWP (approximately 16% of global market).

Strongly positioned in growing markets

Dissolving wood pulp

- Research by Hawkins Wright shows the five-year outlook for dissolving wood pulp (DWP) expanding at an average annual growth rate of 4.9%.
- DWP's share of the textiles market (Sappi's primary DWP market) is expected to grow further:
 - Production of cotton is forecast to remain stagnant or shrink
 - Cellulosic fibre properties are superior to cotton and polyester for many textile applications, and
 - Certain moisture management properties of cellulose fibres cannot be substituted by oil-based synthetic fibres, enhancing opportunity for cellulose.
- Our viscose staple fibre (VSF) customers have additional expansion plans over the next five years or more.
- The DWP market offers diversification opportunities.
- We have debottlenecked volumes at Ngodwana and Saiccor Mills and have received the go-ahead from environmental authorities to proceed with a major expansion project at Saiccor Mill (ZAR7.7 billion).

Specialities and packaging papers

- Cham Paper Group acquisition has added 160,000 tons of speciality paper to our capacity, supporting our diversification strategy and 2020Vision to grow in higher margin growth segments.

- The acquisition of Rockwell Solutions in 2017 has enabled us to accelerate the development of coating solutions.
- Environmental concerns spurring legislation incentivising the use of more paper based packaging, particularly in Europe.

Printing and writing papers

- Paper business is highly cash generative, providing the funds for future growth into cellulose based solutions, speciality packaging papers and adjacent products.

Adjacent markets

- Sappi Biotech business unit, established in 2016, continues successfully to drive innovation and commercialisation in terms of biomaterials and biochemicals:
 - Further scaling up our Xylex technology
 - Lignin-based products increasing the value we derive from trees
 - Valida-branded nanocellulose holds great potential in helping the world shift to materials that do not require fossil based fuels as feedstock
 - Making progress in the marketing and sales of cellulose fibre plastics composites, and
 - Biomass energy and fuel rod projects at Ngodwana Mill.

Geographic diversification and significant assets

- Customers in 150 countries around the world.
- Our global presence allows us take advantage of opportunities where markets are strong.

Extensive fibre base in South Africa

- Low-cost, fast-growing woodfibre base from sustainably managed plantations.
- Forestry R&D programmes target suitability of species for changing climate conditions and end-use in terms of growth and fibre properties.
- Carbon sequestration by our plantations and forests from which we source woodfibre offers a potential buffer against carbon taxes.

Innovation

- History of industry 'firsts'.
- Technology centres around the world.
- Development of low-cost nanocellulose process whereby chemicals can be easily recycled and reused without generating large quantities of waste water.
- Growing our nanocellulose competency at three of our global R&D facilities.
- Collaboration with Felix Schoeller group.
- Acquisition of Rockwell Solutions.

Demonstrable track record of debt reduction

Net debt has nearly halved from US\$2.6 billion in 2009 to US\$1.6 billion, and is in line with our target of two times net debt to EBITDA.

Strong liquidity position

Liquidity comprises cash on hand of US\$363 million and US\$680 million from unutilised revolving credit facilities in South Africa and Europe.

Growing dividends

Dividends have increased by an average of 24.3% per annum over the last three years.

See [Key material issues](#) – Our business model.

²The outlook for dissolving wood pulp: demand, supply, costs and prices, September 2018.

Research and development

Underpinning our strategy with research and development (R&D)

We spent US\$41.6 million on R&D in 2018. Technology is a cornerstone of our business and is supported by technology centres in each region covering each section of the value chain:

Sappi Europe

Maastricht Centre of Excellence

- Papermaking processes

Sappi North America

Westbrook Centre of Excellence

- Coated woodfree paper and speciality casting and release paper development

Sappi Southern Africa

Forestry Research Centre (Tweedie)

- Tree breeding
- Propagation techniques
- Silviculture

Sappi Technology Centre (Pretoria)

- Fibre processing
- Paper science
- Chemical sciences
- Environmental

Sappi Dissolving Wood Pulp Centre of Excellence (Umkomaas)

- Applications testing
- Fundamental cellulose properties

The annual global *Technical Innovation Awards* promote a culture of internal innovation.

Our value add to daily life

With a growing global population and increased per capita wealth, consumers are becoming increasingly conscious of resource scarcity and the need for efficiency. In the context of greater consumer awareness, societal demands for sustainable products will only grow.

Our products add value to people's lives every day and are used in the following ways:

- Our *Verve* DWP is used worldwide by converters to create viscose fibre for fashionable clothing and textiles, pharmaceutical products as well as a wide range of consumer and household products.
- Quality specialities and packaging papers are used in the manufacture of such products as soup sachets, luxury carry bags, cosmetic and confectionery packaging, boxes for agricultural products for export, tissue wadding for household tissue products and casting and release papers used by suppliers to the fashion, textiles, automobile and household industries.
- Our market-leading range of printing and writing paper products are used by printers in the production of books, brochures, magazines, catalogues, direct mail and many other print applications.

We contribute to society through payments to governments, suppliers and employees, as well as returns to shareholders.

We facilitate social and economic wellbeing by using labour drawn from local communities, and the services of small- and medium enterprises situated in the areas around plantations and production facilities. We also have a best practice training programme and, through our corporate social investment programme, together with our enterprise development programme in Southern Africa, invest in the socio-economic development of the communities in which our workers live.



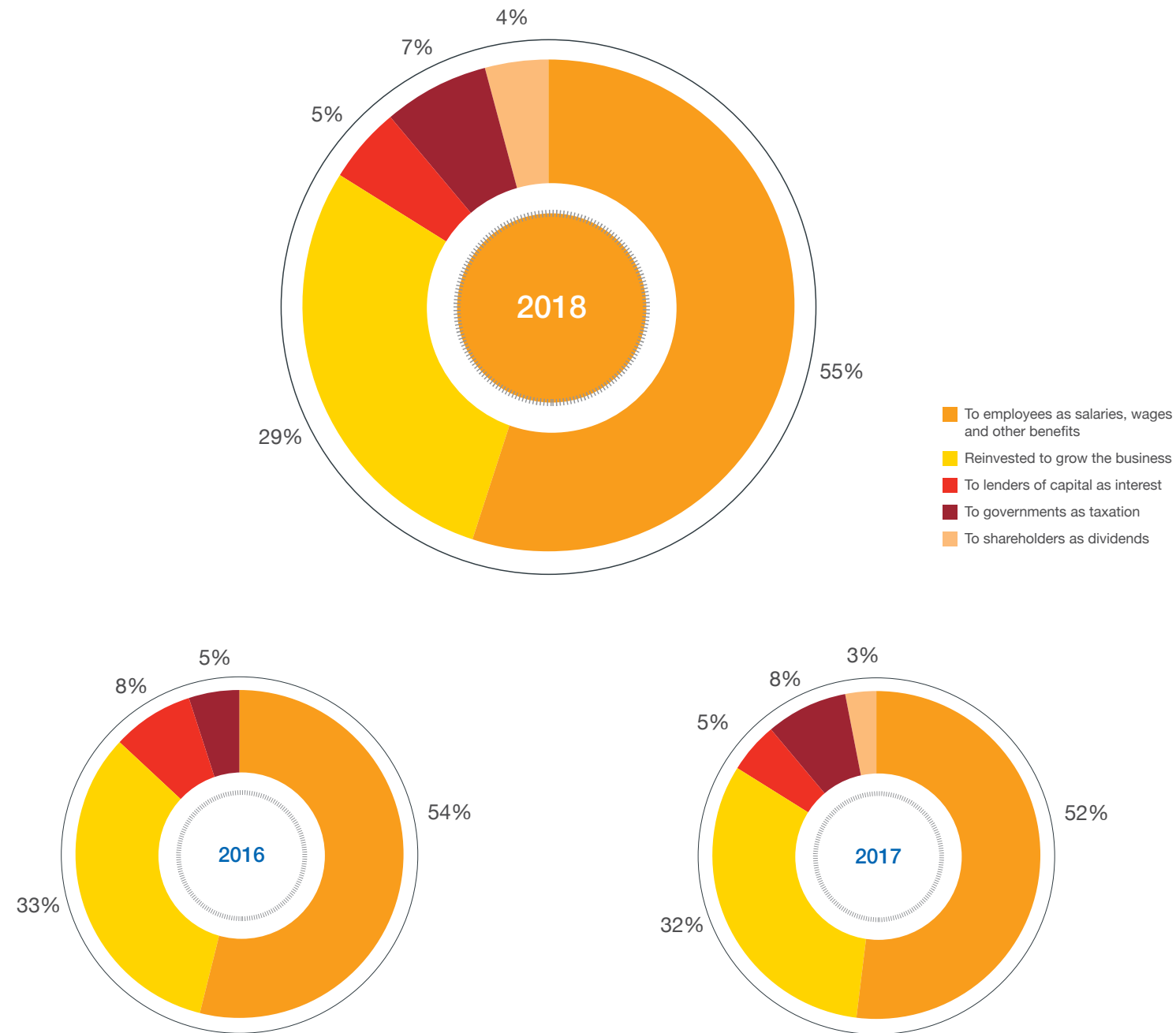
The indirect economic benefits of our operations impact on sectors including technical, construction and engineering services which are outsourced to a wide variety of contractors. The chemicals industry, in particular, is one of our major suppliers. In addition, the provision of services including the collection of waste paper for the industry and the outsourcing of non-core activities such as maintenance, medical services, transportation, cleaning and security creates opportunities for small-, medium- and micro enterprises.

In 2018, we added value to the *Prosperity* of the regions where we operate:

- By employing 12,645 employees, including 624 contractors globally. In addition, just over 10,300 people are employed by contractors working for Sappi Forests (SSA).
- By creating millions of dollars' worth of goods each year: In 2018 sales per region were:
 - **SEU**: €2,494 million (2017: €2,319 million)
 - **SNA**: US\$1,432 million (2017: US\$1,360 million)
 - **SSA**: ZAR18,325 million (2017: ZAR17,489 million).
- By contributing to domestic growth and the balance of payments in each region where we operate by exporting products to over 150 countries around the world.



Value added over the last three years



¹ sustainability.cepi.org/wp-content/uploads/2018/10/CEPI_Sustainability_report_full_update.pdf
² www.afandpa.org/media/news/2018/07/24/u.s.-paper-and-wood-products-manufacturers-report-sustainability-progress
³ www.afandpa.org/docs/default-source/tpgrs/2018-summer-update/jobs-and-economic-impact-july-2018.pdf

Adding value in each region where we operate

Our products play an integral part in the everyday lives of people across the country and around the world. We play an important role in society, offering efficiently manufactured, fully recyclable products, made from renewable raw materials. The forestry industry is one of the strategic economic sectors in each region where we operate, and makes a significant contribution to economic growth and job creation—particularly in rural areas, where employment and income generation opportunities are more limited than in cities.

Europe

In 2017, the pulp and paper industry provided 177,000 direct jobs in Europe directly—63% of which were in rural areas. Annual turnover is €82 billion annually and the industry yields 2x higher return on investment than average manufacturing.¹

North America

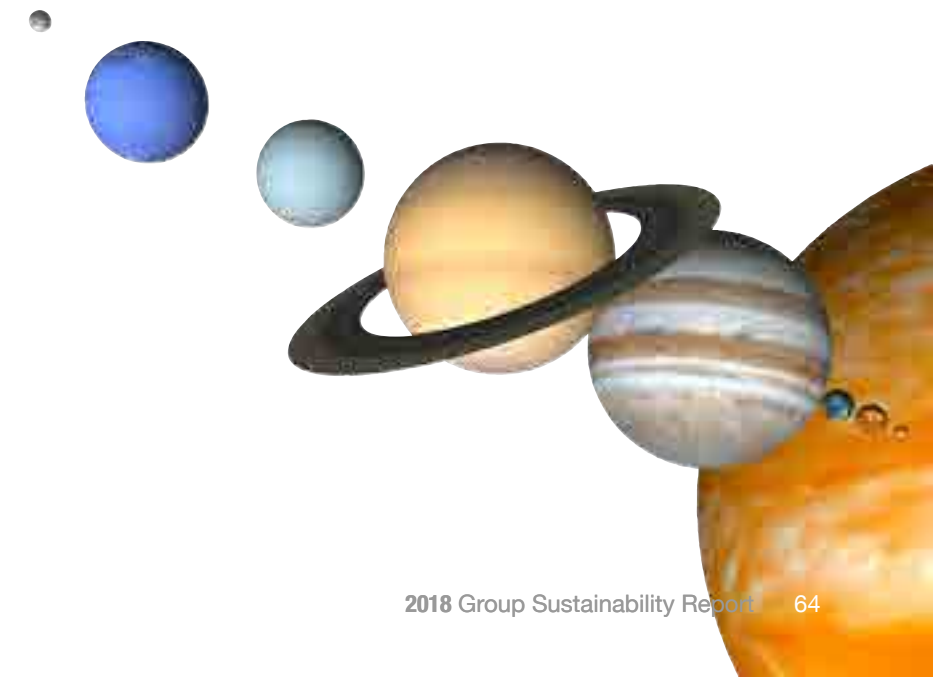
The forest products industry is one of the largest manufacturing segments the United States of America (USA), accounting for approximately four percent of the total USA manufacturing gross domestic product (GDP), manufacturing over US\$200 billion in products annually and employing more than 900,000 people. The industry meets a payroll of approximately US\$50 billion annually and is among the top 10 manufacturing sector employers in 45 states.²

The industry is a major contributor to the national economy, shipping goods that are worth more than US\$200 billion annually. The forest products industry represents nearly 4% of USA manufacturing GDP. For every 100 jobs in the industry, the paper and allied products industry supports 325 jobs in supplier industries and local communities, while the wood products industry supports an additional 225 jobs outside the industry.³

Southern Africa

According to Forestry South Africa, the forest products sector in South Africa employs approximately 158,400 people, with 60,200 people directly employed and 98,200 in indirect jobs. Overall, forestry provides livelihood support to 692,000 people.

The forest sector (forestry and forest products) contributes about 1% to national GDP. In terms of regional GDP, forestry in Mpumalanga contributes 5.45% and 2.90% in KwaZulu-Natal. Total investment in 2016 stood at ZAR42,9 billion.



revitalise

People

Helping people reach their full potential.



People 2018 – at a glance



Our people underpin our business success and the communities in which our operations are situated help to drive that success.



10,207



2,438

12,645 people work at Sappi including **624 contractors**.

Our forestry operations provide employment for approximately **10,000 people**.



Globally, we spent an average per employee of **US\$500** on training and development.



We **monitor training** in terms of **gender** to ensure that female employees are being provided with the same development opportunities as their male colleagues.



We **track training spend per employee category** to ensure that training is directed where most appropriate and where **skills gaps** have been identified.

We continued to unlock the potential of our people with world-class training programmes.



We value **diversity**, believing that it enhances our ability to serve global markets.

We promote **shared value**, spending **US\$5.6 million** on corporate citizenship programmes.



Leadership Academies in each region develop future lead team successors

We recognise and reward achievement through initiatives like the *Technical Innovation Awards* and *CEO Award for Excellence* which recognises outstanding leadership behaviour and contributions to our business.

sappi technical innovation awards

We produce communication materials in many languages



Chinese (Simplified)



Dutch



English (South Africa)



English (United Kingdom)



English (United States of America)



Finnish



German



SeSotho



Siswati



IsiZulu

Our management approach

Our 2020Vision involves focusing on technological innovation that will help us unlock and commercialise the potential of biochemical extracts, microfibrils, nanocellulose fibres and cellulose nanocrystals found in wood.

In order to make this shift successfully, our priority is a diverse, engaged workforce who understand the world of tomorrow so that we position ourselves to take advantage of future trends in order to grow and prosper. Accordingly, we continue to invest in our people so that we are able to create and seize opportunities.

The cornerstone of this approach is making resources available to enable our people to grow intellectually and bring new ideas to fruition. Our aim is to create an environment where we can live up to our values of doing business with integrity and courage; making smart decisions which we execute with speed. Our values are underpinned by an unrelenting focus on and commitment to safety.

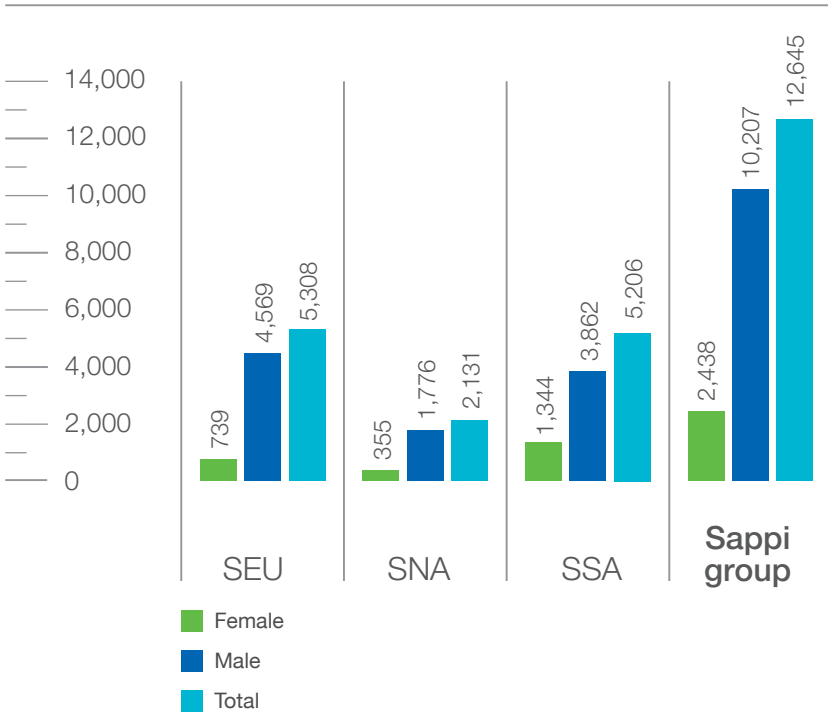
Diversity – a key driver



The total number of employees has stayed fairly constant over the last three years (2017: 12,778; 2016: 12,000; 2015: 12,800). A diverse workplace generates different skill sets and backgrounds, as well as unique ways of doing things and divergent ways of thinking innovatively. These in turn enhance our ability to service diverse, rapidly evolving global markets. We celebrate our differences in human capital and strive to create a workplace free from discrimination and harassment; acknowledging and accepting differences among our people with respect to age, class, ethnicity, gender, physical ability, race, sexual orientation and spiritual practice. We view diversity as a key driver that enhances our competitiveness and sustainability.

Profiling our employee base

Gender split per region in numbers



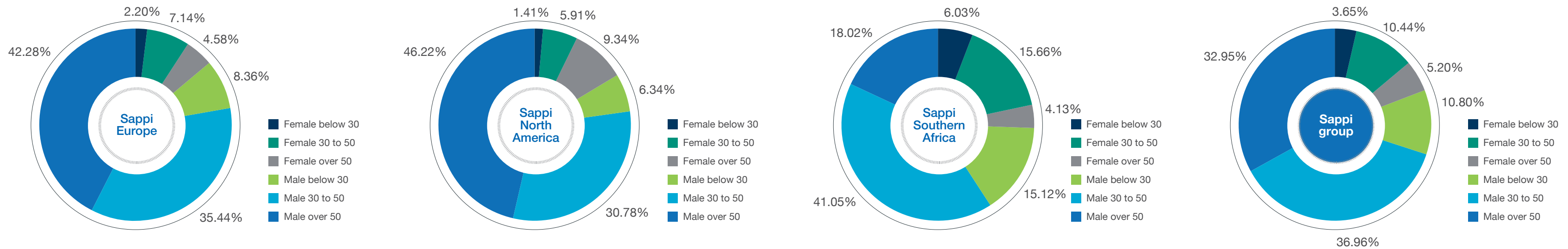
Language diversity

Although English is the primary language used throughout the group, key communication materials are disseminated in the prevailing languages of each region.

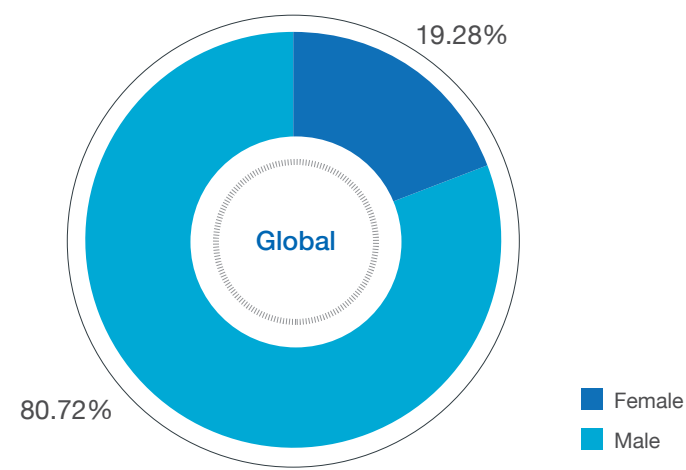


Profiling our employee base continued

Total workforce by age and gender



Total workforce by gender



Total workforce by minority group

| All employees | | | | |
|---------------|--------------|---------------|----------------|--------|
| | Not minority | Not disclosed | Minority group | Total |
| SEU | 60 | 5,248 | – | 5,308 |
| SNA | 2,041 | 39 | 51 | 2,131 |
| SSA | 1,002 | – | 4,204 | 5,206 |
| Sappi group | 3,103 | 5,287 | 4,255 | 12,645 |

Profiling our employee base continued

Total workforce by age group and category

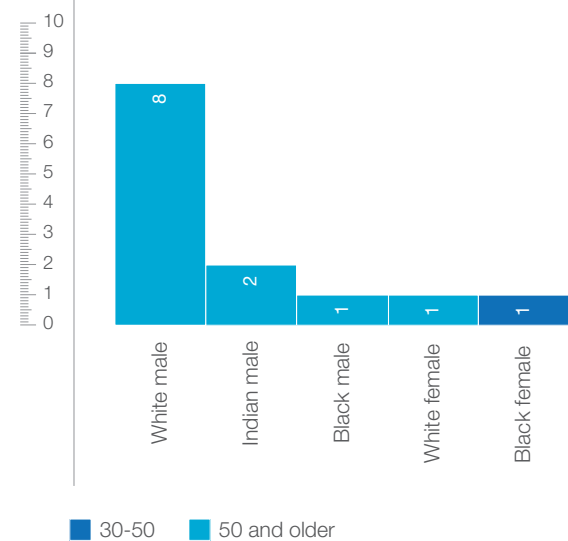
| Below 30 | | | | | | |
|--------------------|------------|------------|--------------|---|------------------------------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Total |
| SEU | 454 | | 3 | 94 | 10 | 561 |
| SNA | 100 | | 6 | 51 | 8 | 165 |
| SSA | 438 | 233 | 220 | 186 | 24 | 1,101 |
| Sappi group | 992 | 233 | 229 | 331 | 42 | 1,827 |

| Ages 30-50 | | | | | | | | |
|--------------------|--------------|------------|--------------|---|------------------------------------|-------------------|----------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Senior management | Top management | Total |
| SEU | 1,735 | | 4 | 206 | 292 | 20 | 3 | 2,260 |
| SNA | 501 | | 10 | 118 | 142 | 11 | | 782 |
| SSA | 131 | 481 | 883 | 1,104 | 317 | 34 | 2 | 2,952 |
| Sappi group | 2,367 | 481 | 897 | 1,428 | 751 | 65 | 5 | 5,994 |

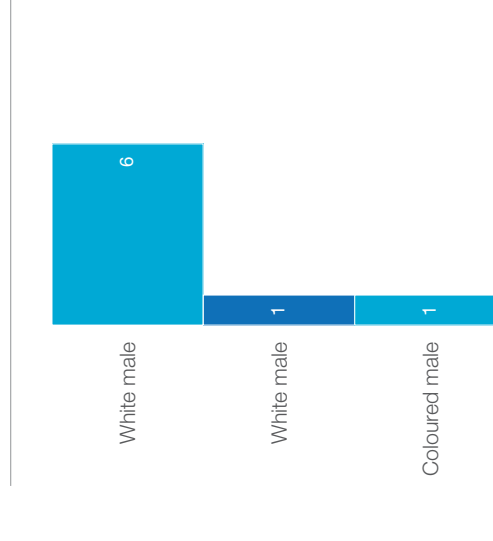
| Older than 50 | | | | | | | | |
|--------------------|--------------|------------|--------------|---|------------------------------------|-------------------|----------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Senior management | Top management | Total |
| SEU | 2,103 | | 2 | 86 | 241 | 48 | 7 | 2,487 |
| SNA | 766 | | 30 | 172 | 173 | 36 | 7 | 1,184 |
| SSA | 38 | 132 | 327 | 446 | 176 | 26 | 8 | 1,153 |
| Sappi group | 2,907 | 132 | 359 | 704 | 590 | 110 | 22 | 4,824 |

Gender and split at executive level

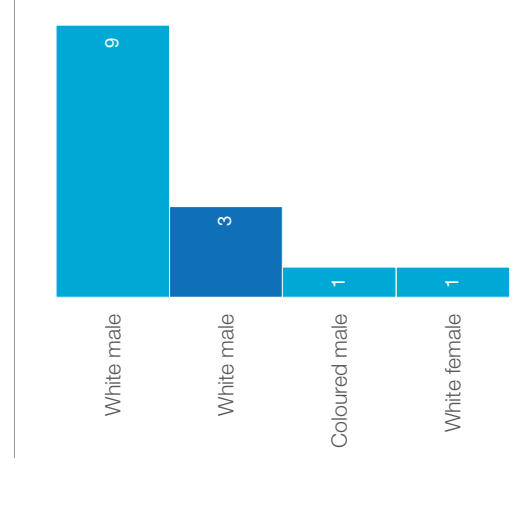
Sappi Limited Board (executive and non-executive) by age, gender and race



Sappi Limited Executive Committee by age, gender and race



Sappi Limited Executive Committee and Management Committee by age, gender and race



Transformation – a key requirement for sustainable growth

We view broad-based black economic empowerment (BBBEE) as a key requirement for sustainable growth and social development in South Africa. We have long been committed to participating in the country’s transformation and development through our South African forestry and manufacturing operations.

In South Africa, where employment equity falls under broad-based black economic empowerment (BBBEE) legislation, our employee diversity profile is monitored quarterly by the South African lead team and discussed monthly at every business unit’s Equity Forum. Each human resources manager and hiring manager is required to recruit in accordance with the employment equity plan in place at their site.

We currently hold a level three BBBEE contributor rating. Management control and employment equity continue to be a focus for the business with targets being set for management linked to the performance bonus scheme.

In South Africa our diversity awareness roll-out has now been completed at most business units. In addition, an online diversity awareness training module is available on the Learning Management System (LMS) and all managers were assigned to complete this training.



| SSA's BBBEE performance against targets | | |
|---|---------------------------|---------------------|
| Element | Target (+bonus points) | Audited achievement |
| Ownership | 25 + 12 | 26.18 |
| Management control | 19 | 10.56 |
| Management level | 9 | 6.48 |
| Employment equity level | 10 | 4.08 |
| Skills development | 20+5 | 12.51 |
| Supplier and enterprise development | 43+6 | 34.79 |
| Preferential procurement | 23+2 | 16.18 |
| Supplier development | 10+2 | 6.68 |
| Enterprise development | 10+2 | 11.93 |
| Socio-economic development | 5+3 | 7.63 |
| Total | 112+6 | 91.67 |
| Contributor level | | 3 |

Being a great place to work



Providing the right employee experience and being a great place to work are critical to differentiating us from other employers in a competitive market and enables us to attract and retain talent.

Great rewards

Our compensation programmes are designed to achieve our goals of attracting, motivating and retaining employees who can drive the achievement of our 2020Vision.

The primary components of pay include base salary, benefits eg medical and retirement, annual incentive awards and long-term incentives. Compensation levels are set to reflect competitive market practices and internal equity as well as company and individual performance.

Great culture

We have a strong talent management culture and mindset. One aspect of this is our recognition programmes which play an important role in motivating employees and establishing a high level of connection to the business.

At a global level, we present two annual awards:

- The **Technical Innovation Awards**, and
- The **CEO Award for Excellence** which recognises outstanding leadership behaviour and contributions to our business.

Regionally, we present the following awards:

- **SEU**: The annual **Coryphaena Award** which recognises truly exceptional achievements
- **SNA**: The quarterly **Risk Taking and Ingenuity Awards**
- **SSA**: The **Excellence in Achievement Awards**, and
- **Sappi Trading**: The **SMART Awards**.



The **Sappi Performance Engine & i (SPE&i)** initiative in SEU is aimed at putting our people right at the centre of our ongoing migration towards becoming a leader in continuous improvement. It is about the participation of all employees every day, working as teams to see how to best reach safety, quality, delivery and efficiency standards on the shop floor. Our SPE&i vision brings our ambition to the point: “Empowered by the Sappi Performance Engine, all of us together will be inspired to learn, trust, respect, deliver and win. We are driven by truth. One Sappi!”

Great company

A great company begins with a set of ethical values and a way of doing business to which all employees can relate. Employee engagement is another important foundation.

Ethics

In 2016, we launched a revised **Code of Ethics** (Code) which incorporates the new Sappi values—*At Sappi we do business with integrity and courage; making smart decisions which we execute with speed. Our values are underpinned by an unrelenting focus on and commitment to safety.* The Code includes specific policies that guide employee behaviour and incorporates practical examples of possible scenarios which employees might encounter. Awareness and training

programmes are ongoing in each region (see [Key material issues](#) – Ethical behaviour and corruption).

We take action against employees who do not abide by the spirit and provisions of the Code. Hotlines in each region facilitate reporting of breaches and we report on hotlines and ethics reports by category and outcomes in our

[Annual Integrated Report](#).



Being a great place to work continued

Employee engagement

Clear evidence continues to link employee engagement to an organisation's bottom line. We recognise that ascertaining levels of employee engagement is important in achieving our goal of building a workforce that is engaged, enabled and energised. Accordingly, we continue to measure levels of employee engagement every second year. In September 2017, we conducted an **Employee Engagement Survey**, aimed at measuring the following:

- Changes in employee opinions and perceptions of Sappi as a place to work since the baseline survey in 2015
- The evolution of *Sustainable engagement* at Sappi globally in order to understand what drives this important aspect of employee engagement among our employees, and
- Our *Employee Value Proposition* to understand what motivates and drives our employees to work within Sappi—the first time metrics for this measurement were included. Because of its strong correlation to company performance, *Sustainable engagement* is used to focus analysis of the results on the most strategic areas to drive future success. We focused on *Sustainable engagement*, which measures employee commitment and motivation, but also enablement and wellbeing

While we included other categories for SEU, SSA and Sappi Trading, the 10 core categories contained in the survey were:

- Development and empowerment
- Ethics and values
- Image and customer focus
- Leadership and direction
- Operational efficiency
- Safety and wellbeing
- Supervision

- Sustainable engagement
- Talent and recognition, and
- Teamwork and communication.

We compared the results to the following:

- Industry benchmarks—global manufacturing norm
- Best in class benchmarks—high performing companies' norm, and
- Cultural benchmarks—regional norm for all supplemental categories.

In terms of the participation rate, the global participation rate was 85% – 15% up from 73% in 2015. The global manufacturing norm participation rate is 83% with Sappi exceeding this and the response rate for high performing companies is 87%.

There was an overall improvement in all categories that were measured in the survey when compared to the 2015 results. In addition, Sappi globally outperformed the global manufacturing norm in all but four categories measured in the survey. The most improvements were seen in [SEU](#) and [SNA](#).

Globally the most improved scores were for:

- **Leadership and direction:** 7% improvement on 2015 and 5% above the global manufacturing norm
- **Operational efficiency:** 9% improvement on 2015 and 5% above the global manufacturing norm, and
- **Talent and recognition:** 7% improvement but the global manufacturing norm indicates that we still need to do some work in this area.

We will continue to focus on *Talent and recognition* going forward. Other areas that have been identified as requiring focus are:

- **Image and customer focus:** 1% overall improvement but still 2% below the global manufacturing norm, and
- **Safety and wellbeing:** 1% improvement but still 1% below the global manufacturing norm.

The importance of 'Sustainable engagement'

The most important dimension that is measured in the survey is *Sustainable engagement* because it gives us an indication as to how happy people are at Sappi, whether they intend to stay, if they are motivated and if they are energised and enable to do the work that they do.



The results in terms of *Sustainable engagement* indicate the following:

- **Even stronger 'traditional' engagement than in 2015:** 88% are willing to go the extra mile; strong rational buy-in and emotional attachment
- **Enablement:** 80% say they have the tools and resources to do their jobs but only 46% say they are not confronted with obstacles—more than half either agree they are confronted with obstacles or are neutral, and
- **Energy:** Strong results, and significant improvements since 2015.

Employee engagement

is one of our global 2020 sustainability goals.

See [Targets](#).

Being a great place to work continued

Great jobs and great leaders

A key aspect of great jobs is creating opportunities and make resources available to enable our people to grow intellectually and bring new ideas to fruition. Training and development programmes are reviewed on an ongoing basis to ensure they remain relevant to the changing needs of our people, the business environment and Sappi.

Our approach to training is decentralised, with each mill, function, business unit and region taking responsibility for training.

In our ongoing drive to build a learning culture, training is split between mandatory and skills training. On average for the group, the split between mandatory or compliance training and skills training is as follows (in terms of time spent) is 69% on skills development and 31% on compliance training. (Respective split in 2016: 76% and 24%; 2017: 62% and 38%).

While we invest in formal training and development programmes, we realise that potential is not only developed through training courses which develop competencies and skills. We provide our employees with opportunities to gain new experiences and through individual development plans which are based on creating the right conditions and circumstances which allow people to develop their careers.

Training initiatives

The focus of training and development at Sappi is to invest in current and future talent in order to encourage learning and growth, establishing a strong succession pipeline, increase change capacity and continuously improve business performance. We achieve this by growing the competencies of our people in three areas of competency: leadership, behavioural and technical. Training initiatives in each region aligned with this goal were as follows:

Sappi Europe

The focus in 2018 was on driving the learning strategy through the following pillars:

- Implementing the 70:20:10 holistic development approach to support effective and continuous learning and ensuring personal growth. (70% of learning takes place on the job, 20% of learning is based on interaction with others and 10% is classroom learning.)
- Leveraging the performance management process to facilitate the definition and creation of individual development plans.
- Using line managers as coaches for people's growth and success, and
- Helping leaders succeed using the global leadership framework as a basis.

In addition, SEU continues to implement a number of key development initiatives, including:

- Incorporating employees from Rockwell Solutions and the newly acquired mills in Italy into the **Sappi Leadership Academy** for 2019
- Establishing a **Sappi Business Academy** in 2019 which will update employees from the new acquisitions on Sappi's businesses, key people and leadership processes, and
- Train and develop approximately 200 young apprentices mainly at the four German-speaking mills on a three- to four-year vocational training programme. This is done to build a technical talent pool that will replace staff going on retirement.

The **Sappi Leadership Academy** develops
leadership skills
and **capabilities**
throughout the Sappi group.



Being a great place to work continued

Sappi North America

In this region:

- All salaried employees were required to complete an online intellectual property compliance training module by the end of 2018.
- All sales, marketing and sales employees from all four business units completed comprehensive live legal compliance and **Code of Ethics** training, which included topics such as anti-trust, corruption, fraud, intellectual property protection, insider trading and governance.
- We hired over 58 co-ops and interns during 2018 in functions including manufacturing, research and development, marketing, finance and human resources.
- Somerset Mill significantly enhanced its use of the Convergence learning management system (designed specifically for the needs of industrial and manufacturing facilities) beyond the training for the new PM1 rebuild.
- Cloquet Mill introduced a new supervisor training programme with modules including self-awareness and leadership.

Sappi Southern Africa

The key focus in 2018 was on:

- Deployment of further online training resources with a focus on sourcing more specialised training. During 2018 the first engineering training was sourced from the world leader in plant reliability training, **Mobius Institute**. The full suite of plant reliability online courses is available to engineering teams across SSA. Employees have so far completed 166 modules and a further 85 are in progress.
- The utilisation of the online video-based training through the **Udemy** platform continues to be high. The overall use of this category of training was 9,647 hours of online content, equating to 1,205 people days; 1,774 employees used this channel to learn.
- The **Sappi Manager in Training programme (MiT)** is in its second year. The programme has received formal accreditation as a **Level 4 Diploma in Leadership and Management** from the London-based Institute of Leadership and Management, part of the City and Guilds group. From the 2017 intake, 24 participants are due to submit their portfolios of evidence in order to receive the qualification. The 2018 group has 86 participants.
- The priority for young talent development programmes for 2018 - 2019 is the year-long **Process Trainees and Production Interns Programme**. It is designed to strengthen the pipeline of production-ready colleagues. There are 47 trainees in these two programmes at present.

- The two technical training facilities, branded **Sappi Skills Centres** at Ngodwana and Saiccor Mills are fully operational. Basic handyman training is underway and the first intake for an apprentice bridging programme started in September 2018. The first trade tests for the mechanical fitter trade were successfully undertaken at the Ngodwana Skills Centre. Further work is underway at the Saiccor Skills Centre to expand the artisan training offering and the construction of a process plan simulator has commenced.

Sappi Skills Centres at Ngodwana and Saiccor Mills

We established two technical training facilities using our existing infrastructure at Ngodwana and Saiccor Mills in May 2017. The centres cater for basic handyman training for local unemployed youth with a view of enabling them to create micro enterprises. In addition, the centres are providing high-quality specialised technical training to mill employees. The first handyman trainees joined in October as a pilot and the centres became fully operational in January 2018.



Sappi Trading

The following training courses and workshops were arranged for and attended by employees in different regions:

- Mastery and advanced mastery sales training were attended by employees in Hong Kong, Australia, Singapore and Latin American countries.
- Employees in Hong Kong, Australia, and Shanghai participated in a global board collaboration workshop.
- Employees from Hong Kong, México and Australia attended legal and paper training, and a mill tour at Somerset Mill.

The new **Learning Management System** will be rolled out across all Sappi Trading regional offices in 2019.

We track spend per category to ensure that training is directed where most appropriate and where skills gaps have been identified. We also monitor training in terms of gender to ensure that female employees are being provided with the same development opportunities as their male colleagues.

Being a great place to work continued

Average training hours by job category and gender

| Training hours – male averages | | | | | | | | |
|--------------------------------|--------------|--------------|--------------|---|------------------------------------|-------------------|----------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Senior management | Top management | Total |
| SEU | 29.53 | | 29.53 | 29.38 | 29.87 | 28.59 | 27.02 | 29.54 |
| SNA | 135.67 | | 36.84 | 40.06 | 29.20 | 18.67 | 8.88 | 104.63 |
| SSA | 193.19 | 42.53 | 55.16 | 45.30 | 27.29 | 7.16 | 3.22 | 61.22 |
| Sappi group | 64.88 | 42.53 | 54.90 | 43.41 | 28.76 | 18.87 | 14.55 | 54.59 |

| Training hours – female averages | | | | | | | | |
|----------------------------------|--------------|--------------|--------------|---|------------------------------------|-------------------|----------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Senior management | Top management | Total |
| SEU | 29.44 | | 16.38 | 27.45 | 28.43 | 28.88 | | 28.41 |
| SNA | 175.75 | | 24.69 | 35.64 | 30.10 | 27.32 | 2.83 | 83.95 |
| SSA | 90.11 | 18.20 | 36.54 | 34.83 | 34.51 | 6.72 | - | 38.74 |
| Sappi group | 76.60 | 18.20 | 34.79 | 32.42 | 31.19 | 20.35 | 2.13 | 42.19 |

| Total – all employees | | | | | | | | |
|-----------------------|--------------|--------------|--------------|---|------------------------------------|-------------------|----------------|--------------|
| Region | No grade | Unskilled | Semi-skilled | Skilled technical and junior management | Professional and middle management | Senior management | Top management | Total |
| SEU | 29.52 | | 17.84 | 28.08 | 29.50 | 28.62 | 27.02 | 29.38 |
| SNA | 139.45 | | 28.65 | 38.63 | 29.40 | 20.69 | 6.29 | 101.19 |
| SSA | 159.57 | 32.53 | 51.73 | 42.97 | 29.21 | 7.09 | 2.90 | 55.42 |
| Sappi group | 66.10 | 32.53 | 50.81 | 40.04 | 29.37 | 19.11 | 12.71 | 52.20 |

Employees with individual development plans

| | 2017 | 2018 |
|-----|-----------------------------|-----------------------------|
| SEU | 42% | 46% |
| SNA | 51% (of salaried employees) | 70% (of salaried employees) |
| SSA | 36% | 51% |

Average training spend per employee

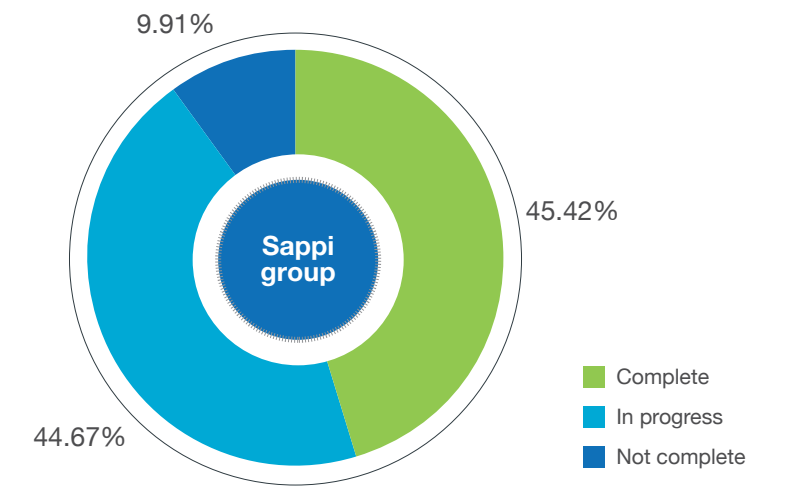
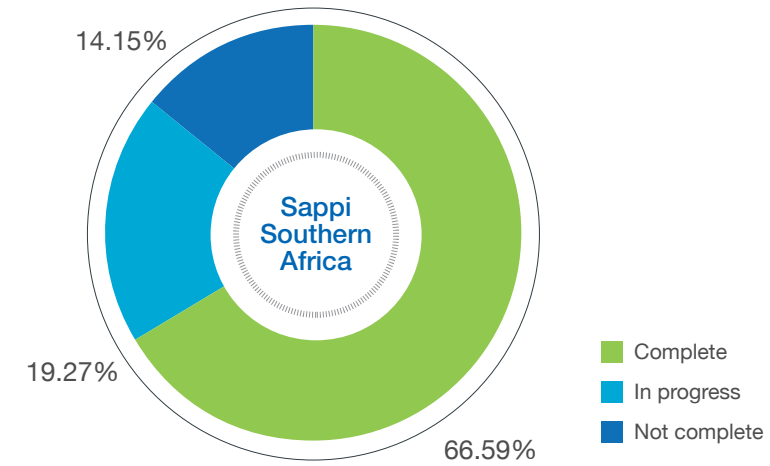
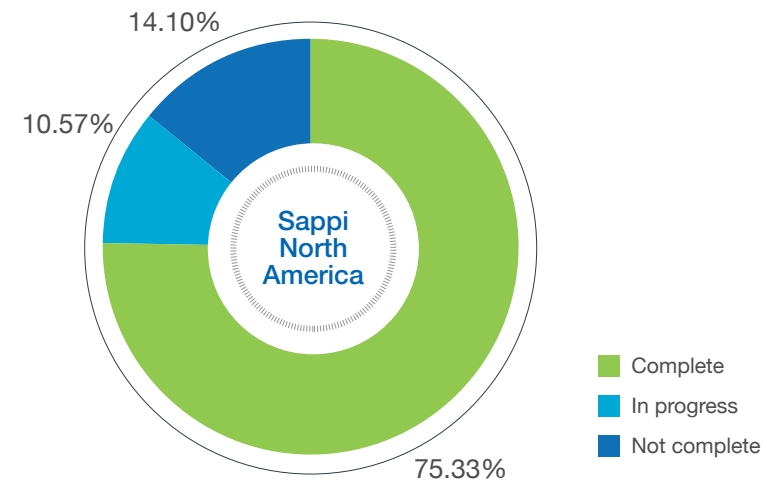
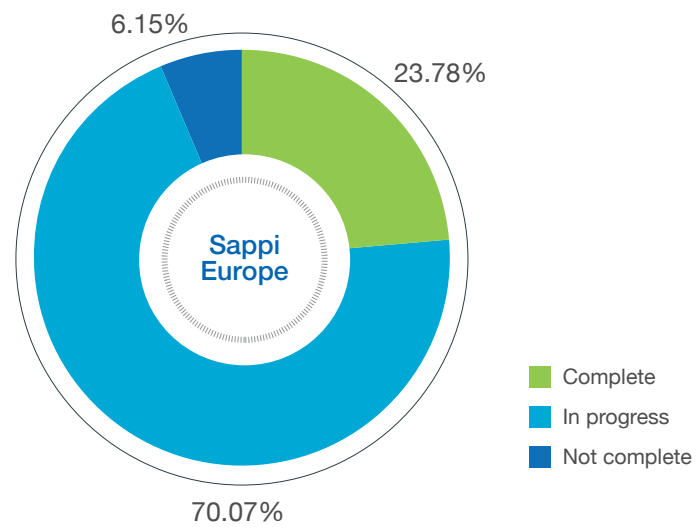
| | 2017 | 2018 |
|-----|---------|---------|
| SEU | US\$531 | US\$407 |
| SNA | US\$337 | US\$305 |
| SSA | US\$486 | US\$707 |



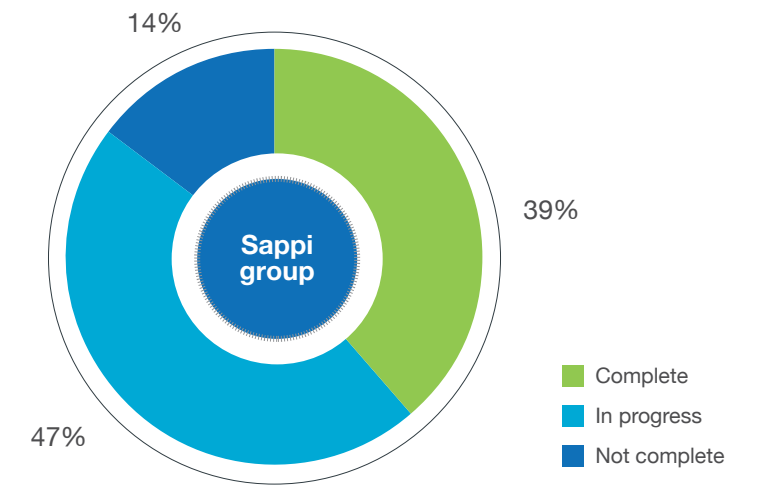
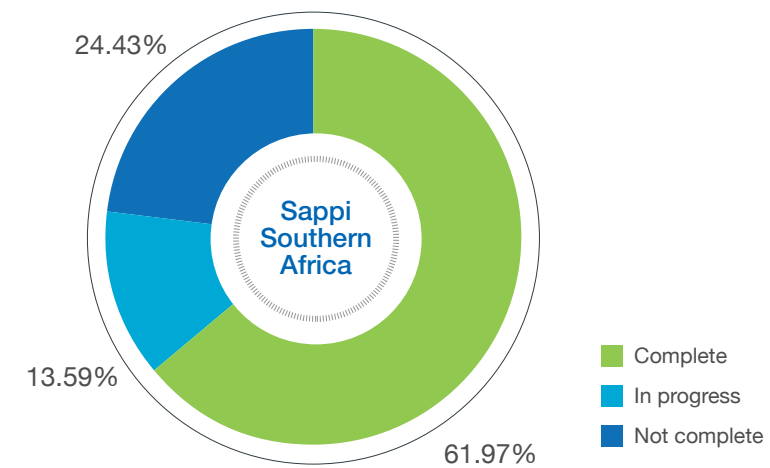
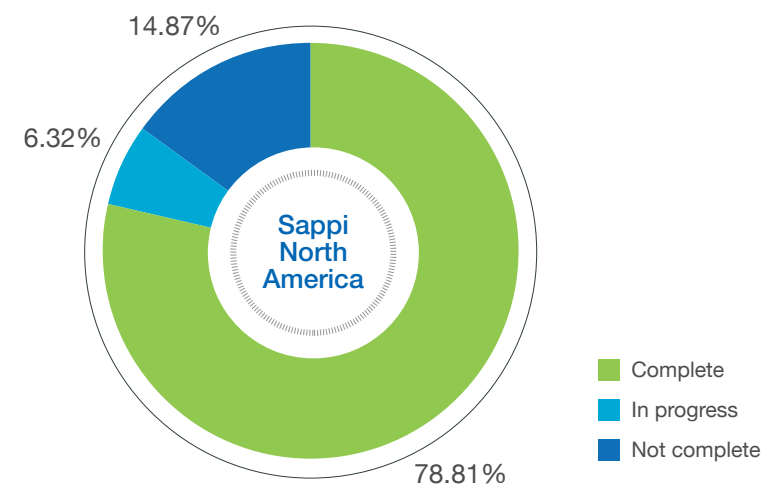
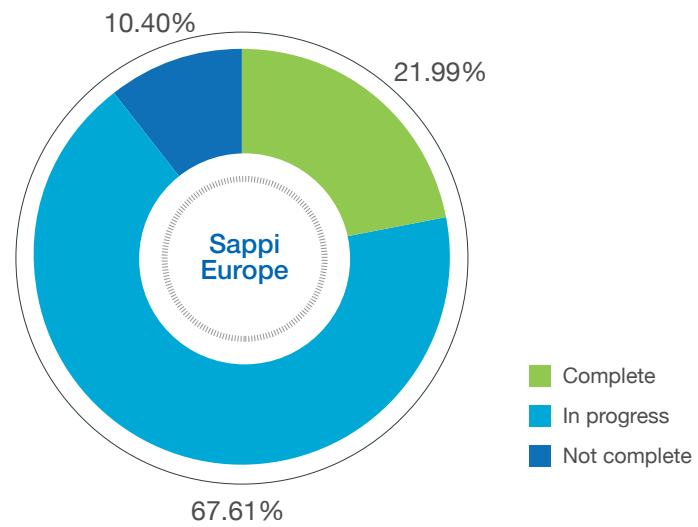
Being a great place to work continued

Eligible employees with completed or in progress performance appraisals

Female employees



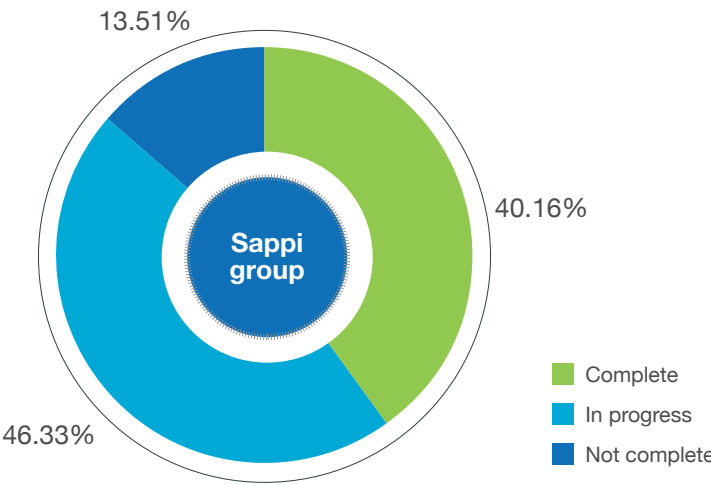
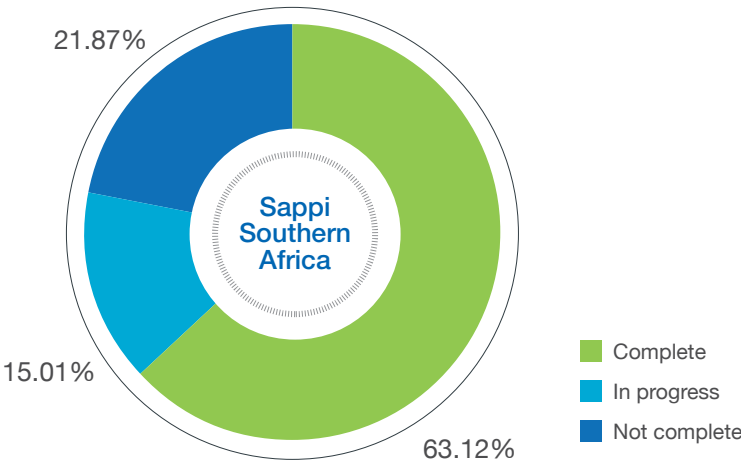
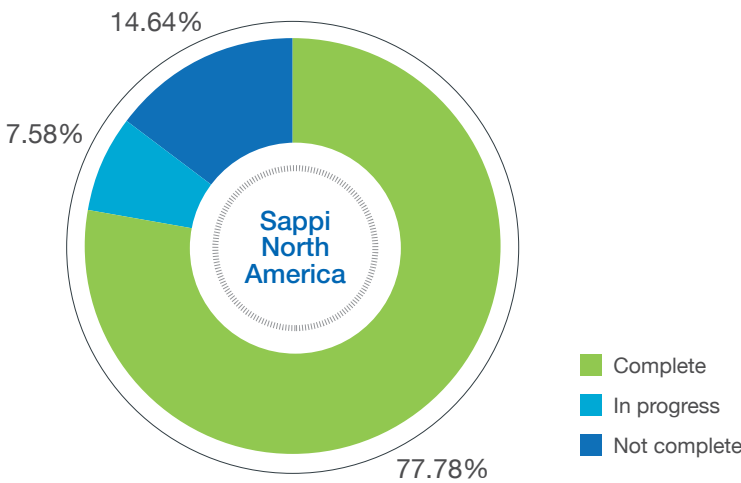
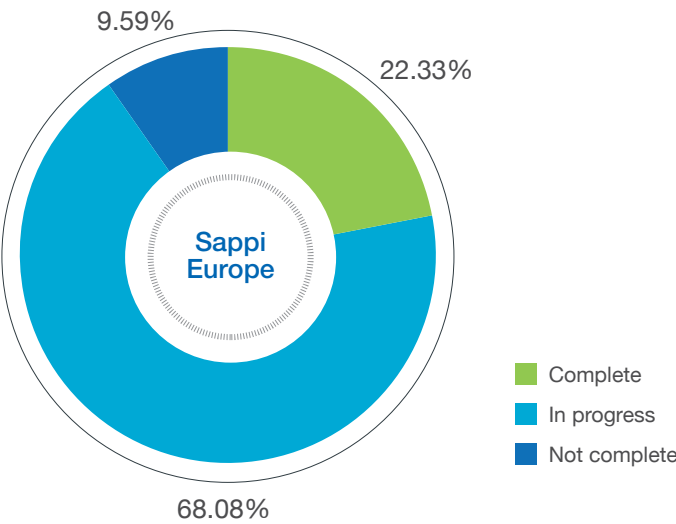
Male employees



Being a great place to work continued

Eligible employees with completed or in progress performance appraisals

All employees



Monitoring turnover and new hires

A certain turnover rate is needed to bring new people with new skills into the business to drive innovation and a fresh approach while maintaining a certain level of continuity. In 2016, the global turnover rate for the manufacturing and distribution industry stood at 10.1% for voluntary turnover and 16% in terms of total turnover.¹ Our global voluntary and involuntary (total) turnover rate for 2018 was 6.81% (2017: 5.85%).

Total turnover rate (voluntary and involuntary)

| Region | Total turnover (voluntary and involuntary) |
|------------------------|--|
| SEU | 5.83% |
| SNA | 9.20% |
| SSA | 6.80% |
| Overall average | 6.81% |

Absenteeism rates

| Region | Female % absent | Male % absent | Overall % absent |
|------------------------|-----------------|---------------|------------------|
| SEU | 2.99% | 4.65% | 4.52% |
| SNA | 2.08% | 1.62% | 1.69% |
| SSA | 3.68% | 2.48% | 2.79% |
| Overall average | 3.30% | 3.09% | 3.13% |

Voluntary turnover by gender

| Region | Female turnover | Male turnover |
|------------------------|-----------------|---------------|
| SEU | 8.27% | 4.40% |
| SNA | 9.86% | 7.43% |
| SSA | 2.91% | 2.18% |
| Overall average | 5.68% | 4.11% |

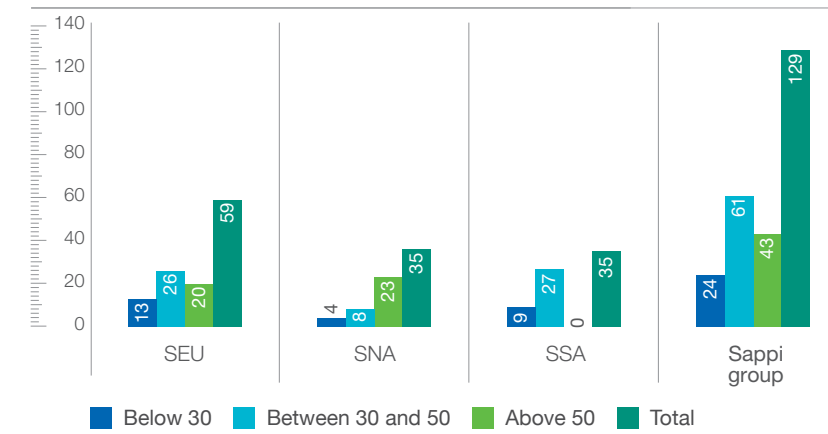


¹ www.compensationforce.com/2017/04/2016-turnover-rates-by-industry.html

Monitoring turnover and new hires continued

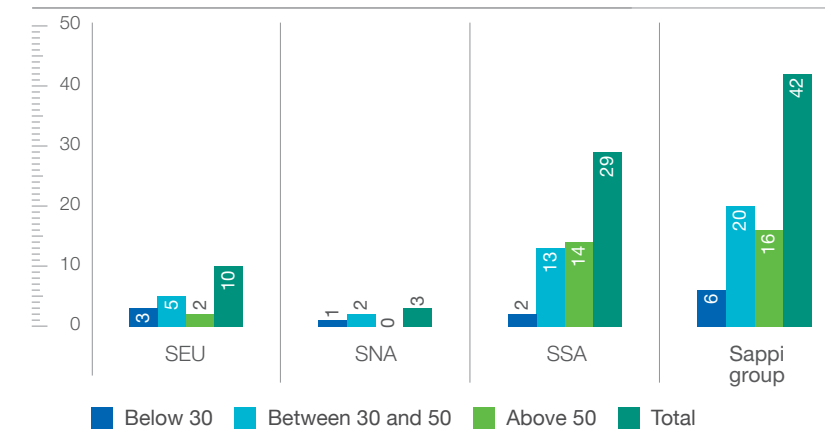
Voluntary turnover in numbers by gender and age category

Female



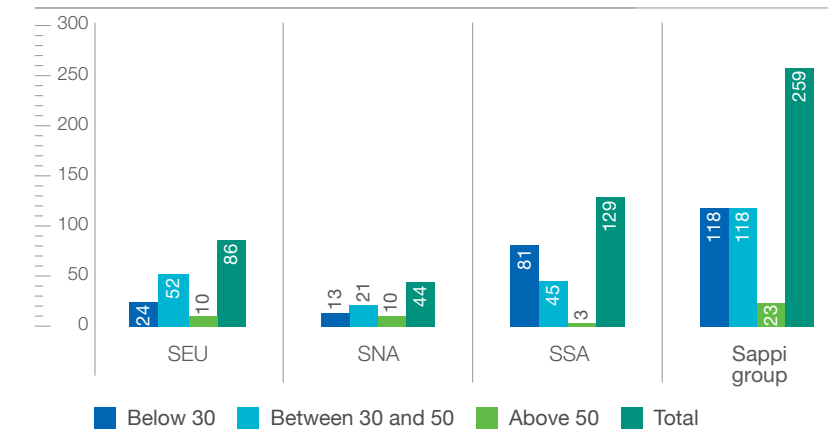
Involuntary turnover in numbers by gender and age category

Female



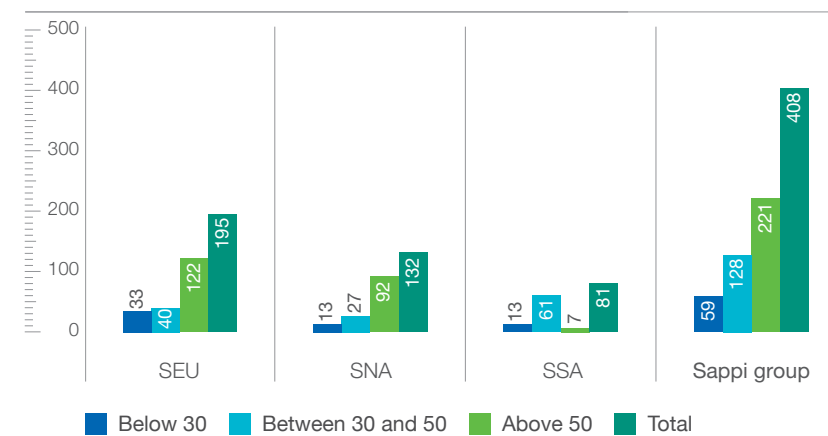
New hires (internal and external)

Female



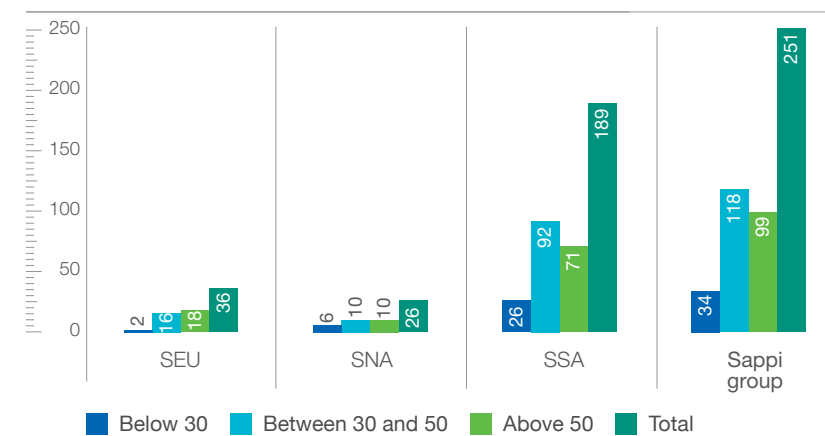
Voluntary turnover in numbers by gender and age category

Male



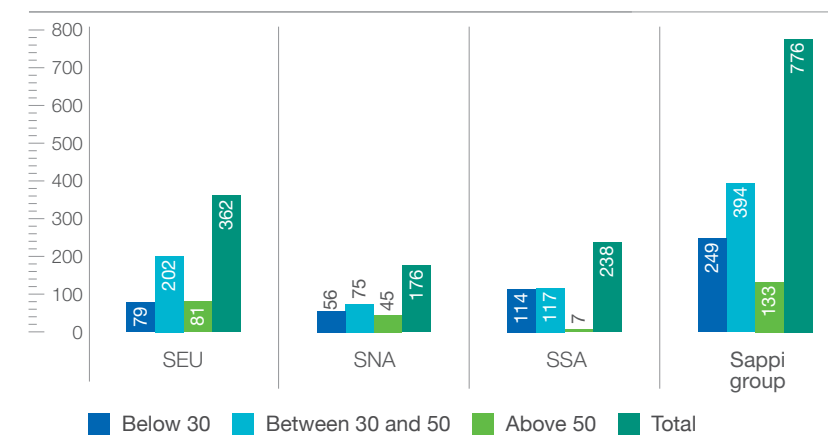
Involuntary turnover in numbers by gender and age category

Male



New hires (internal and external)

Male



Maintaining sound labour relations

Globally, approximately 62% of our workforce is unionised (2016: 60%; 2017: 60%) with 70% belonging to a bargaining unit (2016: 71.5%; 2017: 72.6%).

We recognise the right of employees to collective bargaining and freedom of association in accordance with all relevant local labour legislation. We maintain constructive relationships and partnerships with all representative unions and works councils, who enjoy consultative or negotiating powers on issues of mutual interest, union representatives are present in our formal joint management/worker health and safety committees.

Overall, 2018 was characterised by amicable, but tough negotiations and relatively good relationships with organised labour across the geographies (see [Key material issues](#) – Labour relations, for details on our engagement with trade unions in 2018).

Employees belonging to collective bargaining units by region

| | |
|-------------|--------|
| SEU | 85.10% |
| SNA | 64.29% |
| SSA | 56.43% |
| Sappi group | 69.79% |

Ensuring disciplined behaviour

Disciplined behaviour is essential not only for individual wellbeing, but also to ensure our group goals and objectives. In each region, disciplinary codes ensure disciplinary procedures, while grievance policies entrench the rights of employees, including the right to raise a grievance without fear of victimisation, the right to seek guidance and assistance from a member of their Human Resources Department, or their representative, at any time and the right to appeal to a higher body, without prejudice.

We have identified no operations or significant suppliers where the right to exercise freedom of association and collective bargaining has been violated or is at significant risk, nor have we identified operations and significant suppliers as having significant risk for incidents of child labour. Similarly, we have identified no operations and significant suppliers as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour.



Communicating operational changes

Operational changes are of key concern to all employees, particularly those represented by trade unions and/or bargaining units.

In terms of career endings, access to retirement planning services is provided on a regional basis and in some instances, this is supported by financial wellbeing programmes. To the extent that there are employee lay-offs, we provide severance pay to all employees and, in some instances, outplacement assistance.

Overall, we aim to communicate any changes to our people timeously and transparently.

In SEU, information about significant operational changes is only communicated when these are concrete enough to enable proper consultation. Finland is the only country in which we operate where the process is followed-through according to a set timeline.

Across all countries, information about significant operational changes needs to be provided at a time when planned changes are concrete enough to inform about reasons for changes, planned measures with impact on employees, number of affected employees and timing, but early enough to still enable a proper consultation.

In SNA, the notice period in terms of Federal Law is 60 days. Details regarding operational changes are not specified in collective bargaining agreements.

In SSA (including Sappi Limited), the implementation of significant operational changes is governed in terms of section 197 and section 189 of the Labour Relations Act, 66 of 1995. The Act does not prescribe a specific notice period in this regard. However, the standard practice is a minimum of 30 days, and a maximum of 60 days’ notice for consultation in case of a large-scale restructuring process. The recognition agreement concluded with the majority union, Chemical, Energy, Paper, Printing, Wood and Allied Workers Union (CEPPWAWU), recognises the provision of the Act in this regard.

SSA is party to the Bargaining Council for the Wood and Paper Sector as well as forestry within South Africa. In the case of sawmilling and pulp and paper, collective bargaining is conducted at industry level under the auspices of the bargaining council. The Constitution specifies when parties should submit issues of bargaining for the particular year and when the negotiations must commence. Forestry conditions of employment are implemented on 01 April every year and are regulated by ministerial sectoral determination. The normal notice period applies.

Most of the countries in which Sappi Trading is based are not covered in collective agreements except for Austria, Brazil and South Africa. In Austria, the notice period follows labour law and individual employment agreements. In the case of senior and general staff, notice periods of four and three months respectively are required. Based on local legislation, these notice periods increase according to years of service. A notice period is not set up in Collective Labour Agreements. In Brazil, a minimum notice period regarding operational changes is required for large companies, but there is no particular need to communicate to unions in advance.

Promoting safety, health and wellbeing

Overview

Proactively seeking to keep our employees healthy enhances productivity, reduces stress and enables creativity and innovation. Promoting wellbeing also has a direct impact on the bottom line.

Health and safety committees are in place at all our operations. Through these committees, our people are consulted about the development/review of policies and procedures and changes that affect workplace safety or health.

Representation in each region is as follows:

- In [SEU](#), formal health and safety committees are in place at different levels of the business in line with statutory requirements. All (100%) of all SEU employees are represented by the safety committees.
- In [SNA](#), all unions have the opportunity to participate in joint management worker safety committees.
- In [SSA](#), (including Sappi Limited) health and safety representatives are elected from non-supervisory staff. In line with legislation, there is one representative for every 50 workers.
- [Sappi Trading](#) does not have formal joint management-worker health and safety committees due to the small size of the offices, but there are appointed safety officers.

Wellbeing

Sappi Europe

Employee wellbeing programmes are decentralised and each mill, together with the mill lead teams, decides on their priorities for the year. Programmes vary across the mills and include preventative medical health care check-ups; flu vaccinations and immunisations as well as support of employee sports and social activities, amongst others.

Kirkniemi Mill embraced the wellbeing theme throughout 2017, with different related initiatives every month including nutrition, everyday exercise and mindset. The interactive nature of the initiative was designed to inspire employees to interact, and make informed choices that support their wellbeing and employability. The wellbeing drive included Will 2018!—a one-year programme with three subgroups: *Lose Weight! Move!* and *Keep going!* managed by external health care professionals. Participants were given the tools, support and motivation to achieve their targets.

Sappi North America

We encourage all salaried and hourly employees (and their spouses) who participate in one of Sappi ‘s medical plans to complete a health risk assessment (HRA) questionnaire. We continue to have wellness events, such as healthy cooking demonstrations and wellness webinars, at our sites.

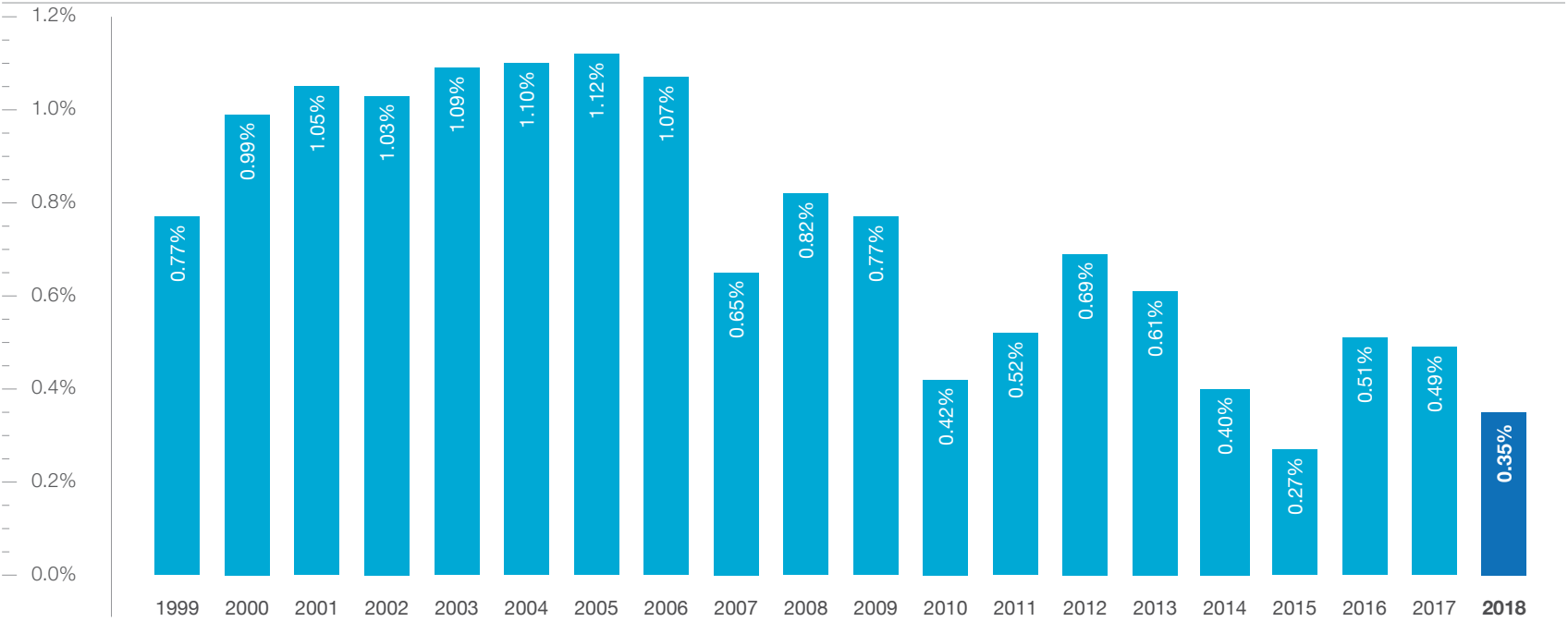
Sappi Southern Africa

The complexity of the SSA workforce and employment legislation has resulted in a more structured employee wellbeing function. We categorise our health and wellbeing programmes based on occupational health; primary health care and employee wellbeing.

- **Occupational health:** Our practice is governed through standards and best operating practices aimed at preventing harm to employees at work. The major risks we are challenged with due to our work environment are noise, vapours, fumes and ergonomic risks. To mitigate the noise risk, we conduct repeated hearing loss measurements and have focused on reducing or eliminating noise levels in the work environment.

- **Primary health care:** We continue to focus on HIV/AIDS and tuberculosis as primary health care issues. At some of our mills we have partnered with the provincial health services to provide chronic medication and HIV/AIDS retroviral drugs to the clinics at our mills. As indicated by the graph below, the mortality rate from HIV/AIDS within SSA has been reducing steadily over time.
- **Employee wellbeing:** These programmes focus on educating, empowering and providing employees with the skills to take ownership of their wellbeing. The programmes include support against obesity, substance abuse (alcohol and drugs), basic counselling for referrals to external providers, financial wellness, trauma counselling, work stress issues and other health issues and relationship issues.

HIV/AIDS mortality within Sappi (National mortality rate: 2%)



Safety

Our management approach to safety

The seriousness with which we view the safety of our employees and stakeholders is highlighted by the restatement of our group values to emphasise our commitment to safety: *At Sappi, we do business with integrity and courage; making smart decisions which we execute with speed. Our values are underpinned by an unrelenting focus on and commitment to safety.*

All three regions within the group have safety programmes focused on creating an environment where no person will suffer permanent disability or loss of life. We do not accept that injuries and accidents are inevitable and remain committed to **Project Zero**, our group-wide safety initiative, with the continuance of improved personal behaviour and making safe choices underpinned by risk assessments, group sharing of all incidents, root cause investigations, enforcement of compliance and leadership engagement.

We have a global safety goal in place, supported by specific safety targets in each region with specific action plans in place to achieve these targets (see [Targets](#) to view our global and regional safety targets).

Certification systems and audits

All our pulp and paper mills are certified to the internationally recognised **OHSAS 18001 Health and Safety Management System**. A core element of this approach is the hazard identification and risk assessment process in terms of which task-specific hazards and risks are identified, evaluated in terms of current controls and managed by establishing additional controls and risk reduction activities. Roles, responsibilities and accountability are documented, with management in all regions actively involved in our safety

programmes. Like preventive action, corrective action involves root-cause analysis with the emphasis on improvement rather than blame. In addition to actual incidents, the intent is for all near-misses to be documented and also undergo root-cause investigation.

Annual external safety audits are conducted at operations. Internal safety tools and techniques which have proven to be effective are shared within the group with particular emphasis on the empowerment of our workforce to identify where and how improvements can be made. We also share regular feedback with our employees on performance measured against our standards to instil a sense of ownership and awareness.

Training

We take the safety of contractor employees as seriously as we do that of our own employees by emphasising safety awareness and competence through ongoing training programmes which take into account differing levels of ability, literacy and responsibility. Training related to health and safety hazards and safe work practices is reinforced by educational pamphlets, posters, videos as well as a **Global Safety Awareness Day** around which each facility arranges a week of focused activities to reinforce and reinvigorate our year-round work programme on safety.

In addition to addressing hazards in the workplace by means of the OHSAS 18001 related systems we also address ‘at risk behaviour’ of our employees and contractor employees by means of behaviour-based safety (BBS).

Safety terminology key to graphs and terms used

LTI – Lost Time Injury. Lost days are calculated as days that an employee cannot report for the next work day or shift due to an illness, injury, disability or death arising from an incident occurring at work. Lost days are recorded from the day after the accident/incident until the employee returns. The day of the accident and the day returning to work are not included. A fatality or permanent disability is counted as 6,000 days.

NLTI – Non-Lost Time Injury.

LTIFR – Lost Time Injury Frequency Rate based on a Sappi groupwide standard for man hours.

$$LTIFR = \frac{(LTI \times 200,000)}{\text{Hours of exposure}}$$

LTISR – Lost Time Injury Severity Rate based on a Sappi groupwide standard for man hours.

$$LTISR = \frac{\text{Days lost to injury} \times 200,000}{\text{Hours of exposure}}$$

II Injury Index – Provides an overall sense of safety within the measured unit.

$$II = LTIFR \times LTISR$$

AIFR – All Injury Frequency Rate represents the number of all injuries.

$$AIFR = \frac{LTI + NLTI \times 200,000}{\text{Hours of exposure}}$$

OIR – OSHA Incidence Rate.
$$\frac{\text{Recordable incidents} \times 200,000}{\text{Hours of exposure}}$$



Our management approach to safety



Safety performance in 2018

In 2018, we did not achieve our primary goals of no fatalities and a 10 % improvement in LTIFR. Tragically there were two fatalities—one own employee fatality in [SEU](#) and one contractor fatality in [SSA](#). The severity of these accidents is reflected in the increased Injury Index (II) for own employees and contractors. Own and contractor Lost Time Injuries (LTIs) remained fairly constant with only [SNA](#) achieving a major improvement.

We remain committed to reducing the impact of injuries on our workforce. By involving all personnel, sharing information and managing risk in accordance with accepted best practice our aim is to drive down the severity of accidents and of near misses.

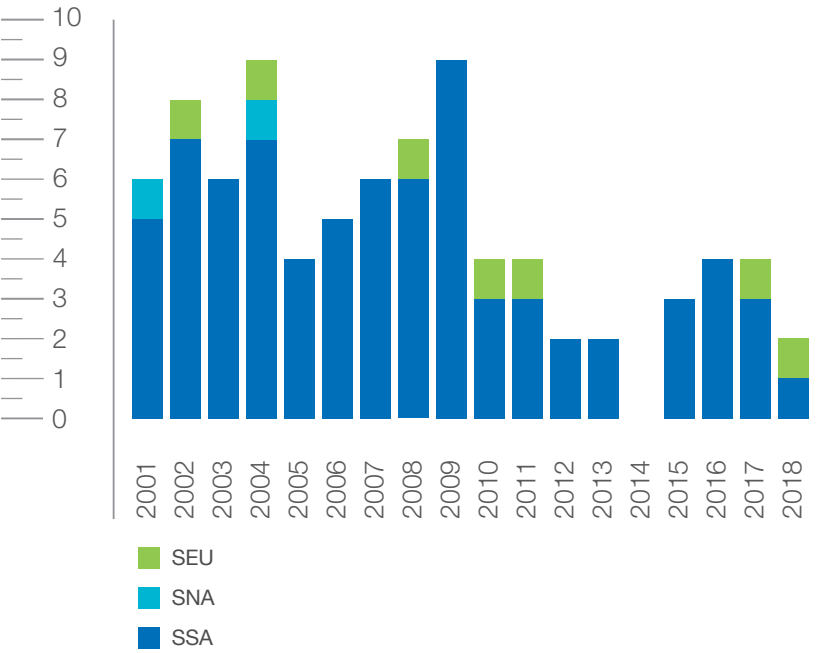
Note:
Our new manufacturing and logistics operations have been included in the safety statistics set out on the following pages.

Sappi group

Employee (Own) and Contractor LTIFR



Sappi group fatalities by region



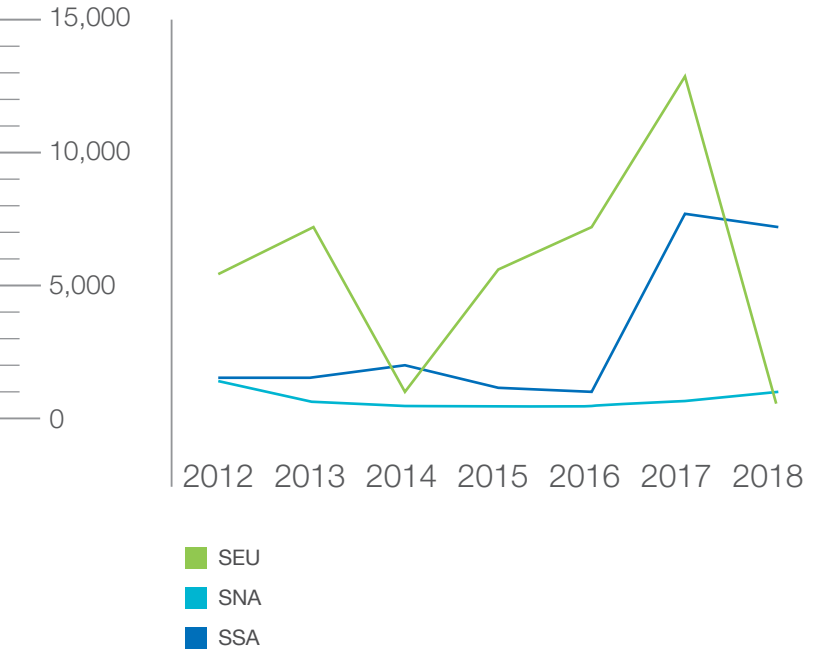
Comment:
The graph on the left shows that Employee (Own) LTIFR improved from the previous year and is at improved values at below the previous four years. Contractor LTIFR remained similar to last year but improved on the previous four years. The Injury Indices were an improvement on last year but above what has been achieved in 2014. The Injury Index was impacted by two fatalities.

sappi | safety

Our values are underpinned by an unrelenting focus on and commitment to safety.

Own safety. Share safety.

Severity as reflected by lost days of own employees



Lost days
[SNA](#) maintained the lower lost day trends in 2018 with the lost day metrics having been standardised in 2018. Although [SSA](#) year-end performance shows an improvement, the start of 2019 was impacted by contractor fatalities at Ngodwana Mill and at Sappi Forests in KwaZulu-Natal. The spike in [SEU](#) in 2017 and 2018 is attributable to a fatality in both years.

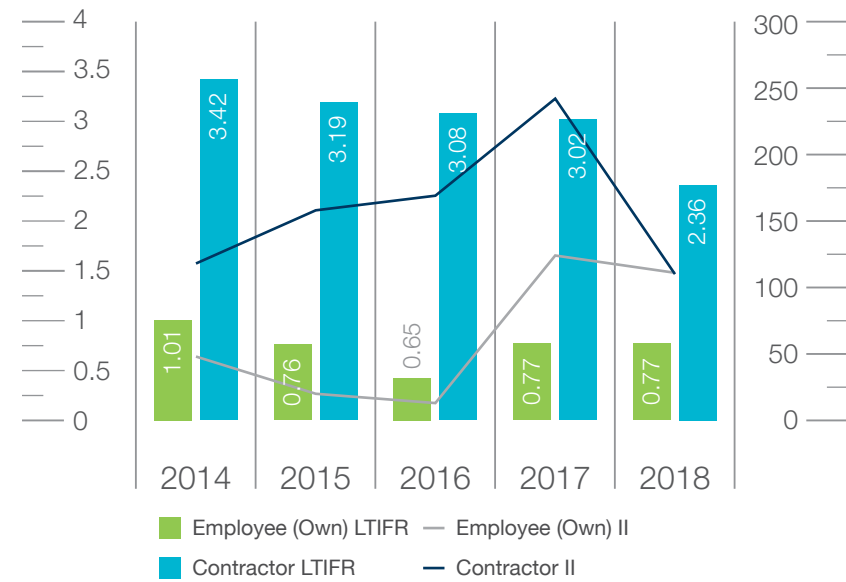
Operating units with no LTIs were Allentown Sheeting Facility, Sappi Forests nurseries and LignoTech SA.

Globally, in terms of employees (own) and contractors, over 63 million hours were worked; 15,541 days were lost including the two fatalities; 1,576 NLTIs were reported and there were 136 LTIs.

Safety performance in 2018 continued

Sappi Europe

Employee (Own) and Contractor LTIFR



Tragically, in **SEU**, an employee was cleaning the conveyor belts leading from the woodchip silos to the digesters when he was pulled in between a guiding roll and a conveyor belt and killed. This significantly affected the severity rate.

Employee (Own) LTIFR remained constant at 0.77 (2017: 0.77). However, this does not accurately depict the year-on-year improvement, because in 2018, **SEU**'s structure changed significantly with the incorporation of the recently acquired manufacturing assets. This gave rise to new challenges in terms of safety. On average, with some exceptions, the existing business units improved safety performance. However, all the new entities were at a lower level with action plans put in place to reverse this trend. A concerted leadership effort is underway to improve the safety culture and performance of our new assets whereby safety managers of the established mills will conduct an audit and implement improvement programmes together with management of the new mills.

Going forward, the three main focus areas from a **SEU** regional perspective are to:

- Integrate the new units into Sappi safety culture and bring them to the level of the existing operations
- Grow safety behavior and mindset, and
- Reduce risk by awareness.

SEU's vision is to be the safest pulp and paper company in Europe by 2020. The strategic objectives in support of this goal are:

- Improve Employee (Own) LTIFR with an ultimate goal of achieving 0.52 in 2020
- Achieve the Employee (Own) LTIFR target for 2019 of less than 0.59 for own employees
- Make the safety of personnel the first priority in all operations, and
- Ensure that no employee will suffer permanent loss of the use of a body part or a fatal injury.



2018 significant accomplishments

Alfeld Mill

1.4 million man hours
without LTI (new mill record).

Stockstadt Mill

1.0 million man hours
without LTI.

Maastricht Mill

Two quarters
without LTI.

Gratkorn Mill

One quarter
without LTI.

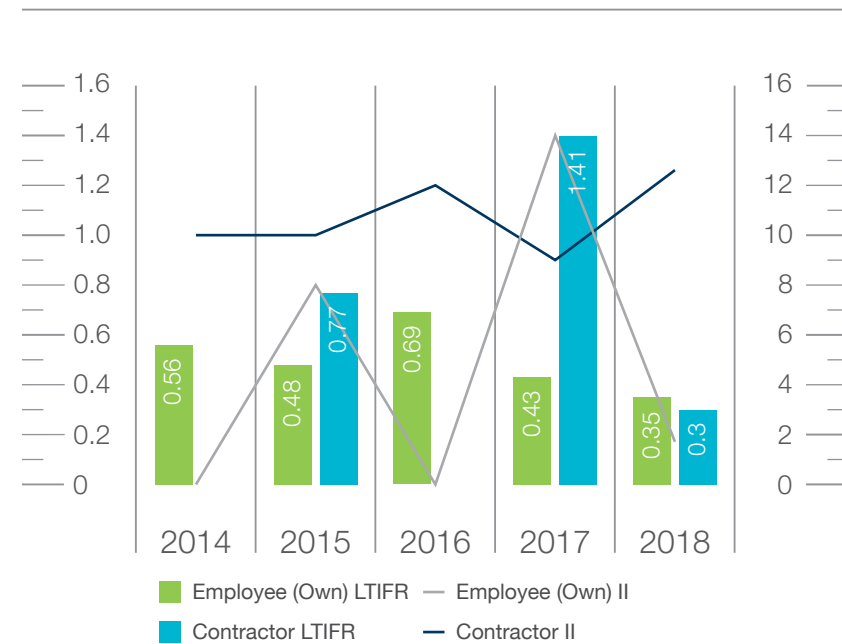
Kirkniemi Mill

One quarter
without LTI.

Safety performance in 2018 continued

Sappi North America

Employee (Own) and Contractor LTIFR



SNA completed 2018 with Employee (Own) LTIFR of 0.35 (2017: 0.43), establishing the region's best LTIFR year on record. A total of nine lost time incidents occurred during 2018 (eleven in 2017). In addition, SNA completed 2018 with an OIR of 1.02 comparable with 2017 rate of 0.98 which is significantly lower than the 2016 rate of 1.42 and improved upon the historically best achievement of 1.01 in 2015. There were 26 recordable incidents during 2018 (2017: 25).

With 909 lost workdays in 2018, SNA's severity rate has significantly declined from a costly high of 1,673 lost work days in 2011.

The region continued to refine ergonomic risk reduction efforts with both internal and external resources, with front line leaders continue to engage people with daily safety contacts, five-minute safety talks and craftsmen performing pretask job safety analysis. In addition, SNA continued to engage with labour unions and work together on the goal of going home to our families. As an example, Westbrook Mill met with the local union leadership and an external United Steel Workers (USW) safety facilitator/consultant who helped the mill formulate a safety improvement plan—utilising a hazard mapping technique—that will be implemented in 2019.

Going forward, SNA's goal of zero fatalities or life changing incidents and an LTIFR of less than 0.55 will be achieved by:

- Driving participation and prevention activity through sharing
- Focusing on managing hazards and exposure to major projects by contractors and own employees
- Coaching and mentoring of frontline leaders through the safety contact programme
- Refining efforts to eliminate muscular skeletal disorders and reduce ergonomics hazards, and
- Managing the major changes related to capital projects.

2018 significant accomplishments:

Allentown Sheeting Facility

Experienced zero recordable lost time incidents

in 2018 and continues to maintain their OSHA Voluntary Protection Programme Star status.

Cloquet Mill

Completed 2018 with two LTIs for an annual Employee (Own) and Contractor LTIFR of 0.26 in line with the

second-best year

in the mill's history.

Somerset Mill

Completed 2018 with seven LTIs with Employee (Own) and Contractor

LTIFR at 0.53.

Westbrook Mill

Experienced two LTIs compared to six in 2017 and three in 2016 for an Employee (Own) and Contractor

LTIFR of 0.59.

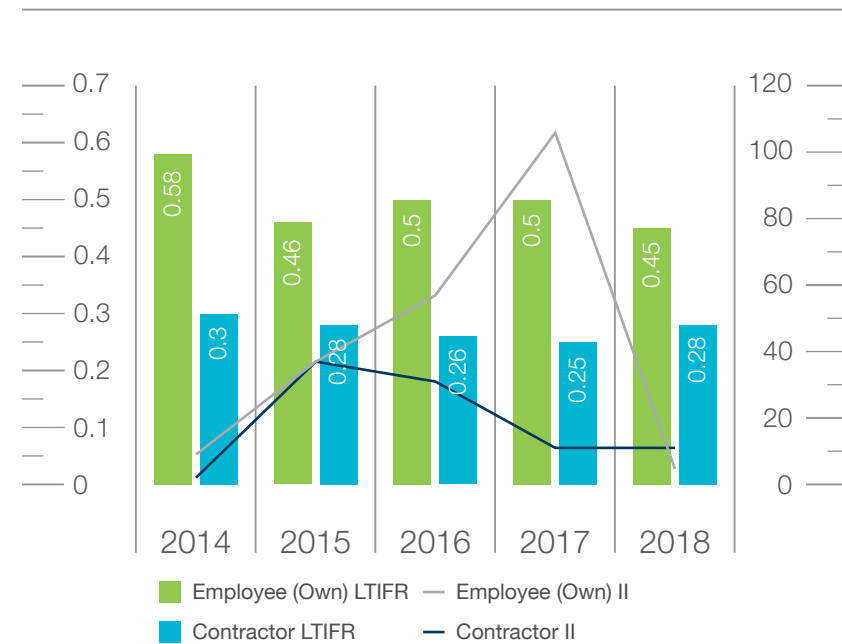
All mills maintained

OHSAS 18001 certification.

Safety performance in 2018 continued

Sappi Southern Africa

Employee (Own) and Contractor LTIFR



The excellent performance in terms of severity of incidences was marred by a fatal accident when a Bell timber off-loader operator lost control of his vehicle and died. In terms of LTIFR, the 12-month moving average (mma) was 0.45. This is better than the ‘best ever’ LTIFR of 0.46. The 12 mma LTIFR for contractors reduced to 0.24—trending towards the ‘best ever’ figure of 0.21.

These improvements follow on from a number of safety initiatives launched in 2018 as part of the ‘twice as safe’ initiative, following three fatalities in 2017:

- An external service provider was tasked to perform safety culture reviews at Ngodwana Mill and our forestry assets in Mpumalanga province.
- Sappi Forests initiated the *Stop and Think Before You Act* safety initiative underpinned by an intense communication programme supported by easy-to-understand communication material.
- A forum involving contractors in safety plans and programmes, with emphasis on inputs from contractors, was established.

Based on the recommendations of the external safety experts, the following initiatives are ongoing with implementation planned for 2019:

- Integration of the safety management with the operational/manufacturing system at the mills.
- A complete review of all manufacturing risk assessments to ensure that all risks are identified and assessed correctly in terms of potential severity. The risk assessment review team have completed their review at Saiccor, Stanger and Tugela Mills and started with their review at Ngodwana Mill in September 2018. To date, a total of 27 common weaknesses have been identified. For each of these weaknesses, action plans have been formulated with planned close out during 2019.
- Eight *Lifesaving rules (LSR)* have been identified. The roll-out of these rules began on 01 October 2018 with expected roll out of all eight rules by December 2018. Non-compliance is potentially a dismissible offence. An *Own Safety, Share Safety* theme video—*My Safety Story*—which is currently under production will be shared throughout the SSA operations.

- The external safety experts have identified the following key action items:
 - Process hazard analysis (PHA) and process safety information (PSI)
 - Management of change, and
 - Incident investigation.
- Management systems in support of safety will be modelled on the *Sappi Europe Performance Engine & I (SPE&I)* principles. The system will be referred to as *Lean & me*—integrating best manufacturing and operating principles with safety.

Going forward, the region’s 2019 objectives are to achieve:

- An LTIFR of better than 0.40 for own employees, and
- An LTISR of less than 25 for all categories of employees.

Regrettably, the start of the 2019 year was marred by two contractor fatalities, one at Ngodwana Mill and at one at Sappi Forests in KwaZulu-Natal.

2018 significant accomplishments:

SSA achieved their

lowest 12 mma LTIFR

for Employees (Own) in 2018, ending the year on 0.45.

LignoTech South Africa achieved

six years without an LTI

on 31 August 2018.

Tugela Mill

LTI free.

Saiccor Mill

One million LTI free hours

worked.

Sharing value

Our approach

We have matured our approach to corporate citizenship to include both corporate social responsibility (CSR) as well as corporate shared value (CSV). The importance of this step lies in the fact that it recognises that our support for society is integral to the way we do business, and not something which stands separate. Shared value involves developing profitable business strategies that deliver tangible social benefits. In other words, identifying societal challenges within a company’s sphere of operation and finding ways of addressing these for the mutual benefit of communities and the company. We take a very active approach to CSV both regionally and globally, driving key initiatives in support of our three primary stakeholder groups—employees, customers and the local communities in which we operate.

Projects are aligned with and support business priorities and needs, and are developed with input from key stakeholder groups. While each region has its own programmes, these conform to common themes which are aligned with our business needs and priorities and which include education, local community support, the environment and health and welfare. We encourage employees to participate in outreach and community projects. Our support is focused on the communities where we have an impact. Our preference is for multi-year programmes which create sustained impact in our communities. We have prioritised community support projects with a particular focus on education, environment, health and welfare.

In addition, support for activities associated with access to Sappi land and conservation efforts, such as biodiversity and species mapping, mountain biking and recreational birding continues to grow.

The fact that Sappi is headquartered and listed in South Africa, coupled to the significant development and unemployment needs of the country, dictates a higher focus on CSR and CSV activities by [SSA](#).

The underlying goals of our programme are to create a stronger social licence to operate, build our reputation as a responsible corporate citizen, establish customer loyalty and attract talent.

Ⓢ Our *Group Corporate Citizenship Policy* (see www.sappi.com/policies, provides a global framework used by each operating region to guide local activities We have revised our policy to respond to the evolution in community expectations, societal priorities, customer requests and the opportunity to achieve some of these through targeted supply chain actions. The policy reflects our preference for the Asset Based Community Development (ABCD) approach and references our alignment with the United Nations Sustainable Development Goals.

Details of initiatives are covered in our regional sustainability Ⓢ reports (see www.sappi.com/sustainability). We present a snapshot of our initiatives on the following pages.

Social investment spend per region


| 2018 | |
|---------------------|-----------------|
| SEU | €100,000 |
| SNA | US\$550,000 |
| SSA | ZAR64.3 million |

Sappi Europe

Employees are encouraged to nominate and participate in local community projects and events. The Sappi Eco-effectiveness campaign is supported by showcases of initiatives from Sappi staff. At a local community level our focus is to add to the wellbeing, safety and health of our communities. Each Sappi mill and sales office support various local education, cultural and environmental projects based on annual requests and identified needs.

In terms of specific activities per mill:

- *Alfeld Mill* spearheads [SEU](#)’s membership of the *Save Food* initiative, a joint initiative of the Food and Agriculture Organisation of the United Nations (FAO), the United Nations Environment Programme (UNEP), Messe Düsseldorf and Interpack, the world’s leading trade fair for processes and packaging. Through projects, trade fairs and conferences, the initiative aims to increase awareness among decision makers from the worlds of politics, business and industry of the critical need to fight food waste. The initiative was set up in response to the shocking fact that one-third of all food is wasted or lost in transit to the end customer.
- *Ehingen Mill* donates paper to schools and various associations and hosts school children at the mill to give them an idea of what our industry is all about. The mill also hosts job fairs and job orientation sessions for students whereby they come into the mill for a week or more to learn about the mill’s activities. Every year the mill also provides the paper for a book aimed at teaching school children about traffic safety.

To learn more about our support of the town of Ehingen which has declared itself as a ‘Sustainable City’  (see [Key relationships](#) – Civil society (and media)).



- *Gratkorn Mill* hosted a charity run for employees and their families in 2018. The six-kilometre run took place on the mill premises and for every kilometre run, the mill donated one Euro. The €2,000 collected was donated to the *Children’s and Youngsters Rehabilitation Department* in a hospital next to our mill.
- At *Kirkniemi Mill*, 2% of savings from continuous improvement initiatives is allocated by employees to local charity organisations. In 2018, these were:
 - *Hope*: The aim of this association is to give children more equal opportunities for everyday life. Hope used the donation to buy Christmas food for families of limited means.
 - *Save the Children*: The local organisation sponsors children from poor families to attend high school
 - *Jalava School*: This school, which caters for special needs children, used the donation to take the children on an outing.

Kirkniemi Mill is a member of the *Association for Water and Environment of Western Uusimaa* (*fin Länsi-Uudenmaan vesi ja ympäristö ry, LUVY*) which promotes research, monitoring and state of water bodies in the Western Uusimaa of southern Finland and works with in the areas of water conservation, environmental protection and environmental health.

Sharing value continued

Sappi North America

Ideas that Matter


As an integral part of SNA’s corporate social investment platform since 1999, the *Ideas that Matter* grant programme has funded over 500 non-profit projects and contributed more than US\$13 million to a wide range of causes that use design as a positive force in society. The programme is open to North American designers who have partnered with a non-profit organisation and developed a communication campaign that is ready for implementation.

SNA made nine grants in the 19th annual *Ideas that Matter* programme, where financial support is given to designers who create print integrated projects to maximise social impact.

The nine projects selected this year in the 19th annual *Ideas that Matter* programme highlight how design and creativity can help solve prominent social issues. Through communication projects and campaigns using paper and print, the winning projects focus on:

- Educating high school students about the environment and sustainability
- Promoting literacy (two projects)
- Preventing sexual harassment
- Providing guidance on healthier ways of eating
- Designing measurable and sustainable impact projects
- Encouraging young adults to explore careers in design and creative problem solving
- Helping student survivors of sexual violence, especially women of colour, LGBTQ, and gender non-conforming individuals to understand their rights on campus and determine what actions they can take to hold their colleges accountable to their needs, and
- Providing San Francisco and Bay Area residents with disaster preparedness guides.

Ideas that Matter proposals are evaluated on creativity, plans for implementation and potential impact by an independent panel of judges who are selected annually and are recognised for their commitment to design for social impact.

We profile a few of the winners in the box on the following page  (see www.sappi.com/2018-winners for details of other winners in 2018).

In 2017, we launched the *Employee Ideas that Matter* programme which is proving extremely successful. In 2018, there were 50 applications, of which 11 were successful and which received funding to the value of a total of US\$25,000. The grants have been made to wide-ranging projects, including support of the *Fond du Lac Head Start Programmes* in Minnesota for a children’s educational event celebrating the local Ojibwe Native American culture, and the Lehigh Pennsylvania Valley Centre for Independent Living to fund an inclusive fishing event allowing people with disabilities to access and experience outdoor recreation.

Supporting the Sustainable Forestry Initiative® (SFI®)

SNA sponsors two university students to attend the SFI Annual Conference. Sponsorship covers the students’ registration, all meals including the networking dinner, a two-night hotel stay and a travel stipend. SNA has also been donating the paper for the SFI Sustainability Report since 2009.

Supporting environmental initiatives

Beneficiaries of our support include:

- **The Ruffed Grouse Society (RGS):** Creates healthy forest habitat for the benefit of ruffed grouse, American woodcock and other forest wildlife. RGS works with landowners and government agencies to develop this habitat utilising scientific management practices.
- **Dovetail Partners:** Conducts forest dwelling bat surveys in Aitkin and Carlton counties in the state of Minnesota in support of a broader initiative related to bat habitat conservation efforts in the state.
- **The University of Minnesota Sustainable Forests Education Cooperative:** Offers continuing education opportunities to forestry and natural resource professionals in a broad range of fields, including forest ecology and management, wildlife biology, forest hydrology, botany, best management practices, technology transfer, and human dimensions of natural resource management.



Sharing value continued

CASE STUDY

Award recipient:
READ TO ME!
(US\$20,527)

A book and learning tablet to be included in Parent-Child Home Program's (PCHP) early childhood literacy program for under-resourced families. These educational tools were designed and written to help simplify the parent-child interaction when reading together in order to build critical school readiness skills.



Award recipient:
Sexual Harassment Prevention Initiative
(US\$16,000)

A comprehensive and transformative sexual harassment prevention initiative designed to engage individuals, businesses and institutions in building sexual harassment-free communities where harassment is no longer ignored, but eliminated. Tools include a training manual, digital communications and outreach material.

Award recipient:
Sound The Mound
(US\$40,722)

Curriculum toolkit, technology-driven public art installations, exhibits and a supporting website focused on educating high school students about waste, sustainability and environmental health. The toolkit will be used by students who visit Freshkills Park (formerly the world's largest landfill and now a park) and will be downloadable for use throughout the country.



Award recipient:
Path to Impact
(US\$30,000)

Integrated campaign providing an actionable and accessible framework of activities to guide organisations, communities and individuals through the process of designing measurable and sustainable impact projects. The campaign includes a comprehensive workbook with design thinking exercises, as well as workshop and training strategies.



Sharing value continued

Sappi Southern Africa

Employee Wellbeing Committees at each mill support local community projects based on annual requests and identified needs. These are coordinated via the annual Mandela Day (67 minutes) initiative. In addition, project support is provided to Sappi forestry communities including fresh water, ablution facilities, fencing, buildings and structures and vegetable gardens.

As South Africa is a developing country characterised by high levels of inequality, shared value is particularly important in advancing socio-economic development. **We have a number of initiatives in place to drive shared value including:**

Socio-economic development

- The **Sappi Khulisa** supplier and enterprise development programme ('Khulisa' means 'to grow' in isiZulu), was established in 1983. A shared value enterprise development initiative, previously known as *Project Grow*, it is aimed at community tree-farming. Since 1995, a total volume of 3,796,940 tons of woodfibre, to the value of ZAR21 billion, has been purchased from small growers in terms of this programme. Sappi Khulisa represents a win-win situation—it drives prosperity and skills development and also helps to ensure continuity of fibre supply to our mills. The programme has also helped create hundreds of businesses to support the tree farmers as well as a training centre to upskill the farmers in areas such as financial management and forestry practices.
- The **African Honey Bee (AHB)** project is positively impacting on communities in KwaZulu-Natal (KZN) province. The AHB project is a social enterprise enabling families from disadvantaged rural communities to build sustainable micro-beekeeping businesses by leveraging the natural resources available to them. Over the past two years, AHB has trained 1,482 people in KZN. Of

this number, 962 people are actively keeping bees and producing and selling honey. In addition to empowering people, the project is helping to reduce fires from honey hunting on our plantations

- The **Abashintshi** (the 'changers' in isiZulu) programme: Established in 2015, in conjunction with development agency, Devcom, programme has expanded from 18 Abashintshi in nine communities been expanded to 117 Abashintshi across 65 Sappi communities in KZN and Mpumalanga. These young people are transferring skills to their communities and helping Sappi engage with the communities. Many have also begun to generate an income for themselves through their own businesses while they motivate other community members to restart or improve their own businesses. During 2018, 190 such micro- and small businesses were started or rejuvenated, earning an income for 268 people. Businesses range from brickmaking projects to poultry and pig farms, and from crèches to home industries. The programme is not only contributing to socio-economic development, it is also helping to boost morale and empower people.

The programme includes life skills training for the youth, the **Ifa Lethu** programme for the elderly (protecting cultural heritage), the introduction of Asset Based Community Development (ABCD) as the foundation for engagement with Sappi, as well as holiday programmes for school children.

- A shared value alien invasive clearing programme at our mills in KZN in collaboration with the non-governmental organisation **Wildlife and Environmental Society of South Africa (WESSA)**. The aim is two-fold: to clear alien invasive vegetation on our mill sites and to develop small-, medium- and micro enterprises (SMMEs) within the surrounding communities. A total of 20 community members per mill are being trained and employed through the programme, with the goal of establishing viable businesses which would also serve other customers.

Comments from participants in the Abashintshi programme

"The Abashintshi have helped me understand how to handle money in my business; they have also helped with advertising the work that I do and I am very grateful for their contribution not only in my life, but also for everything they do for our community."

Patrick Khumalo, carpenter and upholsterer

"ABCD training opened my eyes and I realised that I have a very lucrative business. Whenever I go out to sell my produce, I never come home with any of the stock, the business is really going well."

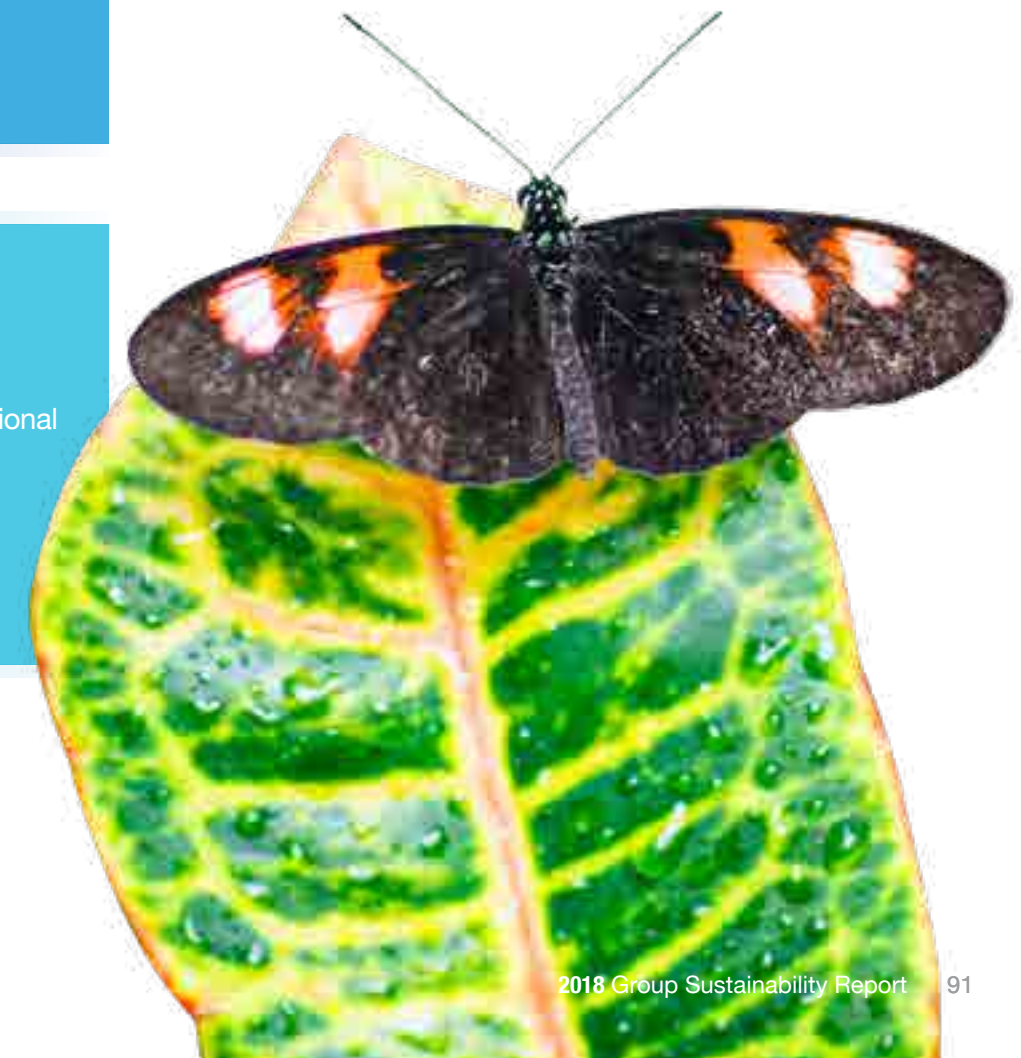
Khumbulile Ngongo, vegetable grower

SSA is a member of

Poverty Stoplight

and uses the tool to measure aspects of multi-dimensional poverty in the families of community beneficiaries so that we can target, prioritise and develop initiatives that speak to real needs on the ground.


 (www.povertystoplight.org.za)



Sharing value continued

Education

Our support of education and training includes:

- **Early Childhood Development (ECD):** In KwaZulu-Natal caregivers from Sappi communities are selected to gain qualification through the Training and Resources in Early Education (TREE) organisation. In Mpumalanga province we have established an ECD Centre of Excellence at the Sappi Elandshoek community through Penreach  (www.penreach.co.za/early-childhood-development).
- **Programme for Technological Careers (PROTEC):** We support five PROTEC branches in Sappi communities (mathematics and science classes for over 500 students per year in grades 10, 11 and 12).
- **Sappi Skills Centres:** Located at Ngodwana and Saiccor Mills, these centres provide structured technical vocational skills training to increase employability and income generation. Candidates are also identified for artisan positions.

Environment

- We provide support to various environmental organisations including the **SANBI (South African National Biodiversity Institute)**, **Birdlife SA**, **WWF-SA**, **The Honorary Rangers of the Kruger National Park**, and the **UCT Animal Demography Unit (ADU)** indigenous tree mapping project.
- The **Pepper Bark Tree (Warburgia salutaris)** project supports the efforts of the Kruger National Park to protect South Africa's most endangered tree by reintroducing the tree into communities. Sappi's intervention has enabled seedlings to be grown on a large scale. Seedlings are being grown for distribution to communities and an annual target of 15,000 seedlings is ensuring the tree is being reintroduced across many communities in Mpumalanga province and Swaziland in sustainable numbers.

Mountain biking

Support for mountain biking not only reduces risk and improves stakeholder relations, but provides direct benefit to local communities through increased tourism spend measured at some ZAR231 million annually.

About the *Warburgia salutaris*

The **Pepper Bark Tree** of South-eastern Africa, *Warburgia salutaris*, is endangered in the wild because of heavy harvesting of its much sought-after bark for traditional medicine. The name 'salutaris' which means 'health-giving', references the tree's medicinal properties. The bark and roots of the tree are used to treat various ailments. As the trade in medicinal plants has become increasingly commercialised, the harvesting of the tree has become unsustainable and *Warburgia salutaris* is being wiped out across its habitat.

Warburgia salutaris was assessed by the IUCN as endangered in 1998 because of its limited distribution. The tree is not only threatened by harvesting for medicinal use, but also by land-use changes. It grows slowly, increasing its susceptibility to overharvesting.

The tree is already extinct in the wild in Zimbabwe and is considered critically endangered in Swaziland.



regenerate

Planet

Bringing new and more vigorous life
to environmental responsibility.



Planet 2018 – at a glance



Treading more lightly

Our business relies on natural capital, particularly on woodfibre, land and water. Accordingly, we aim to tread more lightly on the **Planet** by responsible management of these resources.

Responsible production and consumption

Globally, over five years we have:

- Increased energy self-sufficiency by **5.6%**.
- Reduced emissions by:

Specific indirect (Scope 2) emissions by **13.34%**

Specific direct (Scope 1) and indirect (Scope 2) emissions by **3.4%**

Specific particulate matter emissions by **10.4%**

Specific NOx emissions by **12%**

Ensuring responsible management of our woodfibre sources

We recognise these credible third-party forest certification systems: the Forest Stewardship Council® (FSC®)¹, the Programme for the Endorsement of Forest Certification™ (PEFC™), the Sustainable Forestry Initiative® (SFI®) and other PEFC-endorsed systems.

Our plantations in South Africa are **100% FSC-certified**.

Globally 75.2% of the woodfibre used comes from certified forests and plantations, the rest from known, controlled and non-controversial sources.

Approximately a third of our land in South Africa is set aside for conservation purposes.



¹ Sappi licence number: FSC-C015022.

Our products come from nature and return to nature.

Recyclable



Biodegradable



Some of our packaging papers are compostable.



Our woodfibre resources



Woodfibre sourced from forests close to each mill. Softwood and hardwood pulp is sourced from Europe and the Americas.



Wood sourced from landowners and commercial loggers. Woodfibre is procured from temperate forests in Maine, New Hampshire, Michigan, Minnesota and Wisconsin and from the Canadian provinces of New Brunswick,



Access to **516,000 hectares plantations**, of which approximately
- **379,000 hectares** are owned or leased, and
- **129,000 hectares** are contracted supply.

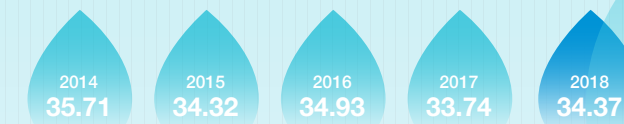
Primary species used: Spruce and pine (softwoods) and beech, eucalyptus, poplar, aspen (hardwoods). No owned forest land.

Quebec and Ontario. No owned forest land.

Primary species used: Maple, poplar, aspen, beech and birch (hardwoods) and spruce, pine and fir (softwoods).

Primary species used: Eucalyptus (hardwood) and pine (softwood).

Using less process water (m³/adt)

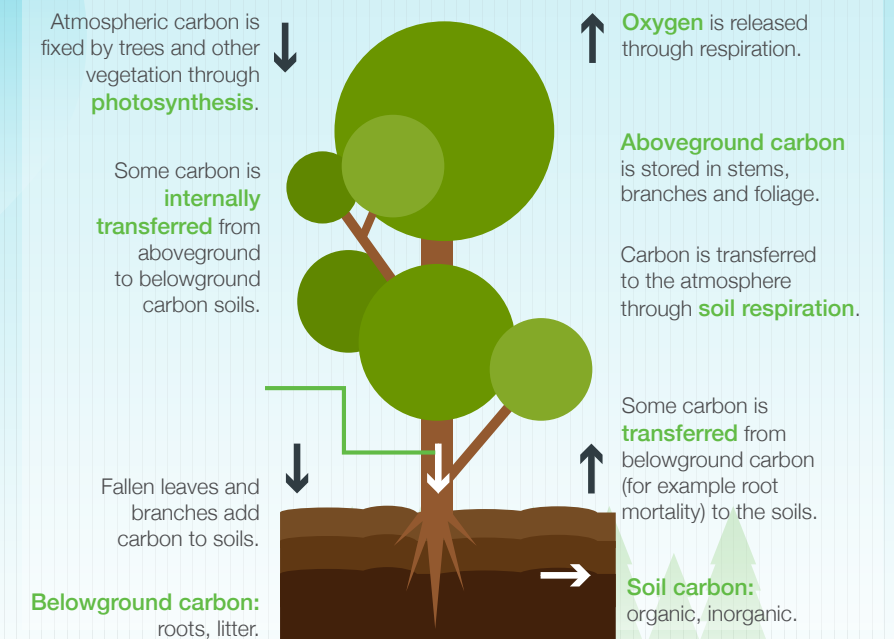


Globally, over five years, we have **reduced specific process water extracted by 3.8%**.

“Trees and forests play an essential role in mitigating the impact of climate change. Planting trees is one of the most important things we can do to contribute to the health of the planet.”

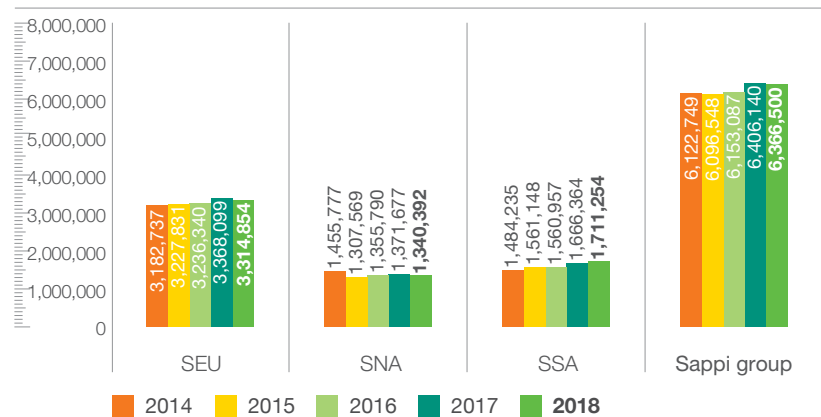
António Guterres, United Nations Secretary-General, message on the International Day of Forests 2018

The forests and plantations from which we source woodfibre help **mitigate global warming** by acting as **carbon sinks**.



Treading more lightly on the planet

Saleable production (adt/a)



Comment: Saleable production (adt/a)¹

In global terms, production was stable. In **SEU**, although most of the mills had a full order book in Q1 – Q3, production figures were down in Q4, so the 2018 production figures were not achieved. There was a slight decrease in **SNA**, due to reduction in Somerset Mill’s production because of the PM1 rebuild and operational issues (boiler pH excursion). In **SSA**, there was a slight increase, with paper production above business plan. However, dissolving wood pulp (DWP) production was negatively affected by new equipment installation issues associated with the DWP improvement projects at Ngodwana and Saiccor Mills. These projects, due to be fully completed shortly after year-end will add 50,000 tons of additional capacity at the two mills.



Our management approach

Recognising that healthy ecosystems are vital to our survival, wellbeing and prosperity, conducting our business in an environmentally sustainable manner is a necessity and an obligation. This obligation is integral to our licence to operate on an individual, community, country and global level. It also makes sound business sense, given that we depend on natural resources such as water and woodfibre for our ongoing viability as a business.

We acknowledge that we do have an environmental footprint, however we carefully manage and mitigate the environmental, climate and biodiversity impacts of our operations. We achieve this by working towards the Planet commitments embodied in **(S)** our *Group Sustainability Charter* (see www.sappi.com/policies).

To realise these commitments, we have a far-reaching environmental management approach which includes:

- Having environmental targets in place in each region. Progress in achieving targets is monitored closely and reported to the management teams in each region on a regular basis, quarterly to the *Global Sustainable Development Council (GSDC)* and biannually to the *Social, Ethics, Transformation and Sustainability (SETS) Committee*
- Using internationally recognised, independently verified accreditation systems including ISO 9001, ISO 14001 and in Europe, the *Eco Management and Audit System (EMAS)* and ISO 50001 in Europe and South Africa, as well as the *Forest Stewardship Council® (FSC®)*, the *Programme for the Endorsement of Forest Certification™ (PEFC™)* and the *Sustainable Forestry Initiative® (SFI®)* (woodfibre)
- Striving to minimise the environmental impact of our operations in terms of raw materials and energy use
- Developing new production methods and products and finding innovative new ways of benefiting side streams

- Saving water and energy at every stage in production processes. This begins in our South African plantations, where we apply best practice management techniques to produce woodfibre with properties that allow it to be pulped using less energy and water
- Ongoing investment in research and development
- Monitoring environmental performance and legal compliance at each mill, by constantly assessing our performance in terms of energy dashboards, integrated water and waste management plans, air emissions, and effluent
- Taking appropriate, pre-emptive action to avoid or mitigate identified environmental risks, and
- Ensuring that we keep up with environmental best practice through an internal environmental ‘cluster’ comprised of experts in various fields.

¹ www.compensationforce.com/2017/04/2016-turnover-rates-by-industry.html



Ensuring continuity of fibre supply

Overview

The responsible management of the forests and plantations from which we source woodfibre underpins our sourcing activities. This means that forests and plantations are managed for regeneration and healthy regrowth, thereby contributing to more resilient landscapes.

In **SEU**, we mitigate fibre supply risk through shareholdings in wood sourcing cooperatives and on a combination of approaches which include both short- and long-term wood supply agreements. Similarly, in **SNA**, we rely on long- and short-term supply agreements, but also improve access to small woodholdings through the **Sappi Maine Forestry Program** and the **Sappi Lake States Private Forestry Program**. These two programmes, staffed by SNA foresters, offer a wide range of services to landowners including contracting with experienced loggers, providing plans to enhance wildlife habitat and forest health, as well as advice in complying with town, state and federal regulations.

In **SSA**, Sappi Forests owns and leases 379,000 hectares of land. We also have access to wood from a further 129,181 hectares via contracted timber suppliers.

CASE STUDY

Getting in touch with forestry activities

Every year for the past eight years, employees from SEU's headquarters in Brussels planted saplings in the *Forêt de Soignes*. In March this year they planted a further 1,100, bringing the number of trees planted since the initiative began to over 17,350. The initiative is conducted in association with Agentschap voor Natuur en Bos (ANB), the equivalent of the Department of Forestry in South Africa. This organisation is responsible for the planting of approximately 30,000 trees in the *Forêt de Soignes* every year as part of the National Forest Management Plan (Belgium). Located in the south-eastern part of Brussels, the *Forêt de Soignes* covers an area of over 4,400 hectares.



Sappi Forests

Sappi Forests' planning section documents, monitors and models its woodfibre resources to ensure that a continuous and sustainable supply of timber is available as required by different markets. Planning incorporates planting permits and water licences as well as information for non-plantation areas.

Growing stock data is used for determination of the value of forestry assets. Accurate information about growing stock is obtained from systematic sampling of stands and growth models used to model stand development over time. Conventional sampling is supplemented by LiDAR data. Adjustments to growing stock are made for damage caused by pests and diseases as well as climatic extremes and fire risk. Sophisticated software is then used to produce annual operational, tactical and strategic supply plans. The planning section incorporates species recommendations from the research section in the three-year planting plan. In addition, we use remote sensing and GIS analysis to assist with the identification and management of biotic and abiotic risks. We enhance our fibre base through leading-edge tree improvement programmes which aim to produce low-cost wood with the required pulping characteristics and increase yield per hectare. We achieve this mainly through genetic selection of planting stock.

Our *Tree Health Laboratory* enables us to conduct

research into pest and disease management,

and initiate pilot studies in the selection and use of bacterial and fungal biological control agents of insects and pathogens.

Maintaining high levels of certification

Overview

Our procurement policies cover a wide variety of issues, including the management of plantation forests and harvesting.

We are committed to sourcing woodfibre from forests and timber plantations in a manner that promotes their health and supports community wellbeing. Accordingly, in 2018

Ⓢ we revised our *Group Woodfibre Procurement Policy* (see www.sappi.com/policies).

The sale of illegally or unsustainably harvested timber has been and continues to be a major issue that contributes to deforestation around the world. We mitigate this risk by ensuring that all wood used is legally harvested and comes from sustainably managed forests and tree plantations in accordance with the following credible third-party forest certification systems: The *Forest Stewardship Council*® (FSC®), the *Programme for the Endorsement of Forest Certification*™ (PEFC™), the *Sustainable Forestry Initiative*® (SFI®) and other PEFC-endorsed systems.

Rigorous tracing practices

Suppliers have to provide evidence that all woodfibre is sourced from controlled, non-controversial sources in accordance with the *FSC Controlled Wood Standard*, as well as PEFC (and SFI in North America) risk-based due diligence systems. Due diligence procedures are in place in all regions to fulfil the PEFC and FSC Controlled Wood requirements and risk assessment procedures related to EUTR/Lacey Act (origin of wood and supplier chains) are also in place.

Sappi mills have the monitoring tools in place to fulfil the requirements of the *EU Timber Regulation (EU No 995/2010)* and *Lacey Act*. SEU can provide information on product composition, tree species, and the origin of woodfibre. All purchased woodfibre is at least FSC Controlled Wood and all mills are either FSC Chain of Custody or FSC- and PEFC Chain of Custody-certified.

SNA records the town and state or province of origin of each load of wood received at the mills. Representative samples of the deliveries to the mills are subsequently traced backward to confirm the accuracy of the information provided. Through a separate effort, the State of Maine requires that all timber harvests must be registered with the Maine Forest Service, which periodically inspects the operation for environmental compliance. The State of Maine also requires the use of a 'trip ticket' to accompany any wood transported to market. The trip ticket identifies the owner, the place of origin and the destination of the wood. A trip ticket system is also utilised in Minnesota, supported by a random sampling process which is incorporated into SNA's certified sourcing procedures.

SSA and SEU operate according to FSC- or PEFC Chain of Custody requirements which stipulate reporting on species and on countries' forest origin.

Ⓢ See [FAQs – Our certifications](#) on www.sappi.com/certifications.

Across the group, 75.2% of fibre supplied to our mills is certified. Our global target is to achieve 79% by 2020

📖 (see [Targets](#)). In SEU, SNA and SSA, the percentage of certified fibre supplied 2018 was respectively: 78%, 58% and 82.2%. Our plantations in South Africa are 100% FSC-certified (see [Key material issues](#) – Woodfibre certification).



Multi-site certification in Sappi North America

SNA recently transitioned to a multi-site Chain of Custody certificate as a result of a successful audit under the FSC, PEFC and SFI programmes. The audit, conducted by *Bureau Veritas*, noted several exceptional practices including:

- **Somerset wood procurement:** Excellent culture of training and mentoring new foresters, yielding outstanding results on the ground and retention of the highest calibre foresters
- **Culture of teamwork:** Successful transition to a multi-site certificate indicative of effective teamwork and robust internal auditing protocols, and
- **Robust forestry certification training programme:** Impressive training plan, scope, execution and reach across organisation.

Overall, this transition will reduce complexity and increase transparency for all parties, including Sappi customers, and over time provide increased flexibility to deploy certification credits across Somerset, Cloquet and Westbrook Mills.

Mitigating climate change

Accountability for climate change

The Group Head Technology reports directly to the CEO. This individual is responsible for overseeing:

- Climate-change related research, such as the group’s tree improvement research which focus on improving the sustainable supply of woodfibre
- Research related to the reduction of greenhouse gas (GHG) emissions as well as more efficient water usage—particularly important in South Africa, where climate change is putting pressure on freshwater resources, and
- Expansion projects where climate-related issues such as energy efficiency, decreased energy usage and a reduction in GHGs are always a consideration.

Overview

In all three regions where Sappi operates, climate change could alter the frequency and intensity of forest disturbances such as insect outbreaks, invasive species, wildfires and storms. These disturbances could reduce forest productivity and change the distribution of tree species. However, given SEU’s general risk mitigation strategy of sourcing pulp and woodfibre from a variety of sources and regions, we do not anticipate any material impact to raw material supply from climate change in the short- to medium term (five to 10 years). In SNA, our operations do not currently face material risks associated with climate change. With the exception of fibre from Brazil for Westbrook Mill, we source from northern hardwood and softwood baskets that have not suffered under any drought conditions or from fire.

In SSA, where our operations are being impacted by climate change and we make significant investment in the prevention of fire, pests and diseases, as well as site species matching to tolerate drought, frost and other weather events. We have seen a large steady decline in rainfall in our best growing areas in KwaZulu-Natal (KZN) with a significant decline in mean annual increment and production from these areas.

Sappi Forests’ response

The plantation industry in South Africa faces an increasing threat from pests and diseases, as well as climate change.

As a leader in R&D, Sappi Forests mitigates these risks by:

- A diversity of commercial species and hybrids deployed across a wide range of climatic conditions and site species matching
- Maintaining wide genetic variability in planting material. This enables Sappi to breed trees for a wide range of conditions and the rate of change in conditions is considered slow enough for the company to respond in the breeding programme. In other words, we will produce better trees as conditions change
- Measuring permanent sample plots annually (*eucalypts*) or bi-annually (*pin*es) to determine the effect of drought on current annual increment as an input to long-term planning
- Implementing extensive planting of more drought-tolerant *eucalypt* hybrids, and
- Engaging in research and collaboration with industry and tertiary institutions to develop bio control measures and breed genetically more resistant planting stock.

In addition, we have undertaken the following:

- We recently conducted an assessment to investigate possible climate change effects on our land holdings. The most important finding from the preliminary work is that it provides a ranking of areas where the most severed climate changes can be expected. These results indicate that monthly changes and trends are as important as mean annual changes between periods.

There is in general an increase in mean maximum temperatures over the late-winter (July to October) period. Winter minimum temperatures will not increase significantly on higher elevations, whilst winter minimum temperatures will increase on lower elevation areas. Thus, there might be only a small frost risk reduction on certain plantations. There is a high likelihood of an increased fire season and decreased growing period.

The reduced rainfall and increased temperature range over the late winter to early spring period on the Highveld plantations will likely increase tree stress. For the first three districts in Mpumalanga with the highest climate change risk planting of *Eucalyptus (E.) nitens* had to be stopped due to pest and disease issues, possibly already related to climate change.

Mitigating climate change continued

- Shifting our tree breeding strategy:** Sappi's breeding programme has seen an important shift from planting pure species to more productive, better adapted, and more pest and disease resistant hybrids of both hardwood and trees grown in **SSA** plantations. This change in strategy is being driven by the need to respond more rapidly to the challenge of changing weather patterns (driven by climate change) that are resulting in significant increases in pest and diseases in the tree crop. The benefit of developing new hybrids is that breeders can additively combine the benefits from two or more species and develop varieties that have improved fibre yield and quality as well as better disease/pest tolerance. The vision is that by 2025 all of the Sappi's tree planting efforts will be improved hybrid varieties or families. A good current example of this shift is provided by our strategy in terms of *E. nitens* (see case study alongside).

Sappi's forest land encompasses a huge diversity of environments, ranging from warm, year-round growing conditions in sub-tropical Zululand to cold temperate areas with winters exposed to both frost and snow during the winter season. Accordingly, breeders have focused on developing and testing a large range of new hybrids with species sourced from Australia/Indonesia for *eucalypts* to Central America, Mexico and the United States of America for *pines*. In addition, new technologies, such as the use of molecular marker technologies, are helping breeders improve both the quality and throughput of the varieties than can be tested and developed.

One important driver for this change in strategy is the ability to respond rapidly to changes or new threats. The move to developing and testing hybrid varieties and families will greatly increase Sappi's response time. In conjunction with a change in breeding strategy, Sappi has invested in state-of-the-art nurseries at Clan, in the KZN midlands and at Ngodwana, Mpumalanga. These cuttings nurseries are now capable of replacing a large proportion of the previous seedling crop that has been planted in the past.



CASE STUDY

Eucalyptus nitens in KwaZulu-Natal

Site genotype matching aims to find the optimal solution between producing as much timber as possible, at the lowest risk, which is suitable for the market. Over a large portion of KwaZulu-Natal (KZN) at altitudes greater than 1,150 metres, snowfalls with an average interval of 10 years between major snowfall events can occur. In the past, *Eucalyptus nitens* has been deployed in areas in KZN where snow and frost risk are high. However, increased occurrences of pest and disease issues associated with *E. nitens* (such as *Mycosphaerella* leaf disease, *Phytophthora* root rot and Cossid Moth) are putting this species at risk.

Accordingly, Sappi had to consider deploying alternative genotypes, despite the potential higher risk of snow and frost damage. A study was conducted to identify the areas in KZN subjected to different levels of frost

and snow in order to quantify the risk exposure. The financial implications of planting alternative genotypes were also evaluated for a number of scenarios. The results from a snow damage study at Bulwer provided both a measure of the percentage of *E. nitens* trees per snow damage class, as well as the impact of snow damage on harvesting productivity. This information was used in the calculation of utilisable timber and harvesting costs of each scenario. This, together with a financial evaluation was used to determine the sensitivity of various parameters and assumptions.

This in turn provided a probability of making a loss with each scenario, based on the variation defined for each assumption in the model. The results indicated that on sites where both severe snow risk and frost risk occurs, it will be challenging to find an alternative to *E. nitens*, without increasing the risk of crop loss (past conditions). However, compared to scenarios where *E. nitens* survival declined and were subjected to pests and diseases (future conditions), even the worst-case scenario with a snow and frost tolerant hybrid outperformed the *E. nitens*. This work highlighted the importance of evaluating management options and associated risks across the entire value chain.

Maintaining biodiversity

Overview

Neither our own plantations in South Africa nor the forests in Europe and North America from which we source woodfibre would be productive without biotic processes taking place. These processes play a vital role in ensuring the health and vitality of trees in terms of decomposition, soil rejuvenation and pest control.

Both the plantations and forests which provide us with woodfibre are actively managed to enhance these beneficial processes and restrict harmful processes like pests and disease.

The certification systems we use include measures to protect water quality, biodiversity, wildlife habitat, species at risk and *Forests with Exceptional Conservation Value* (SFI).

Sappi Forests

Approximately 30% of the land that we own and lease in South Africa is permanently unplanted and actively managed for the conservation of the natural habitats (including indigenous forests) and the biodiversity they contain.

Our strategies for managing biodiversity include:

- Managing natural vegetation according to best practice in terms of burning, grazing and weed control to ensure health habitats
- Ongoing assessment and monitoring of veld condition
- Protection of sites from poaching, illegal medicinal plant collection and overgrazing
- Participation in the national stewardship programme through which we have six declared nature reserves and are in the process of having a seventh proclaimed, and

- Long-term integrated weed management plans on all our plantations. Invasive alien plants (IAPs) are widely considered as a major threat to biodiversity, human livelihoods and economic development. Currently, there are 379 species of plants listed as IAPs in South Africa. As a result of their high diversity and far-reaching distribution, they are extremely difficult to control. We combat weeds by implementing weed control programmes, managing natural areas to maintain healthy vegetation (weeds generally spread into disturbed poorly managed areas) and reducing sources and avenues of seed dispersal.

In addition, we are currently establishing biodiversity targets in Sappi Forests.

Flagship species

Flagship species are a selection of charismatic easily recognisable

red data listed animal species.

Flagship species on Sappi land include the Blue Swallow, Oribi, the Cape Parrot, Southern Ground Hornbill and all South African cranes.

The *Endangered Wildlife Trust*

requests information on the numbers and location of these species from landowners.

In **SNA**, our Forestry Program assists woodlot owners in the states of Maine, Minnesota, Wisconsin, and Michigan’s upper peninsula develop, manage and harvest their woodlands.

In **SSA**, qualified extension officers work with growers in our enterprise development scheme, *Sappi Khulisa*, to promote responsible planting and harvesting practices.

Becoming more energy efficient

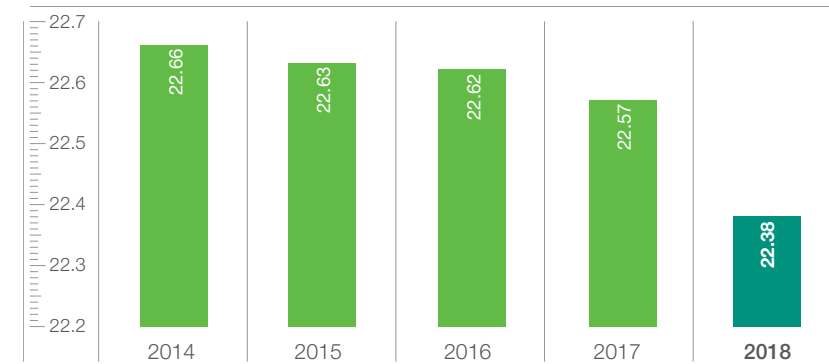
See [Key material issues](#) – Bio-energy, for more information about *Ngodwana Energy*, the biomass project in which we have a 30% shareholding.

Overview

Our aim is to enhance energy self-sufficiency, improve energy efficiency and decrease our reliance on fossil fuels. We are achieving this by making process changes, installing best available technology (BAT) which is more energy efficient, reducing purchased energy (electricity and fossil fuel) by increasing our use of renewable energy—an approach that ultimately results in a reduction in CO₂ emissions.

As can be seen from the graph alongside, specific energy intensity has steadily decreased over time.

Specific energy intensity (GJ/adt)¹



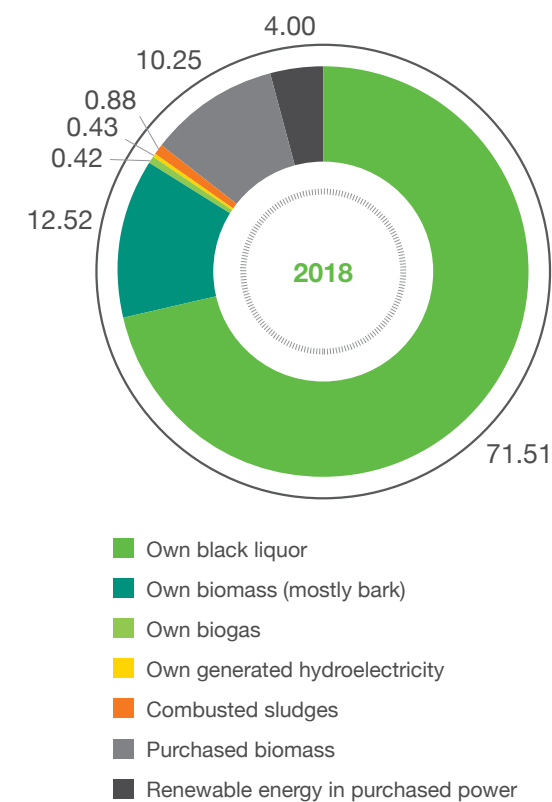
Ngodwana Mill

¹ Figures based on net calorific values.

Renewable energy

Our renewable energy consumption in 2018 was 46.8% of total energy consumption, 71.5% of which was derived from black liquor, as indicated in the pie chart below. The regional renewable energy profile is as follows: **SEU**: 25.3%, **SNA**: 79.3% and **SSA**: 42.7%.

Group renewable energy consumption (%)



Using renewable, rather than fossil fuel, energy sources is important, as the burning of fossil fuels releases ‘new’ CO₂ previously locked up in the earth’s crust in the form of oil, gas or coal. When renewable energy like biomass is burned, the CO₂ released is equivalent to that which was bound from the atmosphere during the process of photosynthesis—so, no ‘new’ carbon is being introduced.

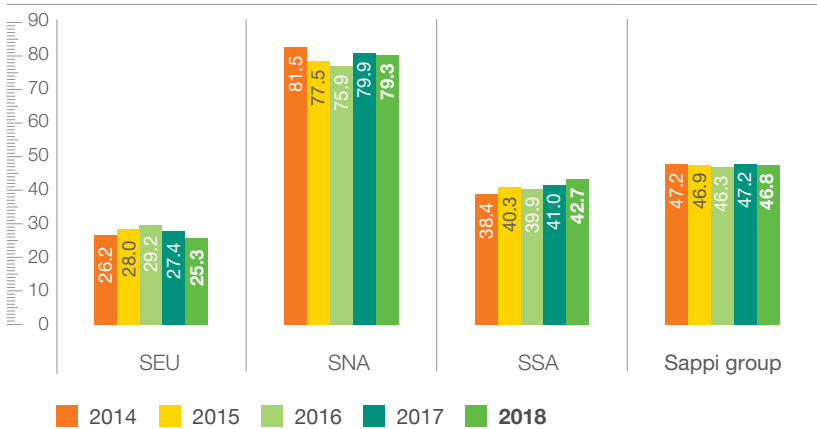
The reason for the much higher percentages of renewable energy in our mills in **SNA** and **SSA** than in **SEU** is that in the first two regions, a much greater proportion of our product originates from integrated pulp and paper mills. These mills typically have a higher degree of energy self-sufficiency than mills with different processes from those that only produce paper, as the black liquor (dissolved organic compounds from wood) created during the manufacture of pulp is a biofuel and a primary source of renewable fuel for steam and power production.

While we are committed to higher use of renewable energy, we have the following process constraints:

- Currently, our black liquor recovery boilers and chemical recovery plants are used to maximum capacity and any additional black liquor is sold
- There are constraints in the existing infrastructure which limit the use of biomass including low capacity of receiving stations and feeding systems
- The use of biomass in existing coal-fired boilers is limited as these boilers are designed for hard coal, given that the operation of the installed steam turbines requires higher inlet heat loads, and
- In **SNA**, our combustion of biomass is constrained by the scarcity of drivers who can make deliveries. In addition, increasingly limbs and toppings are increasingly being diverted for use on logging roads to limit erosion, instead of being sent to our mills.

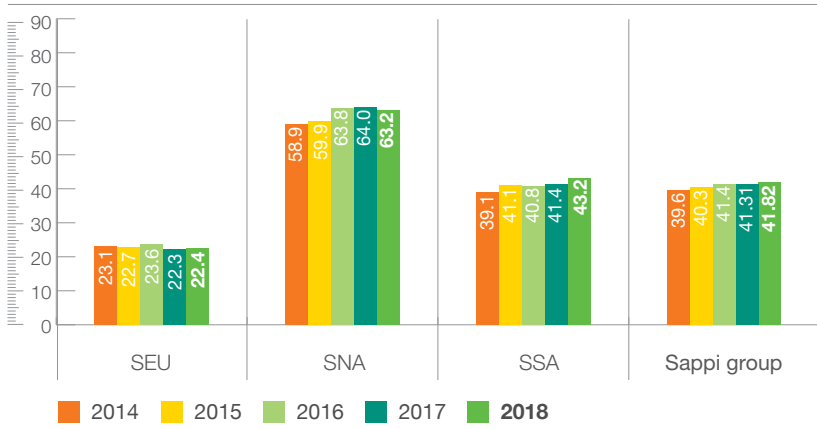
Renewable energy continued

Renewable energy (%)¹



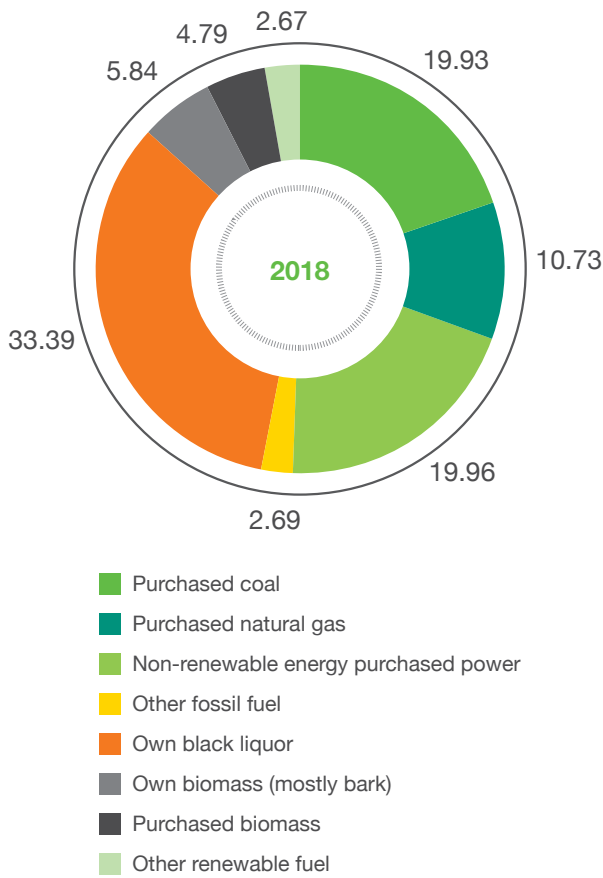
Comment:
Across the group, renewable energy was stable, but decreased in **SEU** due to unplanned maintenance standstill of the green power steam generator turbines at Alfeld and Stockstadt Mills. It also decreased at Gratkorn Mill because of increased consumption of natural gas for power and heat generation—the result of a cold winter. In **SNA**, all three mills showed slight decreases. Westbrook Mill increased coal firing for economic reasons while Somerset Mill increased their use of natural gas and #6 oil in response to low biomass inventories. These were partly due to a woodroom replacement capital project and economic pressures. In **SSA**, there was a slight increase due to the inclusion of Lomati Sawmill which has a high energy self-sufficiency and a slight increase at Saiccor Mill. The latter was due to an increase in the amount of black liquor fired and a decrease in heavy fuel oil consumption as a result of enhanced boiler operation stability.

Energy self-sufficiency (%)



Comment:
Across the group, there was a slight increase. In **SEU**, energy self-sufficiency was stable. Maintenance standstills of steam turbine generators at Alfeld and Stockstadt Mills reduced energy self-sufficiency. However, this was compensated by an increase in energy self-sufficiency at Ehingen and Kirkniemi Mills. In **SNA**, there were a slight decrease. Somerset Mill showed a decrease due to additional power boiler and turbine outages resulting from boiler water pH excursions. In **SSA**, there was a slight increase due to the inclusion of Lomati Sawmill which has a high degree of energy self-sufficiency; as well as an increase in black liquor fired and a decrease in heavy fuel oil consumption as a result of more stable boiler operation at Saiccor Mill. At Ngodwana Mill, energy self-sufficiency increased due to good performance of the recovery boilers, increased bark combustion and more efficient steam usage.

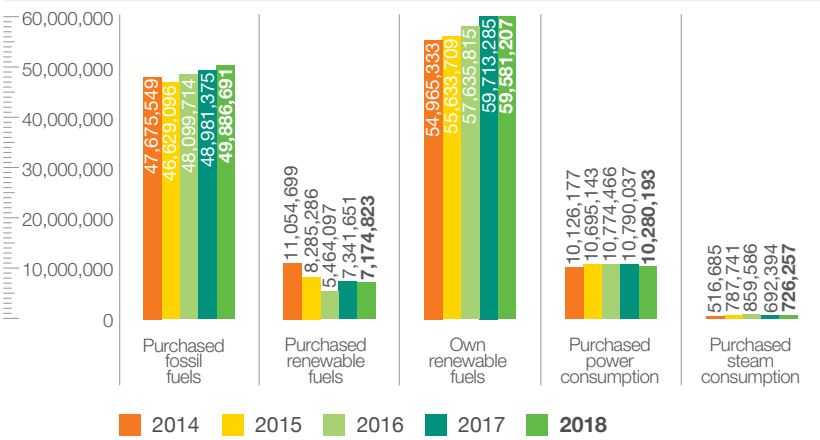
Fuel sources (%)



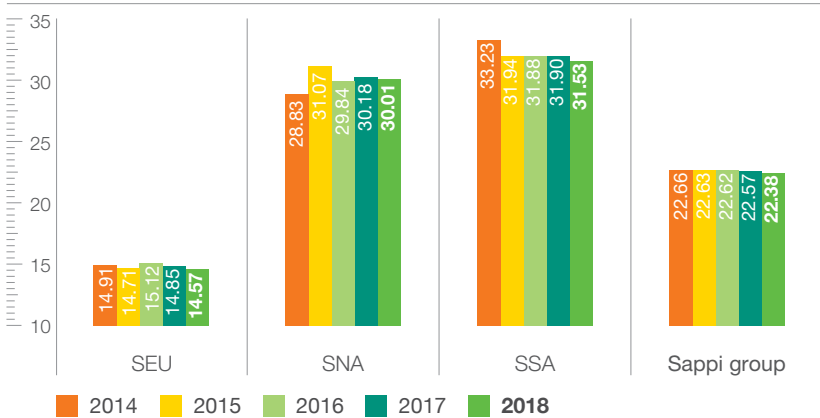
¹ Renewable energy certificates (RECs) not deducted.
www.sappi.com

Renewable energy continued

Energy consumption within organisation (GJ/a)



Energy intensity (GJ/adt)¹



Comment: Across the group energy intensity based on specific total energy (STE) (GJ/adt) was stable. In **SEU**, while Kirkniemi Mill increased production by approximately 10%, resulting in a decrease in energy efficiency, Lanaken Mill experienced operational problems with its gas turbine in 2017. However, in 2018 operations resumed as normal, with the mill reducing specific natural gas consumption. In **SNA**, there was a slight decrease. Cloquet Mill continued to improve due to a combination of stable production capital projects and Lean Six Sigma efforts. This offset increases at Somerset Mil due to the rebuild of PM1 and at Westbrook Mill due to power generation inefficiency. In **SSA**, energy intensity decreased slightly. This was due to the following actions: At Stanger Mill, coal savings were achieved because of the optimisation of airflow, grate speeds and guillotine heights on boilers, as well as improved insulation lagging. In addition, there were electricity savings due to installation of high efficiency lighting mill-wide and load shedding the wash press during peak periods. At Tugela Mill, energy intensity decreased due to above-budget saleable production and improved efficiencies. The mill stopped one refiner on PM2, made improvements to the digester (energy saving of 164 KW/h per ton), stablished the spray dryer and reduced steam consumption. In addition, a vacuum pulp commissioned after the shut contributed positively, as did energy conversion on the gas boilers. Coal savings were achieved as the turbine maximised generation. At Ngodwana Mill, the reduction was due to efficiency improvements in steam usages and good performance of the recovery boilers in Q4.

Black liquor, which is classified as a biofuel, is the spent cooking liquor from the pulping process which arises when pulpwood is cooked in a digester thereby removing lignin, hemicellulose and other extractives from the wood to free the cellulose fibres. The resulting black liquor is an aqueous solution of lignin residues, hemicellulose and the inorganic chemicals used in the pulping process. Black liquor contains slightly more than half of the energy content of the wood fed into the digester.

In South Africa in 2018, Sappi signed an agreement with the *Department of Energy* to **build a 25 MW biomass energy plant at Ngodwana Mill in Mpumalanga**. Sappi will have a 30% stake in the facility, which is expected to contribute to the national grid from 2020 (see [Key material issues](#) – Bio-energy).

Gratkorn Mill has partnered with local energy provider *Bioenergie Wärmeservice GmbH (BWS)* to

supply industrial waste-heat

generated by the mill’s combined heat and power (CHP) plant to Energie Graz for the next 20 years. Transported to Graz via nine kilometres of underground pipes and at a temperature of 120° C, the excess heat is fed into the city’s existing heating system and

will be used to keep 18,000 households in the Austrian city of Graz warm.

As a result of this initiative, total CO₂ emissions will be reduced by 20,000 tons per annum.

¹ Figures based on net calorific values.

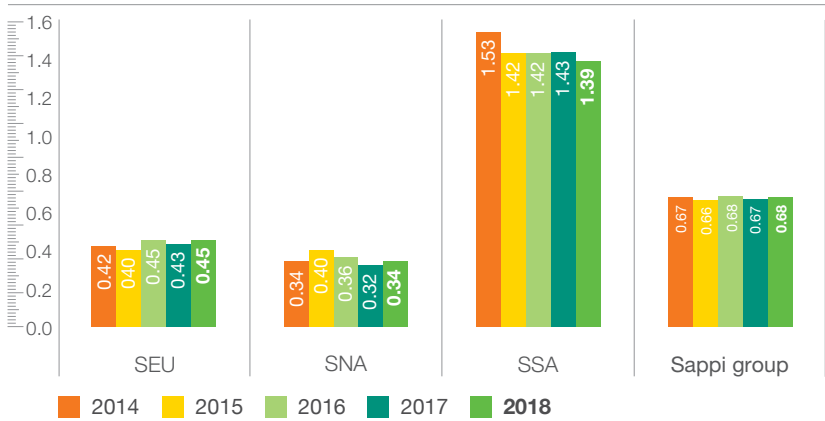
Reducing greenhouse gases

Overview

We share the view that collectively, greenhouse gases (GHGs), most notably carbon dioxide (CO₂), and methane (CH₄), are responsible for climate change. It makes sense for us to focus on reducing GHG emissions not only because it helps us achieve our aim of treading more lightly on the Planet but also in the light of impending carbon taxes in many countries around the world. Unfortunately, there was a slight increase in direct (Scope 1) GHG emissions in 2018, due to the reasons outlined in the commentary underneath the graph. However, there was a slight decrease in indirect (Scope 2) GHG emissions.

In terms of carbon taxes, we continue to monitor the situation in each region where we operate. In North America and Europe, carbon taxes do not appear to be an imminent risk. In South Africa, the Department of Environmental Affairs has accepted our proposed carbon budget which is valid until 2020. As highlighted in the 2018 medium-term budget, the carbon budgeting system and the proposed carbon tax, now due to come into effect in June 2019, will be aligned, with a higher tax rate imposed as a penalty for emissions exceeding the carbon budget.

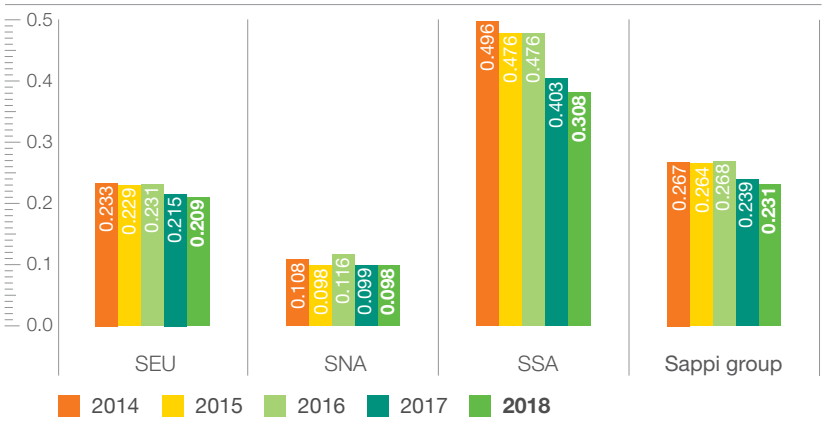
Specific direct emissions (Scope 1) (tCO₂e/adt)¹



Comment

Across the group, there was a slight increase. In **SEU**, the slight increase was caused by the reduction of pulp production at Alfeld and Stockstadt Mills due to technical reasons; in integrated sulphite pulp mills the recovery boiler generates excess energy which is used by the paper mill. When pulp production is reduced, there is less steam from the recovery process, which has to be provided by other boilers, which are fired with fossil fuels at both Alfeld and Stockstadt Mills. At Gratkorn Mill, Scope 1 emissions went up because of increased consumption of natural gas for power and heat generation, as well as the cold winter. Scope 1 emissions at Maastricht Mill increased due to the start-up after the rebuild of PM6, while Stockstadt Mill increased Scope 1 emissions due to trials on new product development. In **SNA**, there was a slight increase, with additional coal firing at Westbrook Mill for economic reasons. Somerset Mill also burned less renewable energy (black liquor and biomass) with the balance coming from fossil fuels (natural gas and #6 oil). In **SSA**, there was a slight decrease, the result of less fossil fuel combustion, good performance of the recovery boilers which led to increased use of black liquor and greater combustion of bark at Ngodwana Mill. In addition, at Stanger Mill, there were coal savings attributable to the optimisation of airflow, grate speeds and guillotine heights on boilers, together with improved lagging.

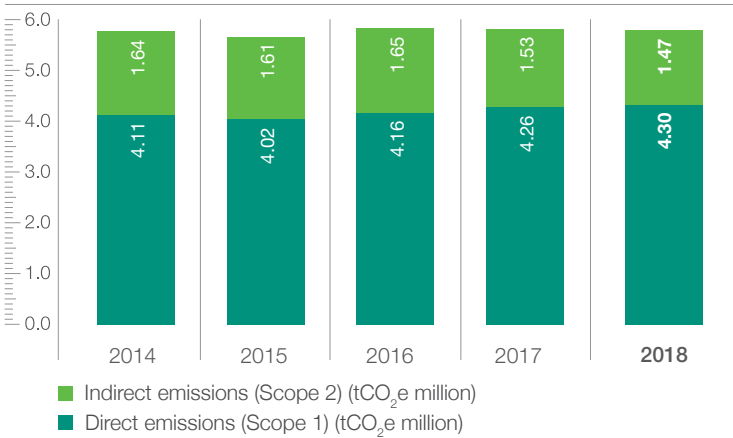
Specific indirect emissions (Scope 2) (tCO₂e/adt)²



Comment

Indirect (Scope 2) emissions showed a slight decrease in global terms. Efficiency improvements in **SEU** led to a slight decrease. The slight decrease in **SNA** was driven by a decrease in the purchased power carbon emission factor. This offset slight purchased power increases in at both Cloquet and Somerset Mills. In **SSA**, the decrease was the results of higher levels of energy self-sufficiency at Saiccor Mill; optimisation projects at Stanger Mill which led to reduced power purchases and improved peak demand management. Tugela Mill decreased due to higher turbine power generation and an energy saving initiative which stopped one refiner at PM2 for most of Q3.

Absolute direct emissions (Scope 1) and indirect emissions (Scope 2) (tCO₂e million)

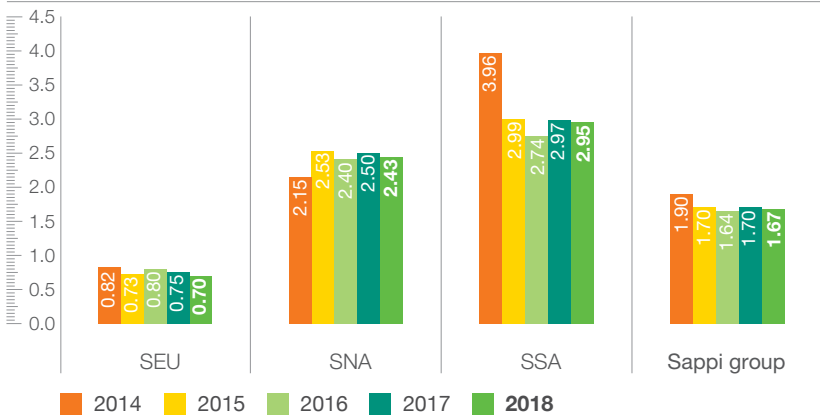


¹ Scope 1 emission calculations are based on the GHG Protocol, using IPCC (2006) emission factors and 5th Assessment GWP factors.
² Scope 2 emissions are calculated based on the market-based method as defined by the GHG Protocol. Eight of our mills use market-based emission factors, the other seven mills use location-based (country-specific) emission factors.



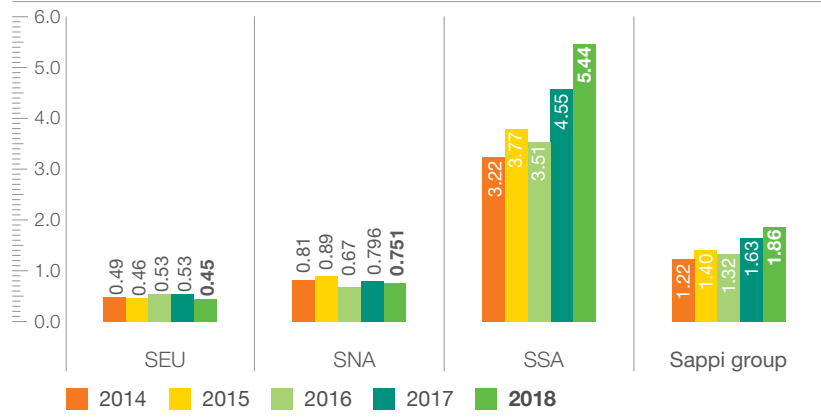
Reducing greenhouse gases continued

Specific NOx air emissions (kg/adt)



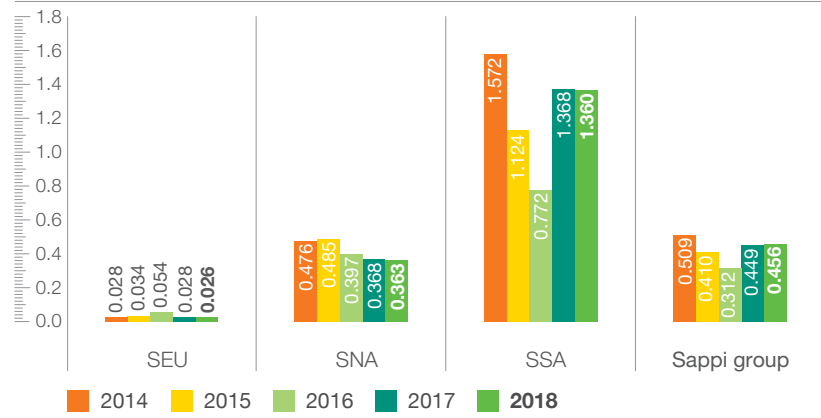
Comment: There was a slight decrease across the group. In **SEU**, the decrease was due to quality variation of coal at Gratkorn Mill and reduced pulp production at Alfeld and Stockstadt Mills. Emissions also decreased in **SNA**, where non-condensable gas (NCG) firing contribution in power boilers #7 and #9 at Cloquet Mill was down. In addition, emissions decreased at Somerset Mill due to lower sulphur content in the fuel oil. The decreases were partially offset by increases at Westbrook Mill’s power boiler #21 due to increased coal firing for economic reasons. In **SSA**, emissions were stable.

Specific SOx air emissions (kg/adt)



Comment Across the group, there was in increase. However, SOx emissions decreased in **SEU** due to optimisation in the liquor boiler at Gratkorn Mill and reduced pulp production at Stockstadt Mill. Overall, emissions were down in **SNA**, due to the use of oil with lower sulphur content at Somerset Mill and decreased NCG firing contribution in power boilers #7 and #9 at Cloquet Mill. The decreases were partially offset by increases at the Westbrook Mill’s power boiler #21 due to increased coal firing. The increase in **SSA** was due largely to a change in coal supply at Ngodwana Mill which led to decreased coal quality. At Stanger Mill, coal quality was also an issue and there were problems with the Copeland reactor at the same mill which resulted in increased use of heavy fuel oil.

Specific particulate matter air emissions (kg/adt)



Comment Particulate emissions decreased slightly in group-wide terms. In **SEU**, the decrease was due to reduction of coal firing at Stockstadt Mill. In **SNA**, emissions declined due to recovery boiler precipitator optimisation including upgrades to the rapper controls at Cloquet Mill. This led to an overall reduction in particulate emissions despite increases at Somerset and Westbrook Mills. Emissions in **SSA** were stable.



Cloquet Mill

Using water responsibly

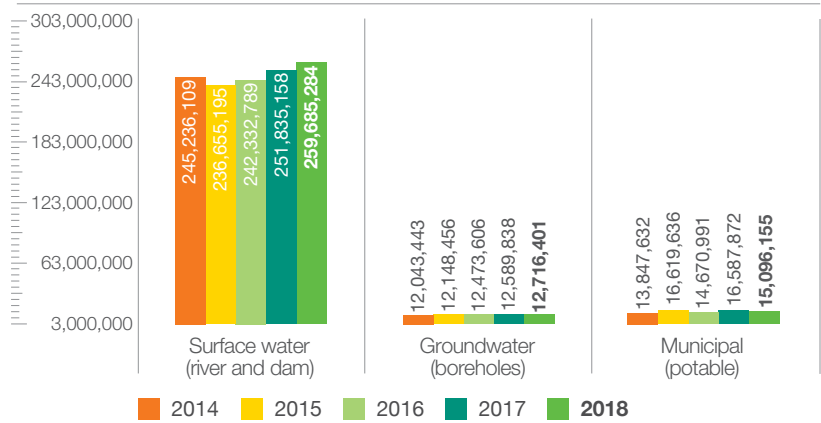
See [Key material issues](#) – Water, for more information.

Returning water to the environment

Across the group, in 2018, we extracted 287.68 million m³ of water. However, our total water consumption is lower than the amount extracted would indicate, because we return a high percentage of the water we use back to the environment—95% of water extracted was returned to the environment. Water that is ‘consumed’ in our operations (approximately 5%), is primarily water lost to the environment due to evaporation in the paper drying process and a small amount of moisture contained in our finished products.

Most of the water used in our operations is drawn from surface water in the form of lakes and rivers, with small amounts of groundwater and municipal water used. All our mills use and treat water in accordance with comprehensive environmental permits. Generally, water is treated by the mill and then returned to the same primary sources from which it was drawn. The exception is Saiccor Mill where water is drawn from the Umkomaas River and released into the Indian Ocean via a 6.5 km pipeline.

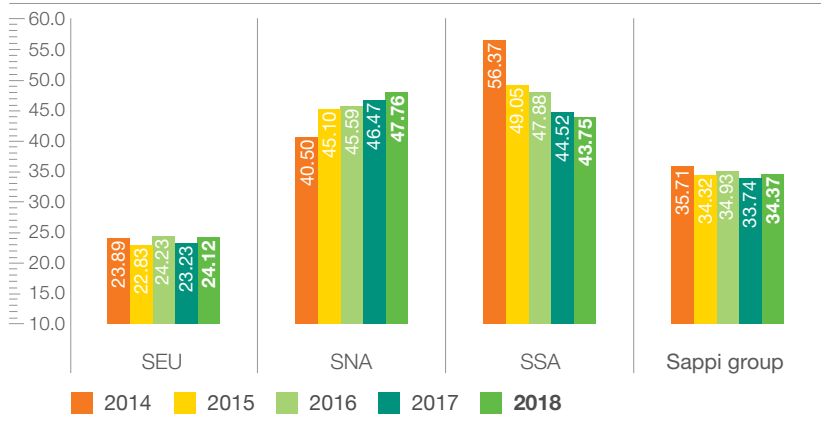
Total water withdrawal by source (m³/a)¹



Comment

Across the group, there was a slight increase in total water withdrawal. Surface water abstraction increased in **SEU**, due largely to increased production at Kirkniemi Mill. In **SNA**, surface water usage increased at Cloquet Mill but was offset by a decrease in municipal water usage at the same mill, as well as at Westbrook Mill. In **SSA**, surface water withdrawal increased slightly. This was attributable mainly to Saiccor Mill, where the speciality grades have a greater requirement for pulp cleanliness and consequently, higher water demand.

Specific process water extracted (m³/adt)²



Comment

Across the group, there was a slight increase. In **SEU**, there was a small increase attributable to the following: water circuit problems with the paper machines at Alfeld Mill, water circuit problems in Gratkorn Mill’s pulp recovery process, the start-up of PM6 at Maastricht Mill and new product trials at Stockstadt Mill. In **SNA**, there was a slight overall increase driven by reduced paper mill production at Somerset Mill due to the upgrade of PM1. Westbrook Mill also showed a slight decrease in specific water usage, do in most part to a production increase. In **SSA**, there was a decrease at Stanger and Tugela Mills (see [Planet](#) – Reducing water usage at Tugela Mill).



Tugela Mill

¹ Total water withdrawal includes water drawn for all purposes: water to process, water to communities, cooling water and third parties etc.
² Process water extracted and effluent discharged excludes non-contact cooling water for Europe and North America.

Using water responsibly continued

Biodispersion at Saiccor Mill

The biodispersion value represents the chemical oxygen demand (COD) tested at the margin of the mixing zone in the marine environment. It is described as a 40 metres radius along the length of the pipeline. This mixing zone is defined and permitted by the authorities in the Mills Coastal Waters Discharge Permit. The pipeline contains 58 diffusers (over a distance of 750 metres), designed to aid the dispersion of the effluent to meet the Coastal Water Quality Guidelines, at the 40 metres distance. The biodispersion value for COD is more representative of the environmental impact of the wastewater.

The CSIR has been evaluating the environmental impact at Saiccor Mill, since 1956 through their annual marine outfall surveys. This monitoring programme has produced 74 scientific reports over this period. The findings from this long-term monitoring programme,

have shown that the wastewater discharge, comprising approximately 98% freshwater, does not harm the marine environment and that biodiversity is being maintained.

These findings have led to the conditions of the discharge permit being amended to stipulate that the marine outfall surveys should take place every two years. In 2017, the scope of the programme was extended to include the monitoring and measurement of the biodispersion value. This additional monitoring will assist the CSIR with providing independent verification of the mill's compliance against the limits of the legal discharge permit and coastal water quality guidelines.

The focus for Saiccor Mill will continue to remain on the actual impact analysis, and further amendments to the monitoring programme will continue to be made, to ensure it remains aligned to international best practice and technological advances.

Water and effluent testing are routinely conducted at all mill sites. Water management is included in our operational environmental management plans, which are reviewed and updated annually.

Managing a scarce resource

While water is not a scarce resource in all regions, in 2018, the **World Resources Institute (WRI)** pointed out that more than a billion people currently live in water-scarce regions, and as many as 3.5 billion could experience water scarcity by 2025¹.

The WRI has published a map showing the average exposure of water users in each country to baseline water stress, the ratio of total withdrawals to total renewable supply in a given area². Levels of water stress for South Africa where our plantations are situated and Belgium, where Lanaken Mill is situated, they are indicated as high. While the same map indicates water stress levels in the USA as medium to high, more detailed maps show that the specific areas in which our mills are located do not suffer from water stress.

 (www.globalchange.gov/browse/multimedia/water-stress-us)

¹ www.wri.org/our-work/topics/water

² www.wri.org/resources/charts-graphs/water-stress-country



Saiccor Mill

Using water responsibly continued

Belgium: Lanaken Mill's water usage

Lanaken Mill is located along the Albert Canal in Belgium. Since 1967, the mill has been licensed by the relevant national authority, *nv De Scheepvaart*, to source the required water from the canal for utilisation at the facility. The mill communicates regularly with the authorities and should any change to water usage be anticipated, permission is requested in advance. The mill actively manages groundwater utilisation, the shipping facilities along the canal and water discharge.

In 2018, Lanaken Mill used approximately 12.3 million m³ from the canal and 180,000 m³ of groundwater. In the same year, 12.5 million m³ of water was returned to the canal. The quality of water discharge is monitored daily by Sappi, periodically controlled by authorities on site or at various locations throughout the canal, and reported on annually as part of Sappi's environmental reporting requirements. In addition, the mill continually implements projects to reduce water requirements or encourage water re-utilisation.

To prepare for increased production capacity through the ongoing rebuild project of PM8 at Lanaken Mill, in 2018 the anaerobic wastewater treatment plant was expanded and upgraded. This process is in the final stages with completion expected in December 2018.

The fact that Albert Canal becomes the source of drinking water for the city of Antwerp, 100 km downstream from the mill, highlights the mill's high standards of water discharge quality.

Understanding the impact of water withdrawal on the river and estuary at Saiccor Mill

In terms of compliance to its water use licence, Saiccor Mill has commissioned an independent specialist to undertake annual estuarine health surveys of the Umkomaas estuary on which the mill is situated. In addition to these annual surveys, periodic low flow studies are also undertaken during drought periods when it is anticipated that the impact of freshwater removal from this system would be at its greatest. These studies have been conducted by *Marine and Estuarine Research (MER)* since 1998 and various physico-chemical and biological indicators to assess estuarine health are used. These studies are submitted annually to the responsible authority and are also peer reviewed by an independent specialist. To date MER has issued 45 reports detailing the results of their studies of *Saiccor Mill's Estuary Monitoring Programme*. In August 2018, MER summarised their findings, which revealed that whilst short to medium term changes do occur in response to low freshwater input during low flow periods, the estuary remains in a good ecological state.



South Africa: Water and our plantations

Our plantations have both positive and negative impacts on the environment. One of the negative impacts is that they generally do use more water than grasslands. However, on a national scale the amount of water they generally absorb is relatively small—about 3% of available resources—but this varies considerably from place to place and during different times of the year. To put this into context, irrigated agriculture uses approximately 60% of South Africa's available water resources.

Due to perceptions about forestry's high use of water, the South Africa government has placed serious restrictions on forestry expansions. We believe this is misguided, based on the following:

- As the only designated streamflow reduction activity, plantation forestry is not irrigated, but plantations pay for the water they use (based on streamflow reduction per sub-catchment)
- Our trees are planted away from riparian zones, thereby decreasing the amount of water used
- The quality of water emanating from afforested catchments is generally good and is much better than most other forms of agriculture, and
- Though difficult to calculate, the value added to the water we use compares very favourably with other forms of land use—especially because forestry uses land that has few other economic options for use.

Reducing water usage at Tugela Mill

High demand for a high-performance fluting grade, UltraFlute produced at Tugela Mill, increased the internal requirements for high quality neutral sulfite semi-chemical (NSCC) pulp from the semi-chemical cooking process. With the assistance of the *Sappi Technology Centre*, the mill embarked on multiple projects to improve the washing in the pulp plant and ensure quality pulp transfer to the paper machine.

The results led to modifications to the washing stages and filtrate system that was contrary to the original equipment manufacturer (OEM) design. However, the end result significantly improved pulp quality. Further improvements made in the pulp plant included the reuse of process water and the introduction of closed loop *Seal* water systems. These initiatives not only reduced water consumption, but also yielded some energy savings.

The cleaner pulp to the paper machine had a direct impact on the mill's final effluent chemical oxygen demand (COD), reducing the COD load by 40%. The increase in direct pulp feed to the paper machine also reduced the water demand from the repulpers. Additional water reduction projects in the mill included the control of process water balances, fixing water leaks and passing valves together with inspections and repairs of open water storages, all of which resulted in further reduction in abstracted water of approximately 30%.

All the water improvements described above were made while the mill increased its pulp production by more than 23% and paper production by 5% over the same period.

Using water responsibly continued

Reducing water consumption at Gratkorn Mill

At the end of November 2017, we switched 105 m³/day of freshwater to use processwater at one of our dust cyclones, resulting in water use savings of 38,000 m³ per annum. In addition, in April 2018, we began reusing processwater in the thickener at the pulp mill. This resulted in processwater savings of 15,000 m³.

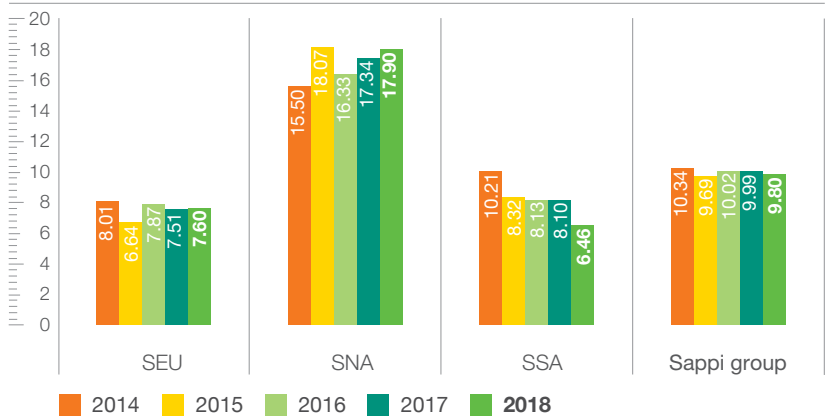
Improving effluent quality

In addition to reducing specific water usage, we have been steadily improving the quality of effluent we discharge. We use temperature controls, oxygen level controls and other metrics to ensure that we comply with all relevant environmental and permit regulations. Over the last five years, chemical oxygen demand (COD), excluding Saiccor Mill—which is building up the biodispersion COD dataset that will be used for future reporting—and total suspended solids (TSS) levels in effluent have declined by 5.2% and 17.2% respectively.



Gratkorn Mill

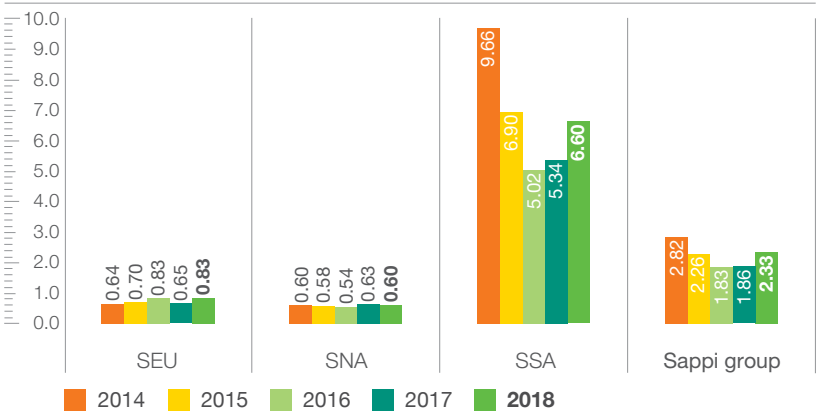
Specific chemical oxygen demand (kg/adt) (excluding Saiccor Mill)



Comment

Across the group there was a slight decrease. However, COD increased slightly in **SEU**, Ehingen Mill experienced operational problems in its wastewater treatment plant. There was also a slight increase in **SNA**. COD at Somerset Mill was up due in large part to the reduction in saleable tons (~9%) resulting from the PM1 upgrade. In addition, the brownstock area had higher than normal liquor losses in Q3. Cloquet Mill’s COD decreased due to continued focus on washing efficiency resulting from a Lean Six Sigma project. Average COD effluent decreased in **SSA**, mainly due to cleaner pulp and washing efficiency improvements at Tugela Mill.

Specific total suspended solids (kg/adt) (including Saiccor Mill)



Comment

Total suspended solids (TSS) increased in group-wide terms. In **SEU**, where TSS levels increased, Alfeld Mill experienced lower efficiencies of the filtration units while Gratkorn Mill experienced problems with final TSS separation. Bulky sludges generated by increased specific COD load caused TSS levels in the bleaching effluent at Stockstadt Mill to increase. It’s important to note that all fluctuations are far below the emission limits. In **SNA**, the overall trend shows a decrease in TSS from last year. TSS levels at Cloquet Mill were stable and declined at both Westbrook and Somerset Mills. In **SSA**, TSS in Saiccor Mill’s effluent increased due to a general unsteady state in the plant, leading to a higher level of fibre in the effluent. The subsequent decrease in production exacerbated the specific TSS figure. TSS at Tugela Mill increased due to effluent pipeline leaks, increased fibre loss from the paper machine and problems with the excess sump pump. We have commenced with the project to replace the effluent pipeline which will be commissioned in 2019.

Minimising waste

Overview

Our focus is on minimising end-of-life waste through waste beneficiation. This not only helps to mitigate environmental impact, but also, as with reducing purchased energy usage, it brings down costs and can generate additional revenue. Sending waste to landfill adds costs, while valorising waste brings in revenue.

The least desirable method of solid waste disposal from an environmental perspective is landfill. Organic waste emits methane, a greenhouse gas with 28 times the global warming potential of CO₂. Inorganic waste can leach, resulting in surface and/or groundwater pollution.

As can be seen from the pie chart opposite, globally most of Sappi's solid waste generated is in the form of bark. In all regions, this is used as a fuel for onsite energy generation. In South Africa, bark is also used for composting and landfill stabilisation. As can be seen from the graph on [page 111](#), the amount of solid waste combusted has increased over time, as has the quantity of waste sold.

How we valorise waste

Non-solid waste

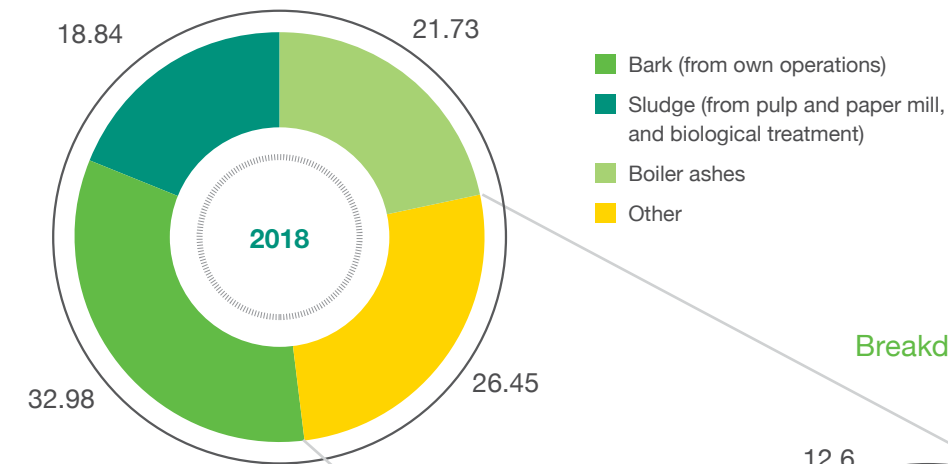
- Used oil is dewatered, chemically treated, refined and filtered for reuse in various grades of base oils.
- At Alfeld and Ehingen Mills in **SEU**, coarse pigments from repulping internal broke are recovered from paper machine effluent and reprocessed to substitute virgin material. In another process, coating colour is also recovered from effluent and reprocessed. These partly Sappi-patented processes help to increase material efficiency.

Solid waste

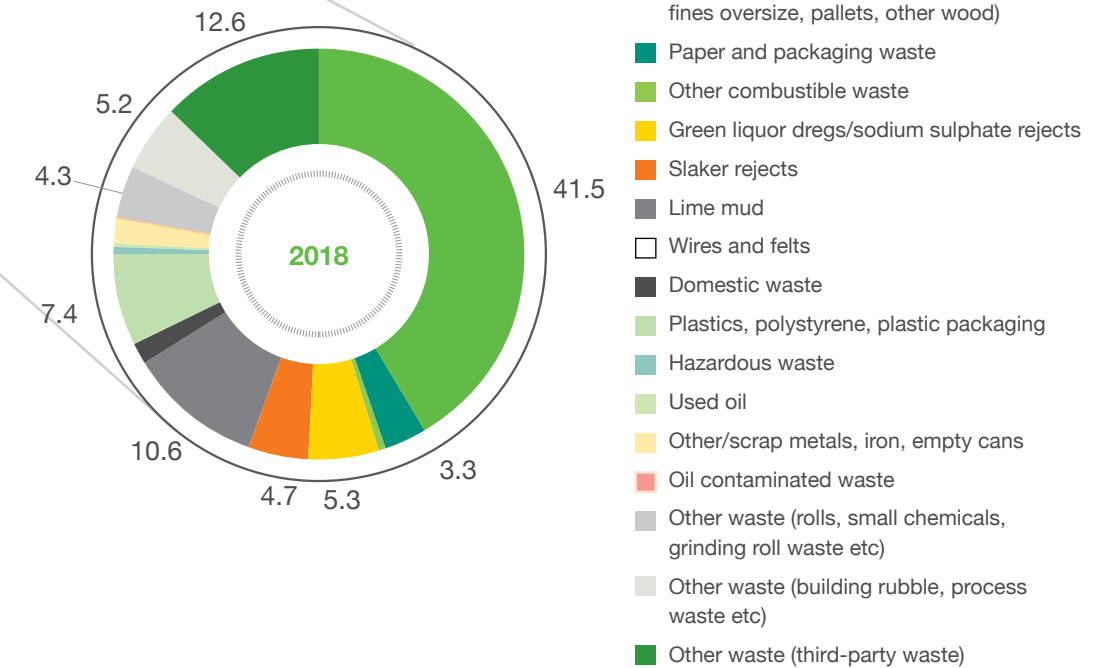
- Sludges, bark and wood are combusted for energy production in each region, while in **SEU**, dried sludge is also used for animal bedding by farmers.
- At some mills, tall oil (a byproduct of the kraft pulping process) is sold to convertors as a renewable chemical raw material and used to make detergents, lubricants and paint additives.
- In **SNA**, lime and boiler ash is provided to farmers as a soil enhancer through a partnership with the University of Minnesota Extension Service, Carlton County By-Products Programme, while in **SSA**, lime mud is sold.
- In **SNA**, inorganic 'grit' removed from the chemical recovery process is used for roadbed underlayment.
- Bagasse supplied to Stanger Mil in South Africa is depithed, and the pith given to farmers as a soil enhancer.
- Lignosulphonate, a byproduct of the pulping process, is a sound revenue stream (see [Key material issues](#) – Extracting maximum value from woodfibre in adjacent markets).

We generate very little hazardous waste, 0.13% of the total generated. This is closely controlled and carefully managed, both at our operations and the receiving facilities.

Breakdown of solid waste types in Sappi group (%)

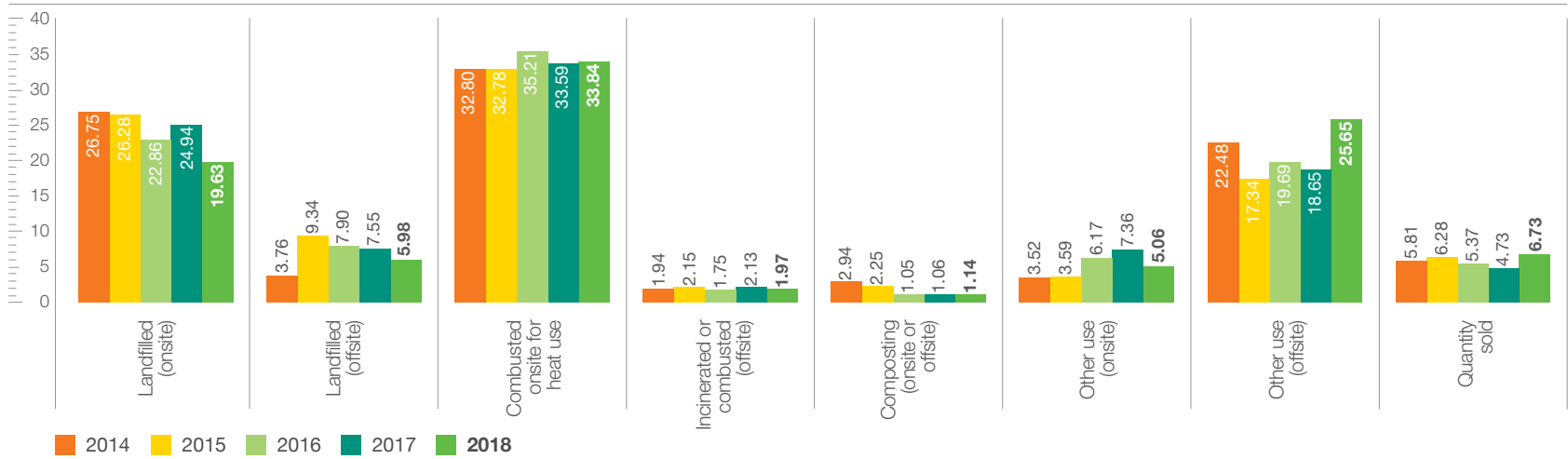


Breakdown of 'other' solid waste types in Sappi group (%)

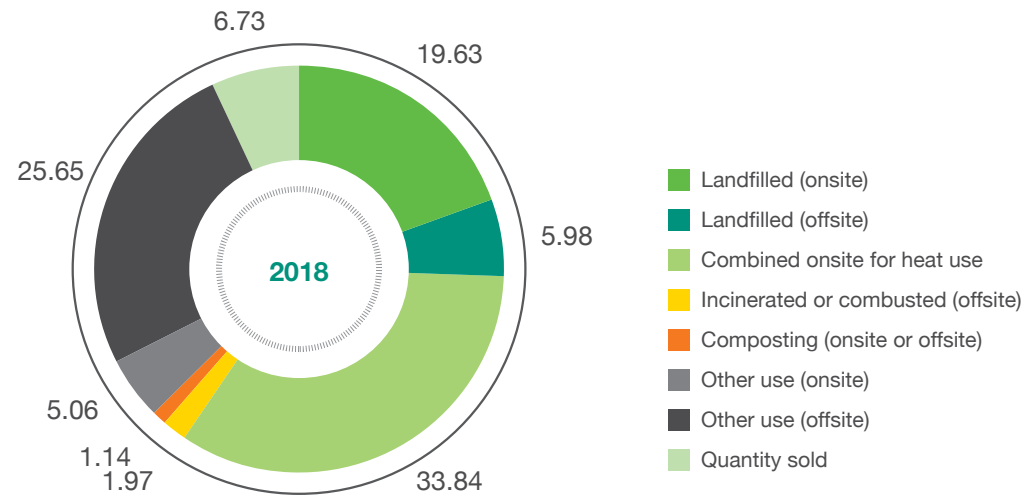


Minimising waste continued

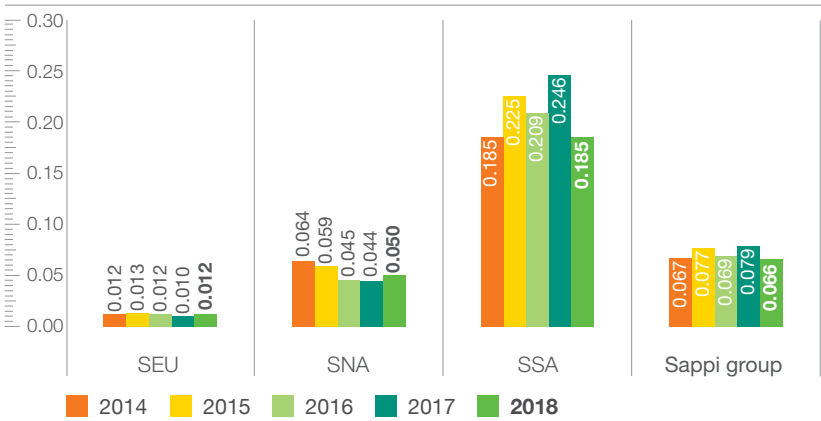
Disposal methods of solid waste (%)



Disposal methods of solid waste (%)



Specific landfilled waste (t/adt)



Comment

Across the group, there was a decrease. However, in **SEU** there was an increase generated by operations standstill at Stockstadt Mill which led to higher use of insulation wool due to lagging replacements. There was an increase in specific landfilled waste at all three mills in **SNA**. Cloquet Mill increased lime/dregs landfilling due to extra kiln cleaning and to manage the size of the land application piles. The increase at Somerset Mill was due to 9% less production driven by the PM1 rebuild. In addition, paper mill losses were high during the start-up of PM1 following the rebuild. These were offset to some extent by a reduction in boiler ash due to less biomass firing at Somerset Mill. The landfilling rate at Westbrook Mill also increased due to an increase in coal- and biomass-firing for economic reasons. In **SSA**, there was a decrease at all mills, with boiler ash used for capping at Ngodwana and Tugela Mills and increased beneficiation at Saiccor Mill (ash, gypsum and building rubble) and Tugela Mill (timber fines).

CASE STUDY

Transforming wood waste into a community resource

Sappi's Shared Services Centre in South Portland (Maine) has implemented a programme that collects the office's organic solid waste onsite, adding a compost container to complement the existing single-stream recycling and landfill waste containers. By working with **Garbage to Garden**, a Maine-based organisation and one of the first in the USA to offer residential pickup of solid organic waste, the office has further reduced waste to landfill.

The office donates its compost to local community gardens and other non-profit organisations focused on providing fresh, healthy food options to residents of the greater Portland area. Since inception of the programme in November 2015, there has been a dramatic reduction in waste to landfill figures. As at the end of October 2017, Sappi South Portland had sent 20,900 kilograms of organic waste for composting.

Minimising waste continued

CASE STUDY

Recovering paper and board in South Africa

In South Africa, recovered board and paper is a valuable resource for Sappi where it is used to supplement virgin fibre in the papermaking process. Many of our papers contain recycled fibre. **Sappi Refibre** has developed an outsourced business model that enables us to not only recycle large volumes of paper, but also benefit businesses and communities as part of the process.

We procure board and paper for recycling from an extensive network of agents across the country. This is sourced directly from homes, offices, wholesalers and retailers, as well as from manufacturers in both the formal- and informal sectors. Most agents offer a one stop service; collecting paper and other recyclables such as glass and certain kinds of plastic and metal.

Sappi Refibre offers a secure market for certain categories of recyclable paper and assists its agents by providing both equipment and business support.

Since 2010, through **Sappi Refibre**:

- 88 businesses have been established
- 484 jobs have been created
- ZAR44 million has been invested in the acquisition of manufacturing for suppliers, and
- Revenue for suppliers has amounted to more than ZAR2 billion.



About Sappi and conflict minerals

Against the backdrop of civil wars and undemocratic governance being funded by trade of natural resources, in May 2017, the European Commission introduced a regulation making the monitoring of supply chains mandatory. The regulation covers the trade of metals and ore, including tin, tungsten, tantalum and gold are covered by the regulation. This builds on an amendment to the US *Dodd–Frank Wall Street tReform and Consumer Protection (Dodd–Frank Act)* requiring electronics companies to verify and disclose their sources of cassiterite, wolframite, and tantalum.

We have seen increased queries regarding conflict minerals and can confirm that we do not use any of the high-risk metals in our products.

reshape

UNGC and SDGs

We support the principles of the United Nations Global Compact (UNGC) and the United Nations Sustainable Development Goals (SDGs) which are focused on reshaping the world around us to create a more sustainable one.



Letter to the United Nations Secretary-General

Our aim is to strengthen the enabling environment for doing business and building markets around the world.



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His Excellency António Guterres
Secretary-General
United Nations
New York, NY 10017
United States of America

30 September 2018

Dear Mr. Secretary-General

I would like to re-affirm Sappi’s commitment to the UNGC’s Ten Principles and to the Communication on Progress process.

Sappi has been a signatory to the UNGC since 2008 and we have been making steady progress in achieving the goals embedded in the Ten Principles.

In line with recommendations and at the request of the UNGC Secretariat, we integrate our communication on the UNGC principles into our sustainability reporting and corporate citizenship communication.

This Communication on Progress Report sets out the manner in which we are doing so and also gives an overview of our alignment with the global Sustainable Development Goals (SDGs) which came into effect at the beginning of 2016. In keeping with the overarching spirit of the SDGs, our aim is to strengthen the enabling environment for doing business and building markets around the world, thereby addressing the universal need for sustainable development.

Yours sincerely

Steve Binnie
Chief Executive Officer
Sappi Limited

Sappi and the United Nations Sustainable Development Goals

Overview

The *United Nations Global Compact (UNGC)* points out that respecting the *Ten Principles* across all business operations and supply chains is a baseline for any company engaging on the Sappi and the *United Nations Sustainable Development Goals (SDGs)*. As a long-standing signatory to the UNGC and responsible corporate citizen, we have an advantage in that we have been working to achieve the SDGs well before they were formalised.

We believe that sustainable growth must be based on a solid foundation from which we do not focus exclusively on profits, but rather, balance our need to generate **Prosperity** by promoting the interests of **People** while respecting the boundaries of the **Planet**.

To achieve these aims, we work closely with a broad group of stakeholders, including technology partners and industry bodies to develop more sustainable approaches to the task of balancing socio-economic growth and natural capital.

Our commitment to those SDGs identified as a priority for Sappi is set out on the following pages.



We promote development throughout the value chain in the rural areas in each region where we operate, thereby creating jobs and opening up economic opportunities that would otherwise be limited (see **Prosperity** – Adding value in each region where we operate).

We also help to create economic opportunity and drive local economic development through our shared value approach to corporate citizenship.

As an example: The *Abashintshi* (the ‘changers’ in isiZulu) programme, which was established in 2015, in conjunction with development agency, Devcom, is a skills development and community upliftment programme. It has expanded from 18 Abashintshi in nine communities to 117 Abashintshi across 65 Sappi communities in KwaZulu-Natal (KZN) and Mpumalanga. These young people are transferring skills to their communities and helping Sappi engage with the communities. Many have also begun to generate an income for themselves through their own businesses while they motivate other community members to restart or improve their own businesses. During 2018, 190 such micro- and small businesses were started or rejuvenated, earning an income for 268 people. Businesses range from brickmaking projects to poultry and pig farms, and from crèches to home industries. The programme is not only contributing to socio-economic development, it is also helping to boost morale and empower people.



We also support *Poverty Stoplight*, an approach that helps people progress out of poverty by empowering them to understand and map their own choices. It encourages households to participate and own their journeys out of poverty, and provides a clear line of sight of how to get there; at the same time allowing organisations delivering support to measure progress against their programme objectives.

Recognising that we have a particular responsibility in South Africa, which is a developing country, we promote the development of local small-, medium- and micro enterprises and local suppliers. Further details are contained in our **S Sappi Southern Africa Sustainability Report** (see www.sappi.com/resources).



We adopt an holistic approach to health and wellbeing, with health and wellness departments at regional level to manage safety, health and wellness in the workplace and safety and wellbeing committees at each operation. In terms of safety, we see contractor safety as equally important as that of our own employees. Performance in this regard is monitored by a global target (see **People** – Promoting safety, health and wellbeing).

As an example of our approach, in **SNA**, Westbrook Mill identified an opportunity to improve employee wellbeing by developing an ergonomics and injury prevention programme. The mill partnered with a local medical group to assist onsite safety field teams and departments with ergonomic tool and process design, the development of ergonomic guidelines as well as job physical demand assessments in order to reduce the risk of injury. The mill also opened an Office Ergonomics Lab to promote proper equipment fit and assist with office setups. For those seeking additional assistance, the mill recently opened a wellness centre so employees can use exercise equipment and meet with licensed physical therapists who can perform preventive musculoskeletal assessments as well as design an exercise programme tailored to their specific needs.

South Africa is estimated to have the most significant HIV/AIDS epidemic in the world, with 7.1 million people living with HIV/AIDS and prevalence among the general population standing at 18.9%.¹ We established our HIV/AIDS programme here in 1992 to measure, monitor and manage the disease in order to mitigate the risks posed to our employees, our organisation and the communities in which we operate.

We involve contractors in our HIV/AIDS programme by training contractor peer educators who are then fully incorporated into our peer educator programme. We offer counselling and testing to contractors and refer them to the appropriate treatment centre if necessary. We also assist contractors with tuberculosis (TB) testing and treatment referral to the Department of Health (see **People** – Promoting safety, health and wellbeing).

¹ www.avert.org/professionals/hiv-around-world/sub-saharan-africa/south-africa

Sappi and the United Nations Sustainable Development Goals continued



We have extensive internal training and development initiatives (see [People](#) – Training initiatives). As an example, we assist our employees with tuition reimbursement/study assistance programmes as follows: 29 people in [SEU](#), 22 people in [SNA](#) and 306 people in [SSA](#).

However, our commitment to education and training extends beyond our employees and customers to the communities where our mills are located.

In [Europe](#), we support *Career Expos* and host visits by schools and colleges to our mills. In this region, in order to build a technical talent pool, we are training and developing approximately 200 young apprentices mainly at our four German-speaking mills on a three- to four-year vocational training programme.

In [North America](#), we support *Science, Technology, Engineering and Mathematics (STEM)* education through scholarship programmes at the University of Maine, the University of Southern Maine and the Fond du Lac Tribal Community College in Minnesota. We also support the Codman Academy, a charter school in Boston.

In [South Africa](#), we sponsor five *Programme for Technological Careers (PROTEC)* centres located close to Sappi communities. PROTEC works to advance *Science, Technology, Engineering and Mathematics (STEM)* education. Recognising that 90% of brain growth and development takes place before the age of five and that children whose development is nurtured early in life are more likely to be academically successful, more productive and healthier when compared with those who are not exposed to formal development, we have established an *Early Childhood Development (ECD)* programme. In addition, we run a training centre for growers in our supplier and enterprise development scheme, *Sappi Khulisa*. In 2018, this centre trained over 1,700 people. In 2017, we opened *Sappi Skills Centres* at our Saiccor and Ngodwana Mills to train both Sappi employees and unemployed youth. To date, 68 young people have qualified through the skills centres (see [People](#) – Education).



In line with our focus on promoting the responsible use of natural resources, we return 95% of water returned to the environment.



Sappi and the United Nations Sustainable Development Goals continued



One of our key goals is to promote the use of clean energy and reduce our carbon footprint by improving energy-use efficiency and decreasing our reliance on fossil fuels.

There are significant opportunities, inherent in our business and processes, that can help us to meet this key strategic goal and sustainability driver:

- The carbon sequestration of our plantations and forests
- Using a high proportion of renewable energy, most of it self-generated in the form of black liquor, and
- Identifying further cogeneration opportunities.

Most conventional power generation is based on burning a fuel to produce steam. It is the pressure of the steam which turns the turbines and generates power. Cogeneration, or combined heat and power (CHP) makes use of more than one form of energy provided from a combustion source—most commonly excess heat, usually in the form of relatively low-temperature steam exhausted from the power generation turbines. Such steam is suitable for a wide range of heating applications and effectively displaces the combustion of carbon-based fuels. Cogeneration therefore offers energy savings ranging between 15 – 40% when compared against the supply of electricity and heat from conventional power stations and boilers. We have cogeneration power plants at 14 of our mills.

See [Key material issues](#) – Bio-energy, for more information about *Ngodwana Energy*, the biomass project in which we have a 30% shareholding.





As part of its annual programme, the Social, Ethics and Sustainability (SETS) Committee reviews Sappi's standing in terms of the International Labour Organisation (ILO) *Protocol* on decent work and working conditions.

We are proud of the fact that, in general terms, in all regions where we operate, our activities promote economic growth in rural areas, where there are often limited forms of economic activity.

In [Europe](#), we work to ensure our customers' success by providing them with information and solutions through the *Sappi&You* online portal. We are also supporting printers' need for digital transformation through *OctoPrint* by becoming a software solution provider and selling software licences and services.

In [North America](#), the *Sappi Forestry Programme* assists forest landowners to meet their objectives for managing their woodland. The *Sappi Lake States Private Forestry Program* works with landowners in the states of Minnesota, Wisconsin and Michigan's upper peninsula to develop, manage and harvest their woodlands. The *Sappi Maine Forestry Program* does the same for landowners in Maine.

We provide extensive support for our customers in the form of online and print education platforms and run two  flagship projects, the *Ideas that Matter* (see www.sappi.com/ideas-that-matter) and *Printer of the Year*  (see www.sappi.com/prINTER-of-the-year) initiatives.

In [South Africa](#) we have established a number of projects which promote economic growth, including:

- *Sappi Khulisa* ('Khulisa' means 'to grow' in isiZulu), was established in 1983, our enterprise development initiative, previously known as *Project Grow* is aimed at community tree-farming. Since 1995, a total volume of 3,796,940 tons, to the value of ZAR2.1 billion, has been purchased from small growers in terms of this programme;
- The *African Honey Bee* project which is positively impacting on communities in KwaZulu-Natal (KZN) province. The AHB project is a social enterprise enabling families from disadvantaged rural communities to build sustainable micro-beekeeping businesses by leveraging the natural resources available to them. Over the past two years, AHB has trained 1,482 people in KZN. Of this number, 962 people are actively keeping bees and producing and selling honey. In addition to empowering people, the project is helping to reduce fires from honey hunting on our plantations, and
- Active participation in 60 land reform projects.

Further details of the projects in [SSA](#) detailed above can be found in our *Sappi Southern Africa Sustainability Reports*  (see www.sappi.com/resources).

Sappi and the United Nations Sustainable Development Goals continued



We have technology and innovation centres of excellence in all regions. We have also invested in biomaterials innovation through research and pilot and demonstration plant investments regarding hemi-cellulose sugar extraction and cleaning, lignosulphonate, nanocellulose and

biocomposites (see [Key material issues](#) – Extracting maximum value from woodfibre in adjacent markets).

We also foster industry-wide innovation and environmental responsibility by participating in a number of local and global programmes—a few examples of which are set out below:

- We are a founding partners of *The Prince of Wales Global Sustainability Fellowship Programme* at the Cambridge Institute for Sustainability Leadership (CISL). Together with other partners, we are funding research on artificial intelligence and bringing carbon emissions to net zero in the paper and pulp industry (see [Key material issues](#) – Innovation).
- We work with the European industry on issues related to the *Green Growth Platform*. These include the development of a new low carbon pulp technology (deep eutectic solvents), exploring financing options to support industry's transformation and investigating block chain technology for timber certification.
- [SEU](#) is an active member of the *Bio-Based Industries Consortium*, focused on supporting innovation and unlocking investments and markets in terms of bio-products, and deploying the bioeconomy across Europe.
- [SNA](#) supports the *Agenda2020 Technology Alliance*, a non-profit organisation that promotes pre-competitive research on key technical challenges that face our industry. Working collaboratively with industry partners, universities and government agencies, the alliance has developed technology road maps in five areas:

- Reducing the use of fresh water
- Advancing drying technology on paper machines (reducing energy)
- Developing next-generation pulping (improving yield and selectivity)
- Reducing energy in the chemical recovery process (more efficient black liquor concentration), and
- Advancing the commercialisation of cellulose nanomaterials.

Each of these initiatives has clear ties to economic and environmental benefits through resource conservation (reducing water, materials and energy) or access to new markets. While some of these initiatives may take a decade or more to address, we believe that success in these areas has the potential to transform our industry.

- Sappi Forests is a member of the *South African Institute for Commercial Forestry Research (ICFR)* and is a founding member of the *Tree Protection Co-operative Programme (TPCP)* based in the *Forestry and Bio-technical Institute (FABI)* (www.fabinet.up.ac.za) at the University of Pretoria. Through the TPCP we also belong to the internationally collaborative *Biological Control of Eucalypt Pests (BiCEP)* programme (www.bicep.net.au) at the Australian Centre for Industrial and Agricultural Research (ACIAR).

In addition, we belong to the *Eucalyptus Genome Network (EUCAGEN)* based at the University of Pretoria and to *CAMCORE*, an international, non-profit organisation dedicated to the conservation and utilisation of subtropical and tropical tree species.

Sappi and the United Nations Sustainable Development Goals continued



Given that our business depends on natural resources, consuming and producing responsibly, is not only the right thing to do, it makes sound business sense.

We use key performance indicators (KPIs) to measure and track our environmental performance. We track key metrics for fibre, emissions, energy usage and the impact of our operations on air, water and solid waste and use this data when setting improvement goals related to our operations. In addition, our R&D work strives to address the demands for light-weighting and making other products deliver more through the addition of our renewable fibre based products (biocomposites, lignosulphonates, dissolving wood pulp).

As regards production, globally, over five years we have:

- Increased energy self-sufficiency by 5.6%.
- Reduced:
 - Specific indirect (Scope 2) emissions by 13.34%
 - Specific direct (Scope 1) and indirect (Scope 2) emissions by 3.4%
 - Specific particulate matter emissions by 10.4%, and
 - Specific NOx emissions by 12%.
- Decreased specific process water extracted by 3.8%.
- In terms of water quality, decreased chemical oxygen demand (COD) by 5.2% and total suspended solids (TSS) by 17.2%.

We continue to find new and innovative ways to reduce our environmental impact. For example, our expansion project at Saiccor Mill, **Project Vulindlela**, will result in CO₂ halving and waste to landfill being reduced by 48%, SOx emissions reducing by 35% and water use efficiency increasing by 17%.

Our focus on reducing environmental impact carries through to the packaging solutions we offer our customers. For example, Sappi was the world's first manufacturer to present a new speciality recyclable paper with a mineral oil barrier integrated directly in the paper, as well as including heat **Sealing** properties. In addition, in light of concerns about carbon footprint and fossil fuel based packaging, we continue to expand our portfolio of lightweight packaging grades.

This also has positive implications in terms of *SDG13 – Climate Action*.



Responsible forestry management and use helps mitigate climate change, while certification helps ensure that the tropical forests are not harvested and used. This is important, as deforestation of the world's endangered tropical forests drives a

significant proportion of global warming. We do not source woodfibre from endangered forests anywhere in the world and participate in climate action because the sustainably managed forests and plantations from which we source woodfibre help to mitigate global warming. Our support for responsible forestry management and commercial plantations means that we not only contribute to the expansion of the amount of natural and planted timber, but also that we promote the protection of natural areas and their biodiversity. We also work to promote the role of renewable products from woodfibre in a low carbon economy.

We are also playing our part in climate action by using high levels of renewable energy. In 2018, renewable energy in our mills stood at 46.98%, mostly from black liquor (71.5%). This not only helps to reduce greenhouse gas emissions, but also separates our operations from the volatility of energy prices.

On World Environment Day 2018, which had **Beat Plastic Pollution** as its theme, the United Nations Secretary-General urged all people to reject single use plastic. Our efforts to expand our portfolio of sustainable, paper based packaging products align with this call and offer environmentally conscious consumers greater choice.

Sappi and the United Nations Sustainable Development Goals continued



High levels of forest certification—75.2% certified fibre supplied to our mills, with the rest procured from known and controlled sources, highlight our responsible approach to life on land.

The sustainably managed forests and plantations from which we source woodfibre are havens for life on land. Europe's net forest area is currently increasing at a rate of approximately 1.6 million hectares per annum. In the United States of America (USA), over the last six decades, the total net USA forested area has increased by over 3%.

In [North America](#), we participate in a partnership with the *American Forest Foundation and the Sustainable Packaging Coalition*, whereby stakeholders across the supply chain have come together to understand challenges and identify new methods to evaluate sustainable forest management on family-owned land. Development of a new data-driven assurance model will demonstrate how the practices and actions of landowners on individual parcels of land aggregate into a healthy forested landscape or regional ecosystem. The model could also be used to identify potential landscape-wide gaps and opportunities to enhance forest sustainability, and find practical ways for the supply chain to address them at a meaningful scale.

In [South Africa](#), we set aside approximately one third of land that we own and lease, managing these areas for the conservation of the natural habitats and the biodiversity they contain. Accordingly, our lands are havens for all forms of natural life. Approximately 455 bird species have been recorded on our plantations, more than half of all South Africa's bird species. A total of 15 faunal red data species have been recorded on our land, with endangered mammal species including Oribi and the Samango Monkey. Near threatened species include Serval and Honey Badger. We provide feedback on numbers and location of specific priority species on our lands to the *Endangered Wildlife Trust* every year.

Biodiversity—the complex web of life made up by millions of species of animals, plants, bacteria and fungi—underpins many of the Earth's systems that we take for granted; systems that provide us with the air we breathe and the food and water we consume.

Given that all our products are based on woodfibre, biodiversity has a particular relevance for Sappi. Neither our own plantations in South Africa or those from which we source woodfibre in South America, nor the managed natural forests in Europe and North America, or plantations would be productive without biotic processes taking place. These processes play a vital role in ensuring the health and vitality of trees and include decomposition, soil rejuvenation, pollination and pest control.

Both the plantations and forests which provide us with woodfibre are actively managed to enhance these beneficial processes and restrict harmful impacts like pests and disease. Biodiversity contributes to the provision of a number of products and services in the following ways:

- **Ecosystem services:**
 - Protection of water resources
 - Soils formation and protection
 - Nutrient storage and recycling
 - Pollution breakdown and absorption
 - Contribution to climate stability
 - Maintenance of ecosystems, and
 - Recovery from unpredictable events.
- **Biological resources:**
 - Food
 - Medicinal resources and pharmaceutical drugs
 - Wood products
 - Ornamental plants
 - Breeding stocks, population reservoirs
 - Future resources, and
 - Diversity in genes, species and ecosystems.
- **Social benefits:**
 - Opportunities for research and education
 - Recreation and tourism, and
 - Cultural values.

Sappi and the United Nations Sustainable Development Goals continued



Sappi reports to its board on an annual basis regarding the application of the *Organisation for Economic Co-operation and Development (OECD)* guidelines on bribery and corruption, which partly works to prevent companies undermining institutions. Sappi's group value statement and **Code of Ethics** (Code) (see www.sappi.com/code-of-ethics) also drive the company to support peace, justice and strong institutions. Sappi Limited is listed on the *FTSE/JSE Responsible Investment Index*, a reflection of our commitment to strong institutions.

The Code is essentially a tool to guide Directors, the executive, employees and other stakeholders as to the acceptable ethical behaviour in complying with the various laws, regulations and policies applicable to Sappi. We require our suppliers to abide by Sappi's Code and are also in the process of rolling out a *Group Supplier Code of Conduct* which calls on suppliers to commit to ethical behaviour, human rights, health and safety, diversity and equal opportunity and environmental awareness.

To view calls and follow-ups to our hotlines in each **S** region, see [Annual Integrated Report](#).



Sappi Limited is a member of *Business Leadership South Africa (BLSA)*, a voluntary organisation of the approximately 70 largest listed companies on the Johannesburg Securities Exchange (JSE) which is actively working to end corruption, underpin the democratic state and institutions and drive economic growth. Sappi is a signatory to BLSA's pledge which reinforces our own **Code of Ethics** by committing us to:

- Actively combating corrupt practices wherever we encounter them
- Not acting anti-competitively
- Having zero tolerance for corruption in our midst, and
- Protecting whistle-blowers and providing information.



Sappi and the United Nations Global Compact

Human rights

Principle 1:

Business should support and respect the protection of internationally proclaimed human rights.

As stipulated in our *Group Human Rights Policy* and *Group Human Resources Policy*, we endorse the principles entrenched in the Universal Declaration of Human Rights and the International Labour Organisation (ILO).

We also conform to, and in many cases, exceed, prescriptions set out in the labour legislation in the countries in which we operate.

Our *Group Human Resources Policy* recognises the right of all people to be treated with dignity, and prohibits harassment in the workplace.

Hotlines in all regions allow employees and suppliers to report human rights abuses in full confidentiality.

Principle 2:

Make sure their own corporations are not complicit in human rights abuses.

Our commitment to ensuring that we are not complicit in human rights abuses is encapsulated in our *Group Human Rights Policy*. This extends to suppliers and states that we:

- Require our suppliers to respect human rights and act in full accordance with our policies and guidelines concerning social responsibility, labour standards and human rights, and
- We commit to openly and transparently reporting on human rights violations within our value chain, should these occur.

This policy further commits us to working with communities in order to address indigenous people’s interests and to resolving land claims in South Africa by working with the claimants to achieve resolutions which benefit all parties.

In terms of our *Group Supplier Code of Conduct*, we also encourage our suppliers to uphold the principles of human rights as set out in the United Nations Universal Declaration on Human Rights.

The World Justice Project Rule of Law Index® measures rule of law adherence in 113 countries and jurisdictions worldwide based on eight factors: constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice and criminal justice (www.worldjusticeproject.org/sites/default/files/documents/WJP-ROLI-2018-June-Online-Edition_0.pdf).

The fourth factor, fundamental rights, encompasses adherence to the following fundamental rights: effective enforcement of laws that ensure equal protection, the right to life and security of the person, due process of law and the rights of the accused, freedom of opinion and expression, freedom of belief and religion, the right to privacy, freedom of assembly and association, and fundamental labour rights, including the right to collective bargaining, the prohibition of forced and child labour, and the elimination of discrimination.

Under this index, the countries in which we have manufacturing operations are classified as set out in the table below. This confirms our understanding that human rights violations in these countries are limited. Scores range from 0 to 1, with 1 indicating the strongest adherence to the rule of law:

| Country | Score | Global ranking |
|---------------|-------|----------------|
| Belgium | 0.77 | 15 |
| Finland | 0.87 | 3 |
| Germany | 0.83 | 6 |
| Italy | 0.65 | 31 |
| Netherlands | 0.85 | 5 |
| South Africa | 0.59 | 44 |
| United States | 0.73 | 19 |

We have identified no operations or significant suppliers where the right to exercise freedom of association and collective bargaining has been violated or is at significant risk, nor have we identified operations and significant suppliers as having any significant risk for incidents of child labour. Similarly, we have identified no operations and significant suppliers as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour.

Labour

Principle 3:

Businesses should uphold freedom of association and the effective recognition of the right to collective bargaining.

We promote freedom of association and sound labour practices by engaging extensively with representative trade unions. Protecting the right to freedom of association and collective bargaining is fundamental to the manner in which we do business. In 2018, globally 62% of our workforce was unionised, with 70% belonging to a bargaining unit.

We focus on maintaining constructive relationships with trade unions, believing that this is essential to long-term sustainable development. Discussions range from remuneration issues, to training and development, health and safety and organisational changes.

Given the complex labour situation in South Africa, we have established a number of structures to enhance ongoing positive engagement with union leadership. This is facilitated by structures such as the National Partnership Forum which includes senior members of management and senior union leaders who hold regular meeting where business, safety and union challenges are discussed.

Disciplined behaviour is essential not only for individual wellbeing, but also to achieve our group goals and objectives. In each region, disciplinary codes ensure disciplinary procedures are applied consistently, while grievance policies entrench the rights of employees, including the right to raise a grievance without fear of victimisation, the right to seek guidance and assistance from a member of the human resources department or their representative at any time and the right to appeal to a higher authority, without prejudice.

As stipulated in our *Group Human Rights Policy* and *Group Human Resources Policy*, we endorse the principles entrenched in the Universal Declaration of Human Rights and the International Labour Organisation (ILO).

Sappi and the United Nations Global Compact continued

Principle 4:

The elimination of all forms of forced and compulsory labour.

Our **Group Human Rights Policy** explicitly forbids the use of compulsory and forced labour. Our **Group Supplier Policy** states that we encourage our suppliers to adhere to national labour law and to internationally proclaimed human rights, including those relating to forced labour (including prison and slave labour).

Our labour standards ensure that our remuneration practices are fair, with compensation levels set to reflect competitive market practices and internal equity as well as company and individual performance.

In all three regions, labour is sourced on the open market. In rural areas, forest products companies like Sappi are often the only, or major, employers in the region which makes the local population very dependent on the company and which could in turn lead to exploitative behaviour and an indirect form of forced labour.

In **South Africa**, as in the other regions where we operate, Sappi pays market-related wages in accordance with or above local legislation. In 2013, in **South Africa**, we made it a contractual obligation for our forestry contractors to pay their workers in accordance with the minimum wage stipulated by government for the agricultural sector. We check compliance with this stipulation on an ongoing basis.

Furthermore, in this region, our plantations are 100% Forest Stewardship Council® (FSC®)-certified or controlled and this forest certification system stipulates the protection of indigenous peoples' rights.

We are further focusing on promoting economic inclusion and eliminating poverty through our **Sappi Khulisa** enterprise development scheme which has been in operation since 1983.

This initiative, which began in 1983, is aimed at community tree farming and has successfully uplifted impoverished communities in KwaZulu-Natal and the Eastern Cape. The total area currently managed under this programme amounts to 27,080 hectares. In 2018, under the programme 483,359 tons (2017: 448,221 tons) worth approximately ZAR387 million was delivered to our operations. Since 1995, a total volume of 3,796,940 tons to the value of ZAR2.1 billion, has been purchased from small growers in terms of this programme.

We also work actively with the authorities and communities on land reform projects which aim to promote the inclusion of previously disadvantaged South Africans into the economy.

Principle 5:

The effective abolition of child labour.

Our **Group Human Rights Policy** explicitly forbids the use of child labour. Our **Group Supplier Policy** states that we encourage our suppliers to adhere to national labour law and to internationally proclaimed human rights, particularly those relating to child labour.

Principle 6:

The elimination of discrimination in respect of employment and occupation.

We recognise that the creation of an equitable working environment, in which the dignity of all individuals is respected and the diversity of all employees is valued, represents an essential foundation for sustainable growth and competitive advantage.

We are committed to promoting diversity and inclusion so that all employees can develop their full potential, irrespective of their gender, ethnicity, disability, age, religion, belief or sexual orientation. We administer our **People** policies, programmes and practices in a non-discriminatory manner in all aspects of our relationship with our employees, including recruitment, hiring, assessments, work assignments, promotions, transfers, terminations, wage and salary administration and selection for training and development.

The **Group Human Resources Policy** and the **Group Human Rights Policy** state that Sappi prohibits "discrimination based on race, gender, colour, ethnicity, age, religion, political and sexual orientation, union membership, physical disability or HIV/AIDS status.



Where an unfair or discriminatory practice has occurred, employees are able to make use of the grievance procedure to lodge their grievance. Employees also have access to a hotline telephone number where they can report incidents of this nature.

In **South Africa**, we have employment equity targets to promote economic and social transformation of the previously disadvantaged.

Females tend to be under-represented in our workforce due to the nature of our operations—a manufacturing environment which involves shift work.

In terms of disability, we focus on creating physically and socially 'disability ready' work environments. In terms of our new corporate headquarters in Johannesburg, for example, we consulted disability experts to ensure that our new offices are disability friendly.

Sappi and the United Nations Global Compact continued

Statement on modern slavery

Modern slavery is defined as slavery, servitude, forced or compulsory labour and human trafficking. The 2016 Global Slavery Index estimates that 45.8 million people in 167 countries are living in modern slavery today. The majority are victims of exploitation in private sector activities, such as manufacturing, construction and agriculture. The UK Modern Slavery Act requires commercial organisations in any sector with a global annual turnover of £36 million or more who do business in the United Kingdom to disclose the steps they are taking to address modern slavery in their business and supply chain.

To demonstrate our commitment to preventing the occurrence of modern slavery and human trafficking in our operations and supply chains, Sappi is publishing this voluntary modern slavery statement: *Modern slavery (slavery, servitude, forced labour and human trafficking) is a global concern with long-lasting impacts on affected individuals and communities.*

There is an increasing focus by consumers on ethical fashion and the social and environmental impacts of the products they use. Given that our products are an

indispensable part of daily life and given that we have direct and indirect customers in over 150 countries around the world, we recognise that we have a responsibility to ensure that slavery does not enter our supply chain.

While we do not currently see this as a material issue, we take a zero-tolerance approach towards modern slavery in any form. Our policies and operational processes embed our commitment to respect for human rights. As stated in our *Group Human Rights Policy*, we subscribe to the principles of the International Labour Organisation (ILO), uphold and commit to the Ten Principles set out in the United Nations Global Compact, and support the observance of human rights as set out in the Universal Declaration of Human Rights.

We do not tolerate any form of workplace discrimination, harassment or physical assault, or any form of child, forced, or compulsory labour. We seek to reflect the diversity of the communities in which we operate in our workforce. We respect the rights of our employees and contractors, including freedom of association and collective bargaining. Throughout our operations, we seek to avoid complicity in human rights abuses, and to uphold relevant international standards.

We have intensified this focus with the development of a new *Group Supplier Code of Conduct* requiring our suppliers to implement policies such as freely chosen employment which prevents the use of forced, slave, bonded, indentured or involuntary prison labour and to align with the United Nations Universal Declaration on Human Rights, as well as the *ILO Convention No 138 on Minimum Age*.

Environment

Principle 7:

Businesses should support a precautionary approach to environmental challenges.

S As stated in our *Group Sustainability Charter* and *Group Environmental Policy*, we acknowledge that we do have an environmental footprint, but are committed to managing and mitigating the environmental, climate and biodiversity impacts of our operations.

The precautionary approach places the onus on Sappi to anticipate harm before it occurs and to take active steps to prevent any harm from occurring. We achieve this by:

- Minimising the environmental impact of our operations in terms of raw materials and energy use
- Developing new production methods and products and finding innovative new ways of beneficiating waste
- Saving water and energy at every step in production processes. This begins in our South African plantations, where we apply best practice management techniques to produce woodfibre with properties that allow it to be pulped using less energy and water
- Ongoing investment in research and development
- Monitoring environmental performance and legal compliance at each mill, by constantly assessing our performance in terms of energy dashboards, integrated water and waste management plans, air emissions and effluent

S Sappi group policies are available on www.sappi.com/policies.

- Taking appropriate, pre-emptive action to avoid or mitigate identified environmental risks
- Ensuring that we keep up with environmental best practice through an internal environmental ‘cluster’ comprised of experts in various fields
- Having environmental targets in place in each region. Progress to achieving targets is reported to the management teams in each region on a regular basis, quarterly to the Global Sustainable Development Council (GSDC) and to the Social, Ethics, Transformation and Sustainability (SETS) Committee biannually, and
- Using internationally recognised, independently verified certification systems including the Forest Stewardship Council® (FSC®), the Programme for the Endorsement of Forest Certification™ (PEFC™) and the Sustainable Forestry Initiative® (SFI®) (woodfibre), as well as ISO 9001, ISO 14001, OHSAS 18001 and, in Europe the Eco Management and Audit System (EMAS) and ISO 50001 in Europe and South Africa.

We view conducting our business in an environmentally sustainable manner as an obligation—one which is integral to our licence to operate on an individual, community, country and global level. It also makes sound business sense, given that we depend on natural resources such as water and woodfibre for our ongoing viability as a business and it is in our interest to use these resources as responsibly as possible.

This obligation includes investing in new technology and upgrading mill processes as these become feasible or preempting changes in manufacturing regulations.

Sappi and the United Nations Global Compact continued



Principle 8:

Undertake initiatives to promote greater environmental responsibility.

At the heart of our business is a renewable, recyclable natural resource—woodfibre. We use this to create pulp, paper and dissolving wood pulp solutions which enhance the lives of consumers around the world.


We take a holistic approach to protecting the environment, beginning with the responsible procurement of wood that is grown and harvested sustainably and sourced only from well-managed forests and plantations. We are committed to reducing our use of traditional fossil fuels, lowering both our environmental footprint and energy costs. We focus on the efficient use and recovery of materials used in the manufacturing process in order to minimise waste.

Our energy efficiency is enhanced through our ongoing drive to make process improvements and install more efficient equipment, as well as through our extensive use of cogeneration.



We track key metrics for fibre, emissions, energy usage and the impact of our operations on air, water and solid waste. We use this data when setting improvement goals related either to our operations or our interactions with our key stakeholder groups—employees, customers and our local communities. In 2015, we established overarching 2020 global goals in addition to the regional goals established in each region to deal with specific issues. Progress against these  goals are reported on in our [Annual Integrated Report](#), our [Group Sustainability Report](#) and regional sustainability  reports (see www.sappi.com/sustainability).

Land, air and water are shared resources. By motivating and encouraging people—particularly those close to our operations—to share our commitment of treading more lightly on the [Planet](#), our aim is to enhance the sustainability of the natural resources and ecosystems on which our business depends.

In [SEU](#), we:

- Continue with our *Eco-effectiveness* campaign whereby Sappi people share their stories about achieving greater levels of environmental responsibility  (see www.sappi.com/eco-effective-stories).
- Communicate information internally about sustainability-related topics through our *Green Ambassadors*, who keep colleagues informed about industry developments that could be of interest to customers
- Are closely engaged in the *Confederation of European Paper Industries (CEPI)* Roadmap 2050 which works to implement the transition to an effective low-carbon economy
- Belong to the *Save Food* initiative which signal a firm commitment to better protection of all foodstuffs the world over. Save Food is a joint initiative of the Food and Agriculture Organisation of the United Nations (FAO), the United Nations Environment Programme (UNEP), Messe Düsseldorf and Interpack, the world's leading trade fair for processes and packaging, and
- Are actively contributing to the development of an industry standard for delivering chemical information through the paper and pulp supply chain amongst other things, through the development of a *Paper and Pulp Industry Declared Substances List*. The consortium is a joint working group under the Confederation of European Paper Industries (CEPI) and the European Pulp and Paper Chemicals Group (EPCG), with Sappi as chair.

In [SNA](#), we:

- Play an active role in *Living Lands and Waters*, a non-profit, environmental organisation focused on cleaning up America's great rivers and forest restoration  (www.livinglandsandwaters.org/about-us/sponsors-supporters).
- Have established a *Fishway* project near Westbrook Mill, enabling natural fish passage through a portion of the Presumpscot River for the first time in more than 150 years
- Have been a long-standing supporter, together with publishers, cataloguers and other paper companies, of *Recycling Works in Publishing (RWIP)*. We have now joined *The Recycling Partnership* as a funding partner and together with the organisation, will be working to help transform recycling nationwide, increase materials recovery, and reduce the creation of greenhouse gases that add to climate change  (www.recyclingpartnership.org).
- The *Sappi Maine Forestry Program* and the *Sappi Lake States Private Forestry Program* assist forest landowners to meet their objective for managing their woodland. Sappi's trained foresters are able to develop a forest management plan geared to the interests of the landowner including wildlife management and aesthetics, marketing of timber to generate maximum return and providing an extensive network of environmental- and marketing resources
- Our Cloquet Mill has had a long-standing relationship with the *University of Minnesota Extension Service*. In terms of this partnership, boiler ash and lime mud are diverted from landfill and put to beneficial use as a soil amendment. The alkaline pH of these materials helps adjust the pH of crop soil and allows for better absorption of nutrients—ultimately resulting in better yield of alfalfa used in dairy farming.



Sappi and the United Nations Global Compact continued

In [SSA](#), we:

- Set approximately 30% of our land aside for the management and conservation of natural habitats, including indigenous forests, and the biodiversity they contain
- Have established a **Group Forest Certification Scheme** for small- and medium-sized growers. There are currently 42 members in the scheme with plantations ranging from less than a hundred hectares to several thousand hectares in size. While our owned and leased plantations are 100% FSC-certified, we recognised that we needed to obtain certification over and above the **FSC Group Scheme** certification, based on the difficulty of getting small growers certified and on customers' requests for PEFC labelled products. PEFC endorses national certification schemes, which meant South Africa had to develop a new certification scheme including a forest management standard. This is now known as the **South African Forest Assurance Scheme (SAFAS)**
- Qualified extension officers work with growers in our **Sappi Khulisa**, our supplier and enterprise development scheme, providing them with growing advice and practical assistance

- Participate in the **National Stewardship Programme** through which seven areas on our land have been declared nature reserves
- Promote multiple use of our landholdings. Our land provides a resource for planned recreational activities. We support non-motorised activities such as mountain biking and bird watching on our land, aligning with our commitment to promoting a healthy lifestyle and nurturing an appreciation for nature and the sustainable use of renewable resources. We have partnered with mountain biking clubs and event organisers, allowing access to our plantations and natural areas in Mpumalanga and KZN.
- Support the **Pepper Bark Tree** (*Warburgia salutaris*) project which in turn supports the efforts of the Kruger National Park to protect South Africa's most endangered tree by reintroducing the tree into communities. Sappi's intervention has enabled seedlings to be grown on a large scale. An annual target of 15,000 seedlings/trees distributed is ensuring that the tree is reintroduced across many communities in sustainable numbers, and
- We provide support to various environmental organisations including the **SANBI (South African National Biodiversity Institute)**, **Birdlife SA**, **WWF-SA**, the **Honorary Rangers of the Kruger National Park**, and the **UCT Animal Demography Unit (ADU)** indigenous tree mapping project.

Annually, we provide information to the **Carbon Disclosure and Forest Footprint Disclosure Projects** and make our submission publicly available.

In each region, we sponsor environment-related publications accessible to the general reader.

Principle 9:

Encourage the development and diffusion of environmentally friendly technologies.

Technology is a cornerstone of our business and is supported by technology centres in each region covering each section of the value chain, including:

- The **Maastricht Centre of Excellence** in [SEU](#) which focuses on papermaking processes
- The **Westbrook Centre of Excellence** in [SNA](#) (coated fine paper and speciality casting and release papers development), and
- In [SSA](#), the **Forestry Research Centre** (tree breeding, propagation techniques, silviculture), the **Sappi Technology Centre** (fibre processing, paper science, chemical sciences, environment) and the **Dissolving Wood Pulp Centre of Excellence** (applications testing and fundamental cellulose properties).

The development and usage of environmentally friendly technologies underpins research at all these centres. In line with our strategy of intentional evolution which includes seeking growth opportunities by producing innovative performance materials from renewable resources, some years ago, we identified nanocellulose as a key growth area.

We collaborated with **Edinburgh Napier University** to find a low-cost energy-saving process that would allow us to produce the nanocellulose on a commercially viable basis—and importantly without producing large volumes of chemical waste water associated with existing techniques. Significant about our process is the use of unique chemistry, which has allowed us to very easily break down the woodpulp fibres into nanocellulose. There is no expensive chemistry required and, most significantly, the chemicals used can be easily recycled and reused without generating large quantities of waste water.

Our high-quality product, which we have branded as 'Valida', is easily dispersed into a variety of matrices. Valida technology uses an environmentally friendly production process which is also compatible with the requirements of the targeted applications. While naturally hydrophilic, Valida can also be subjected to surface modification to suit hydrophobic applications. Valida is suitable for many applications, including biobased composites, food, cosmetics, paper and packaging.

In [North America](#), our trade association, the **American Forest and Paper Association (AF&PA)**, is collaborating with the **Massachusetts Institute of Technology (MIT)** to develop a new approach for a more comprehensive understanding of the trade-offs of changes in recovered fibre utilisation. The MIT methodology applies a 'systems dynamics' approach to consequential life cycle assessment for paper production in the United States of America to model the system-wide effects. The project will deliver a comprehensive model to better educate policy makers and customers to make informed decisions about shifts in recovery rate and recycled content. Sappi personnel have worked alongside other stakeholders as members of a **Technical Advisory Group** and participants in several workshops to help define systems variables and interactions.

Sappi and the United Nations Global Compact continued

Anti-corruption

Principle 10:

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

Maintaining a sound ethical culture forms the foundation of Sappi's long-term sustainability as well as the creation of value for our stakeholders.

We recognise that building an accountable organisation underpins our ongoing viability as a business. Accordingly, the **Social, Ethics, Transformation and Sustainability (SETS) Committee**, amongst other things, monitors our activities with regard to matters such as social and economic development, including the **United Nations Global Compact (UNGC)** and the **OECD Guidelines on Bribery and Corruption**, with particular emphasis on *Section VII of the OECD Guidelines for Multinational Enterprises* dealing with combating bribery, bribe solicitation and extortion.

No issues have been raised regarding Sappi with regards to compliance with the convention either externally or internally.

We regularly review the **Code of Ethics** (Code) to ensure that it remains aligned to current governance and business trends. Accordingly, in September 2016, we launched a revised Code which incorporated the new Sappi values: *At Sappi we do business with integrity and courage; making smart decisions which we execute with speed.* In 2018, in light of our increased focus on safety, we added: *Our values are underpinned by an unrelenting focus on and commitment to safety.*

Sappi's ethics management strengths include:

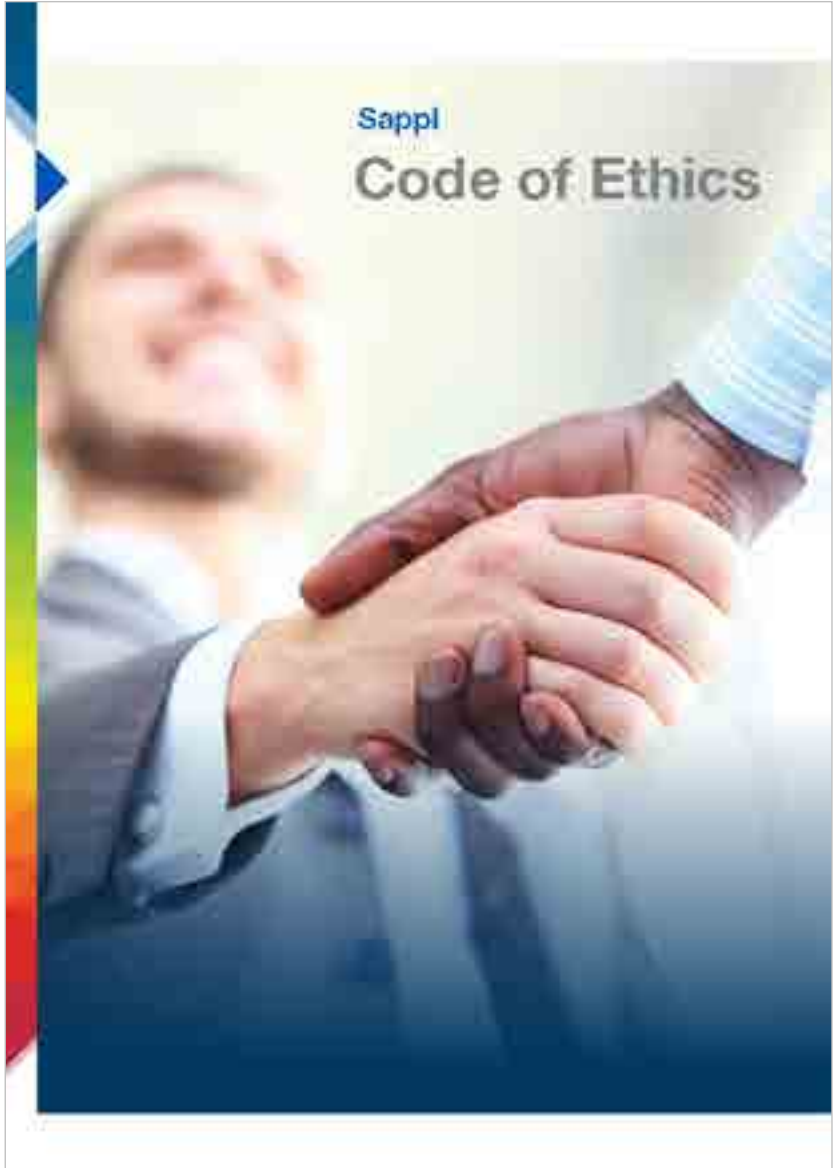
- The completion of mandatory online ethics management training for all employees
- Sappi hotlines, operated by independent service providers, are available to all stakeholders
- Retaliation against whistle-blowers is not tolerated
- An anti-fraud policy is in place to provide guidance to Sappi management in identifying and managing fraud
- Annual fraud and ethics risk assessments are conducted to try and identify potential weaknesses. The fraud and ethics risk assessments are integrated into Sappi's control framework that covers 100% of our operations
- For forensic incidents, independent investigations are done which include due consideration for ethics management and forensic lessons learned, and
- Periodic Employee Engagement Surveys provide insight into employee and management ethics application.

The Internal Audit (IA) Department is responsible for performing or assisting with forensic investigations. During forensic investigations, IA particular attention to the circumstances contributing to the incident and management's tone in responding to these incidents. IA also review the ethics management arrangements and ethics controls for particular units and processes during certain audits. Audit steps include confirming the status of our Code of Ethics and hotline communication, completion of ethics training by employees and reviewing the processes for employees to disclose potential conflicts of interest.

During March 2019, we will once again be rolling out the **Employee Engagement Survey**, part of which tests values and ethical leadership as perceived by employees. The results in this area will be a useful guide to understanding the culture of ethical behaviour and conduct in Sappi and where improvements can be made.

We are also in the process of rolling out a **Group Supplier Code of Conduct** which calls on suppliers to commit to ethical behaviour, human rights, health and safety, diversity and equal opportunity and environmental awareness.

In 2018, we signed the **Business Leadership South Africa Integrity Pledge**, thereby committing ourselves to actively combating corrupt practices wherever encountered, preventing anti-competitive behaviour, adopting a zero-tolerance approach to corrupt behaviour and protecting whistle-blowers.



review

Global Reporting Initiative (GRI)

Reviewing our performance against the GRI's Sustainability Reporting Standards.



Global Reporting Initiative – Sustainability Reporting Standards

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|---|
| GRI 102 | General disclosures | 102-1 | Name of the organisation | Sappi Limited |
| GRI 102 | General disclosures | 102-2 | Activities, brands, products and services | AIR ⓘ Who we are , page 5 ⓘ Product review , pages 24 – 31 |
| GRI 102 | General disclosures | 102-3 | Location of headquarters | 108 Oxford Road, Houghton Estate, Johannesburg, South Africa |
| GRI 102 | General disclosures | 102-4 | Location of operations | AIR: ⓘ Where we operate , pages 20 – 21 |
| GRI 102 | General disclosures | 102-5 | Ownership and legal form | AIR: ⓘ Share statistics , pages 122 – 123 |
| GRI 102 | General disclosures | 102-6 | Markets served | AIR: ⓘ Where we operate , pages 20 – 21 |
| GRI 102 | General disclosures | 102-7 | Scale of the organisation | GSR: ⓘ How we create value ⓘ Our business model |
| GRI102 | General disclosures | 102-8 | Information on employees and other workers | GSR: ⓘ People – Profiling our employee base |
| GRI 102 | General disclosures | 102-9 | Supply chain | GSR: ⓘ Prosperity – Our value add to daily life |
| GRI 102 | General disclosures | 102-10 | Significant changes to the organisation and its supply chain | AIR: Our acquisition of the paper mill assets of the Cham Paper Group is described in the ⓘ Letter to stakeholders – Strategic review, page 16 |
| GRI 102 | General disclosures | 102-11 | Precautionary principle or approach | GSR: ⓘ Sappi and the United Nations Global Compact – Principle 7: Businesses should apply a precautionary approach to environmental challenges. |
| GRI 102 | General disclosures | 102-12 | External initiatives | GSR: ⓘ Key relationships ⓘ – Communities ⓘ – Industry bodies and business ⓘ – Suppliers and contractors ⓘ – Civil society (and media) |

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ⓘ **GSR** – 2018 Sappi Group Sustainability Report (this report)

Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|---|
| GRI 102 | General disclosures | 102-13 | Membership of associations | GSR: 📖 Key relationships 📖 – Industry bodies and business |
| GRI 102 | General disclosures | 102-14 | Statement from senior decision-maker | GSR: 📖 Leadership messages |
| GRI 102 | General disclosures | 102-15 | Key impacts, risks and opportunities | GSR: 📖 Strategic trends shaping our business 📖 Our business model 📖 Key material issues AIR: 🕒 Risk management , pages 60 – 65 |
| GRI 102 | General disclosures | 102-16 | Values, principles, standards and norms of behaviour | GSR: 📖 Key material issues 📖 – Governance |
| GRI 102 | General disclosures | 102-17 | Mechanisms for advice and concerns about ethics | AIR: 🕒 Corporate governance – Reporting on compliance and ethics concerns, page 101 |
| GRI 102 | General disclosures | 102-18 | Governance structure | AIR: 🕒 Corporate governance , pages 94 – 104 |
| GRI 102 | General disclosures | 102-19 | Delegating authority | The Social, Ethics, Transformation and Sustainability (SETS) Committee is responsible for advancing the group-wide sustainability agenda. AIR: 🕒 Social, Ethics, Transformation and Sustainability (SETS) Committee Report , pages 118 – 119 |
| GRI 102 | General disclosures | 102-20 | Executive-level responsibility for economic, environmental and social topics | The Group Head Investor Relations and Sustainability is a member of the Management Committee, reporting to the Chief Executive Officer, Sappi Limited. |
| GRI 102 | General disclosures | 102-21 | Consulting stakeholders on economic, environmental and social topics | GSR: 📖 Sustainability governance |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|---|--|
| GRI 102 | General disclosures | 102-22 | Composition of the highest governance body and its committees | AIR: Ⓢ The composition of the board is reported in the Annual Integrated Report . We indicate the number of executive and non-executive directors and indicate that the Chairman and CEO are separate. We also confirm that we have evaluated the independence of the directors and indicate which directors are independent. We use the JSE Listings Requirements, King IV and the Companies Act (specifically with reference to the Audit and Risk Committee) to evaluate the independence of directors. We also report the date of appointment and tenure of directors, other commitments/positions, gender, race, competence and the average age of directors. |
| GRI 102 | General disclosures | 102-23 | Chair of the highest governance body | Our CEO and Chairman are separate and the Chairman is independent. |
| GRI 102 | General disclosures | 102-24 | Nominating and selecting the highest governance body | AIR: Ⓢ Corporate governance , pages 94 – 104 |
| GRI 102 | General disclosures | 102-25 | Conflicts of interest | AIR: Ⓢ Corporate governance , pages 94 – 104 |
| GRI 102 | General disclosures | 102-26 | Role of highest governance body in setting purpose, values and strategy | AIR: Ⓢ Corporate governance , pages 94 – 104 |
| GRI 102 | General disclosures | 102-27 | Collective knowledge of highest governance body | AIR: Ⓢ Social, Ethics, Transformation and Sustainability (SETS) Committee Report , page 118 – 119 |
| GRI 102 | General disclosures | 102-28 | Evaluating the highest governance body’s performance | AIR: Ⓢ Social, Ethics, Transformation and Sustainability (SETS) Committee Report , page 118 – 119 |
| GRI 102 | General disclosures | 102-29 | Identifying and managing economic, environmental and social impacts | AIR: Ⓢ Corporate governance – Combined assurance framework, page 102 |
| GRI 102 | General disclosures | 102-30 | Effectiveness of risk management processes | AIR: Ⓢ Corporate governance – Combined assurance framework, page 103 |
| GRI 102 | General disclosures | 102-31 | Review of economic, environmental and social topics | AIR: Ⓢ Social, Ethics, Transformation and Sustainability (SETS) Committee Report , page 118 – 119 |
| GRI 102 | General disclosures | 102-32 | Highest governance body’s role in sustainability reporting | Certain key performance indicators are externally assured. |
| GRI 102 | General disclosures | 102-33 | Communicating critical concerns | Our group risk assessment process ensures that the board receives information regarding our critical concerns. |
| GRI 102 | General disclosures | 102-34 | Nature and total number of critical concerns | These are reported throughout the AIR and GSR. |
| GRI 102 | General Disclosures | 102-35 | Remuneration policies | AIR: Ⓢ Remuneration Report , pages 105 – 117 |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|--|
| GRI 102 | General disclosures | 102-36 | Process for determining remuneration | AIR: <div> <div></div> Remuneration Report, pages 105 – 117 </div> |
| GRI 102 | General disclosures | 102-37 | Stakeholders’ involvement in remuneration | Information is fed to the board via the Human Resources and Compensation Committee. |
| GRI 102 | General disclosures | 102-38 | Annual total compensation ratio | We do not report publicly on this ratio. |
| GRI 102 | General disclosures | 102-39 | Percentage increase in annual total compensation ratio | We do not report publicly on this ratio. |
| GRI 102 | General disclosures | 102-40 | List of stakeholder groups | GSR: <div> <div></div> Key relationships </div> |
| GRI 102 | General disclosures | 102-41 | Collective bargaining agreements | GSR: <div> <div></div> People – Maintaining sound labour relations </div> |
| GRI 102 | General disclosures | 102-42 | Identifying and selecting stakeholders | We define stakeholders as those who have an interest in and potential to impact our business as well as those who may be impacted by our business. |
| GRI 102 | General disclosures | 102-43 | Approach to stakeholder engagement | GSR: <div> <div></div> Key material issues </div> |
| GRI 102 | General disclosures | 102-44 | Key topics and concerns raised | GSR: <div> <div></div> Key material issues </div> |
| GRI 102 | General disclosures | 102-45 | Entities included in the consolidated financial statements | <div> <div></div> Group Annual Financial Statements (see www.sappi.com/annual-reports) </div> |
| GRI 102 | General disclosures | 102-46 | Defining report content and topic boundaries | The content has been informed, amongst other things, by: the expectations of our stakeholders; our internal risk management processes which have informed the identification of our most material issues; strategic trends shaping our business, the requirements of the King IV governance standard; and with consideration to the recommendations of the GRI’s Sustainability Reporting Standards. Material aspects have been chosen with the aim of demonstrating our impacts, risks and opportunities and how we create, preserve and erode value over time. |
| GRI 102 | General disclosures | 102-47 | List of material topics | AIR: <div> <div></div> Our key material issues, pages 42 – 59 </div> GSR: <div> <div></div> Key material issues, which link through to our top risks. </div> |
| GRI 102 | General disclosures | 102-48 | Restatements of information | All significant items are reported on a like-for-like basis, with no major restatements. |
| GRI 102 | General disclosures | 102-49 | Changes in reporting | GSR: <div> <div></div> About this report – Joint ventures </div> <div> <div></div> About this report – New acquisitions </div> |
| GRI 102 | General disclosures | 102-50 | Reporting period | 01 October 2017 – 30 September 2018 |

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Global Reporting Initiative – Sustainability Reporting Standards continued



| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|--|
| GRI 102 | General disclosures | 102-51 | Date of most recent report | 2018 |
| GRI 102 | General disclosures | 102-52 | Reporting cycle | Annual |
| GRI 102 | General disclosures | 102-53 | Contact point for questions regarding the report | Graeme Wild, Group Head Investor Relations and Sustainability |
| GRI 102 | General disclosures | 102-54 | Claims of reporting in accordance with the GRI Standards | This report has been prepared in accordance with the GRI Standards: Core option. |
| GRI 102 | General disclosures | 102-55 | GRI content index | Ⓢ This report is available on www.sappi.com/sustainability . |
| GRI 102 | General disclosures | 102-56 | External assurance | GSR: 📖 Independent Assurance Practitioner's Report on Selected Key Performance Indicators |
| GRI 103 | Management approach | 103-1 | Explanation of the material topic and its boundary | The material topics have been informed, amongst other things, by: the expectations of our stakeholders; our internal risk management processes which have informed the identification of our most material issues; strategic trends shaping our business, the requirements of the King IV governance standard; and with consideration to the recommendations of the GRI's Sustainability Reporting Standards. Material topics have been chosen with the aim of demonstrating our impacts, risks and opportunities and how we create, preserve and erode value over time. |
| GRI 103 | Management approach | 103-2 | The management approach and its components | Ⓢ Our suite of policies, available at www.sappi.com/policies , governs our management approach. Initiatives dealing with specific topics can be found throughout the GSR and the AIR. Grievance mechanisms are in place for stakeholders to register issues. |
| GRI 103 | Management approach | 103-3 | Evaluation of the management approach | GSR: 📖 Sustainability governance |

Economic performance

| | | | | |
|---------|----------------------|-------|--|---|
| GRI 201 | Economic performance | 201-1 | Direct economic value generated and distributed | GSR: 📖 Prosperity – Value added over the last three years |
| GRI 201 | Economic performance | 201-2 | Financial implications and other risks and opportunities due to climate change | A detailed assessment of the risks and opportunities of climate change, including (where feasible) an assessment of the financial implications, is provided in our most recent CDP submission, publicly available at www.cdproject.net . |
| GRI 201 | Economic performance | 201-3 | Defined benefit plan obligations and other retirement plans | AIR: Ⓢ Remuneration Report , pages 105 – 117 |
| GRI 201 | Economic performance | 201-4 | Financial assistance received from government | We do not receive any significant financial assistance from government. |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------------|---------------------------|-------------------|--|---|
| Market presence | | | | |
| GRI 202 | Market presence | 202-1 | Ratios of standard entry level wage by gender compared to local minimum wage | We do not provide a comprehensive range of ratios of entry level wage compared to local minimum wages due to the differences in the various countries in which we operate and the challenges associated in doing so. |
| GRI 202 | Market presence | 202-2 | Proportion of senior management hired from the local community | In South Africa, our policies and procedures for broad-based black economic empowerment (BBBEE) ensure that we employ locally. GSR: 📖 People – Transformation – a key requirement for sustainable growth |
| Indirect economic impacts | | | | |
| GRI 203 | Indirect economic impacts | 203-1 | Infrastructure investments and services supported | GSR: 📖 People – Sharing value |
| GRI 203 | Indirect economic impacts | 203-2 | Significant indirect economic impacts | GSR: 📖 Prosperity – Adding value in each region where we operate |
| Procurement practices | | | | |
| GRI 204 | Procurement practices | 204-1 | Proportion of spending on local suppliers | In terms of procurement practices, Sappi’s most material concerns relate to using procurement in our South African operations to stimulate BBBEE. Our local enterprise development scheme, <i>Sappi Khulisa</i> , is described on page 59 of the AIR. As discussed on the same page, we have appointed a specialist to further drive local procurement in South Africa. |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|----------------------------|----------------------------|-------------------|---|--|
| Anti-corruption | | | | |
| GRI 205 | Anti-corruption | 205-1 | Operations assessed for risks related to corruption | GSR: 📖 UNGC and SDGs – Sappi and the United Nations Global Compact – Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery. |
| GRI 205 | Anti-corruption | 205-2 | Communication and training about anti-corruption policies and procedures | AIR: Ⓢ Our key material issues – Ethical behaviour and corruption, page 42 |
| GRI 205 | Anti-corruption | 205-3 | Confirmed incidents of corruption and actions taken | AIR: Ⓢ Our key material issues – Ethical behaviour and corruption, as discussed on page 42, we do sanction incidents of corruption. |
| Anti-competitive behaviour | | | | |
| GRI 206 | Anti-competitive behaviour | 206-1 | Legal actions for anti-competitive behaviour, anti-trust and monopoly practices | No such actions. |
| Materials | | | | |
| GRI 301 | Materials | 301-1 | Materials used by weight or volume | GSR: 📖 Planet – Our key inputs are woodfibre, water, energy and chemicals. We disclose specific water and energy usage in this section, but do not disclose woodfibre and chemicals inputs as these are considered confidential. |
| GRI 302 | Energy | 302-1 | Energy consumption within the organisation | GSR: 📖 Planet – Renewable energy, see pie chart detailing fuel sources. |
| GRI 302 | Energy | 302-3 | Energy intensity | GSR: 📖 Planet – Becoming more energy efficient |
| GRI 302 | Energy | 302-4 | Reduction of energy consumption | AIR: Ⓢ Our key material issues – Energy, page 55, see graph detailing reduction on energy intensity. |

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Global Reporting Initiative – Sustainability Reporting Standards continued








| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|---|
| Water and effluents | | | | |
| GRI 303 | Water and effluents | 303-2 | Management of water discharge-related impacts | GSR: 📖 Planet – Using water responsibly |
| GRI 303 | Water and effluents | 303-3 | Water withdrawal | GSR: 📖 Planet – Using water responsibly |
| GRI 303 | Water and effluents | 303-4 | Water discharge | GSR: 📖 Planet – Using water responsibly 📖 Planet – Using water responsibly – Improving effluent quality AIR: 🕒 Our key material issues – Water, page 57 |
| GRI 303 | Water and effluents | 303-5 | Water consumption | AIR: 🕒 Our key material issues – Water, page 57 |
| Biodiversity | | | | |
| GRI 304 | Biodiversity | 304-2 | Significant impacts of activities, products and services on biodiversity | GSR: 📖 Our business model , in South Africa have a negative impact on biodiversity at stand level (not plantation level). |
| GRI 304 | Biodiversity | 304-4 | IUCN Red List species and national conservation list species with habitats in areas affected by operations | GSR: 📖 Planet – Maintaining biodiversity |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------|---------------------|-------------------|--|--|
| Emissions | | | | |
| GRI 305 | Emissions | 305-1 | Direct (Scope 1) GHG emissions | GSR:  Planet – Reducing greenhouse gases |
| GRI 305 | Emissions | 305-2 | Indirect (Scope 2) GHG emissions | GSR:  Planet – Reducing greenhouse gases |
| GRI 305 | Emissions | 305-3 | Other indirect (Scope 3) GHG emissions | These are partially disclosed in our most recent CDP submission, publicly available at  www.cdp.net . |
| GRI 305 | Emissions | 305-5 | Reduction of GHG emissions | GSR:  Planet – Reducing greenhouse gases |
| GRI 305 | Emissions | 305-7 | Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions | GSR:  Planet – Reducing greenhouse gases, second page of this section |
| Effluents and waste | | | | |
| GRI 306 | Effluents and waste | 306-2 | Waste by type and disposal method | GSR:  Planet – Minimising waste |
| Employment | | | | |
| GRI 401 | Employment | 401-1 | New employee hires and employee turnover | GSR:  People – Monitoring turnover and new hires |
| GRI 401 | Employment | 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees | We do not currently report specifically on this parameter, as we operate in multiple countries with different requirements. We do not believe that it is sufficiently material to provide information on this issue at this level of detail. |
| GRI 401 | Employment | 401-3 | Parental leave | We do not report specifically on the link with parental leave as this is not seen as being material. |

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 **GSR** – 2018 Sappi Group Sustainability Report (this report)

Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|--------------------------------|--------------------------------|-------------------|--|--|
| Labour/management relations | | | | |
| GRI 402 | Labour/management relations | 402-1 | Minimum notice periods regarding operational changes | GSR: 📖 People – Communicating operational changes |
| Occupational health and safety | | | | |
| GRI 403 | Occupational health and safety | 403-1 | Workers’ representation in formal joint management-worker health and safety committees | GSR: 📖 People – Promoting safety, health and wellbeing |
| GRI 403 | Occupational health and safety | 403-2 | Types of injury and rates of injury, occupational diseases, lost days, absenteeism and number of work-related fatalities | GSR: 📖 People – Promoting safety, health and wellbeing – Safety performance in 2018 |
| GRI 403 | Occupational health and safety | 403-4 | Worker participation, consultation and communication on occupational health and safety | GSR: 📖 People – Promoting safety, health and wellbeing |
| GRI 403 | Occupational health and safety | 403-5 | Worker training on occupational health and safety | GSR: 📖 People – Promoting safety, health and wellbeing – Our management approach to safety |
| GRI 403 | Occupational health and safety | 403-6 | Promotion of worker health | GSR: 📖 People – Promoting safety, health and wellbeing – Wellbeing |
| GRI 403 | Occupational health and safety | 403-8 | Workers covered by an occupational health and safety management system | All workers are covered. |
| GRI 403 | Occupational health and safety | 403-9 | Work-related injuries | GSR: 📖 People – Promoting safety, health and wellbeing – Safety performance in 2018 |

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Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|---------------------------------|---------------------------------|-------------------|--|--|
| Training and education | | | | |
| GRI 404 | Training and education | 404-1 | Average hours of training per year per employee | GSR: 📖 People – Being a great place to work – Training initiatives, for average training hours by job category and gender |
| GRI 404 | Training and education | 404-2 | Programmes for upgrading employee skills and transition assistance programmes | GSR: 📖 People – Being a great place to work – Training initiatives |
| GRI 404 | Training and education | 404-3 | Percentage of employees receiving regular performance and career development reviews | GSR: 📖 People – Being a great place to work – Eligible employees with completed or in progress performance appraisals |
| Diversity and equal opportunity | | | | |
| GRI 405 | Diversity and equal opportunity | 405-1 | Diversity of governance bodies and employees | GSR: 📖 People – Profiling our employee base |
| Human rights | | | | |
| GRI 412 | Human rights assessment | 412-3 | Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening | Given the jurisdictions in which we operate, we do not believe this to be material to Sappi. |
| GRI 412 | Human rights assessment | 412-2 | Employee training on human rights policies or procedures | This is covered in Code of Ethics training. |
| Non-discrimination | | | | |
| GRI 406 | Non-discrimination | 406-1 | Incidents of discrimination and corrective actions taken | We promote a workplace where diversity and inclusion are encouraged. Should there be incidents of discrimination, these are swiftly dealt with, but are not publicly disclosed. |
| Child labour | | | | |
| GRI 408 | Child labour | 408-1 | Operations and suppliers at significant risk for incidents of child labour | This issue has been addressed in our Group Supplier Code of Conduct and Group Human Rights Policy, which explicitly forbids the use of child labour (see www.sappi.com/policies). |

📄 **AIR** – 2018 Sappi Annual Integrated Report (page numbers refer to the printed report, but links are to the interactive report)

📖 **GSR** – 2018 Sappi Group Sustainability Report (this report)

Global Reporting Initiative – Sustainability Reporting Standards continued

| GRI standard number | GRI standard title | Disclosure number | Disclosure title | Sappi response 2018 |
|-----------------------------|-----------------------------|-------------------|--|--|
| Forced or compulsory labour | | | | |
| GRI 409 | Forced or compulsory labour | 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labour | We do not believe this is an issue. Forced labour is explicitly forbidden in our Group Human Rights  Policy (see www.sappi.com/policies). GSR:  UNGC and SDGs – Sappi and the United Nations Global Compact, which includes a statement on modern slavery. |
| Local communities | | | | |
| GRI 413 | Local communities | 413-1 | Operations with local community engagement, impact assessments and development programmes | GSR:  People – Sharing value |
| Public policy | | | | |
| GRI 415 | Public policy | 415-1 | Political contributions | Our policy is not to make political contributions. |
| Customer health and safety | | | | |
| GRI 416 | Customer health and safety | 416-1 | Assessment of the health and safety impacts of product and service categories | Our products that are used for food and toy packaging undergo stringent testing and certifications. |
| Marketing and labelling | | | | |
| GRI 417 | Marketing and labelling | 417-1 | Requirements for product and service information and labelling | GSR:  Key relationships  – Customers |
| Customer privacy | | | | |
| GRI 418 | Customer privacy | 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data |  We take customer privacy very seriously (see www.sappi.com/legal-notice). |

 **AIR** – 2018 Sappi Annual Integrated Report (page numbers refer to the printed report, but links are to the interactive report)

 **GSR** – 2018 Sappi Group Sustainability Report (this report)

Glossary

AF&PA – American Forest and Paper Association.

AGM – Annual General Meeting.

air dry tons (ADT) – Meaning dry solids content of 90% and moisture content of 10%.

biochemicals – Enzymes, hormones, pheromones etc, which either occur naturally or are manufactured to be identical to naturally occurring substances. Biochemicals have many environment-friendly applications, such as natural pesticides that work in non-lethal ways as repellents or by disrupting the mating patterns of the pests.

biofuels – Organic material such as wood, waste and alcohol fuels, as well as gaseous and liquid fuels produced from these feedstocks when they are burned to produce energy.

biomaterials – New developments in wood processing supports the move to a biobased economy that utilises materials that are renewable and biodegradable and that do not compete with food sources.

black liquor – The spent cooking liquor from the pulping process which arises when pulpwood is cooked in a digester thereby removing lignin, hemicellulose and other extractives from the wood to free the cellulose fibres. The resulting black liquor is an aqueous solution of lignin residues, hemicellulose, and the inorganic chemicals used in the pulping process. Black liquor contains slightly more than half of the energy content of the wood fed into the digester.

bleached pulp – Pulp that has been bleached by means of chemical additives to make it suitable for fine paper production.

casting and release paper – Embossed paper used to impart design in polyurethane or polyvinyl chloride plastic films for the production of synthetic leather and other textured surfaces.

CEPI – Confederation of European Paper Industries.

Cham Paper Group Holding AG (CPG) – Speciality paper business acquired by Sappi, which included CPG’s Carmignano and Condino Mills (Italy) and its digital imaging business located in Cham (Switzerland) as well as all brands and know-how.

chemical oxygen demand (COD) – The amount of oxygen required to break down the organic compounds in effluent.

chemical pulp – A generic term for pulp made from woodfibre that has been produced in a chemical process.

CHP – Combined heat and power.

coated mechanical paper – Coated paper made from groundwood pulp which has been produced in a mechanical process, primarily used for magazines, catalogues and advertising material.

coated paper – Papers that contain a layer of coating material on one or both sides. The coating materials, consisting of pigments and binders, act as a filler to improve the printing surface of the paper.

coated woodfree paper – Coated paper made from chemical pulp which is made from woodfibre that has been produced in a chemical process, primarily used for high-end publications and advertising material.

corrugating medium – Paperboard made from chemical and semi-chemical pulp, or waste paper, that is to be converted to a corrugated board by passing it through corrugating cylinders. Corrugating medium between layers of linerboard form the board from which corrugated boxes are produced.

CSI and CSR – Corporate social investment and corporate social responsibility.

CSV – Creating shared value involves developing profitable business strategies that deliver tangible social benefits.

deep eutectic solvents – Systems formed from a eutectic mixture of Lewis or Brønsted acids and bases which can contain a variety of anionic and/or cationic species. They are classified as types of ionic solvents with special properties.

dissolving pulp – Highly purified chemical pulp derived primarily from wood, but also from cotton linters intended primarily for conversion into chemical derivatives of cellulose and used mainly in the manufacture of viscose staple fibre, solvent spin fibre and filament.

dissolving wood pulp – Highly purified chemical pulp derived from wood intended primarily for conversion into chemical derivatives of cellulose and used mainly in the manufacture of viscose staple fibre, solvent spin fibre and filament.

EBITDA excluding special items – Earnings before interest (net finance costs), taxation, depreciation, amortisation and special items.

EIA – Environmental impact assessment.

energy – Is present in many forms such as solar, mechanical, thermal, electrical and chemical. Any source of energy can be tapped to perform work. In power plants, coal is burned and its chemical energy is converted into electrical energy. To generate steam, coal and other fossil fuels are burned, thus converting stored chemical energy into thermal energy.

fibre – Fibre is generally referred to as pulp in the paper industry. Wood is treated chemically or mechanically to separate the fibres during the pulping process.

fine paper – Paper usually produced from chemical pulp for printing and writing purposes and consisting of coated and uncoated paper.

FMCG – Fast-moving consumer goods. Examples include non- durable goods such as packaged foods, beverages, toiletries, over-the-counter medicines and many other consumables.

Forestry SA – Largest forestry organisation representing growers of timber in South Africa.

Forest Stewardship Council® (FSC®) – Is a global, not-for-profit organisation dedicated to the promotion of responsible forest management worldwide. (FSC-C015022)

 (www.ic.fsc.org/en)

full-time equivalent employee – The number of total hours worked divided by the maximum number of compensable hours in a full- time schedule as defined by law.

greenhouse gas (GHG) – The GHGs included in the Kyoto Protocol are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

hemicellulose sugars – The biorefinery process for second generation hemicellulose sugars involves recovering them from the prehydolysate liquor, and then separating them.

ISO – Developed by the International Standardisation Organisation (ISO), ISO 9000 is a series of standards focused on quality management systems, while the ISO 14001 series is focused on environmental performance and management and the ISO 50001 covers energy management.

JSE Limited – The main securities exchange in South Africa.

kraft paper – Packaging paper (bleached or unbleached) made from kraft pulp.

kraft pulp – Chemical wood pulp produced by digesting wood by means of the sulphate pulping process.

Kyoto Protocol – A document signed by over 160 countries at Kyoto, Japan in December 1997 which commits signatories to reducing their emission of greenhouse gases relative to levels emitted in 1990.

lignosulphonate – Lignosulphonate is a highly soluble lignin derivative and a product of the sulphite pulping process.

linerboard – The grade of paperboard used for the exterior facings of corrugated board. Linerboard is combined with corrugating medium by converters to produce corrugated board used in boxes.

liquor – White liquor is the aqueous solution of sodium hydroxide and sodium sulphide used to extract lignin during kraft pulping. Black liquor is the resultant combination of lignin, water and chemicals.

Glossary continued

managed forest – Naturally occurring forests that are harvested commercially.

market pulp – Pulp produced for sale on the open market, as opposed to that produced for own consumption in an integrated mill.

mechanical pulp – Pulp produced by means of the mechanical grinding or refining of wood or woodchips.

nanocellulose – Cellulose is the main component of plant stems, leaves and roots. Traditionally, its main commercial use was in producing paper and textiles. Nanocellulose opens up opportunities for advanced, planet-friendly solutions in place of environmentally harmful products.

natural/indigenous forest – A forest of naturally regenerating native trees.

NBHK – Northern Bleached Hardwood Kraft pulp. One of the varieties of market pulp, produced from hardwood trees (ie birch or aspen) in Scandinavia, Canada and northern United States of America (USA).

NBSK – Northern Bleached Softwood Kraft pulp. One of the main varieties of market pulp, produced from coniferous trees (ie spruce, pine) in Scandinavia, Canada and northern USA. The price of NBSK is a benchmark widely used in the pulp and paper industry for comparative purposes.

net debt – Current and non-current interest-bearing borrowings, and bank overdraft (net of cash, cash equivalents and short-term deposits).

newsprint – Paper produced for the printing of newspapers mainly from mechanical pulp and/or recycled waste paper.

NGO – Non-governmental organisation.

NPO – Non-profit organisation.

OHSAS – Is an international health and safety standard aimed at minimising occupational health and safety risks firstly, by conducting a variety of analyses and secondly, by setting standards.

packaging paper – Paper used for packaging purposes.


PAMSA – Paper Manufacturers’ Association of South Africa.

plantation – Large scale planted forests, intensively managed, highly productive and grown primarily for wood and fibre production.

PM – Paper machine.

power – The rate at which energy is used or produced.

printing and writing papers – A generic term for a group of papers intended for commercial printing use such as coated woodfree paper, coated mechanical paper, uncoated woodfree paper and newsprint.

Programme for the Endorsement of Forest Certification™ (PEFC™) – Is an international non-profit, non-governmental organisation dedicated to promoting sustainable forest management (SFM) through independent third-party certification. PEFC works by endorsing national forest certification systems and is represented in 49 countries through national organisations such as SFI® in North America.  (www.pefc.org)

pulpwood – Wood suitable for producing pulp—usually not of sufficient standard for sawmilling.

release paper – Based paper used in the production of making release liners, the backing paper for self-adhesive labels.

ROCE – Return on average capital employed. Operating profit excluding special items divided by average capital employed.

sackkraft – Kraft paper used to produce multi-wall paper sacks.

Sappi Biotech – The business unit within Sappi which drives innovation and commercialisation of biomaterials and biochemicals.

Sappi Dissolving Wood Pulp – The business unit within Sappi which oversees the production and marketing of dissolving wood pulp (DWP).

Sappi Europe (SEU) – The business unit within Sappi which oversees operations in the European region.

Sappi North America (SNA) – The business unit within Sappi which oversees operations in the North American region.

Sappi Southern Africa (SSA) – The business unit within Sappi which oversees operations in the Southern Africa region.

Scope 1 and 2 GHG emissions – The Greenhouse Gas Protocol defines Scope 1 (direct) and Scope 2 (indirect) emissions as follows:

- Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity, and
- Indirect GHG emissions are emissions from purchased electricity, steam, heat or cooling.

SETS – Social, ethics, transformation and sustainability.

silviculture costs – Growing and tending costs of trees in forestry operations.


solid waste – Dry organic and inorganic waste materials.

specialities and packaging papers – A generic term for a group of papers intended for commercial and industrial use such as flexible packaging, label papers, functional papers, containerboard, paperboard, silicone base papers, casting and release papers, dye sublimation papers, inkjet papers and tissue paper.

specific – When data is expressed in specific form, this means that the actual quantity consumed during the year indicated, whether energy, water, emissions or solid waste, is expressed in terms of a production parameter. For Sappi, as with other pulp and paper companies, this parameter is air dry tons of saleable product.

specific purchased energy – The term ‘specific’ indicates that the actual quantity during the year indicated, is expressed in terms of a production parameter. For Sappi, as with other pulp and paper companies, the parameter is air dry tons of product.

specific total energy (STE) – The energy intensity ratio defined by the total energy consumption in the context of the saleable production.

Sustainable Forestry Initiative® (SFI®) – Is a solutions oriented sustainability organisation that collaborates on forest-based conservation and community initiatives. The SFI forest management standard is the largest forestry certification  standard within the PEFC™ program. (www.sfiprogram.org)

thermo-mechanical pulp – Pulp produced by processing woodfibres using heat and mechanical grinding or refining wood or woodchips.

ton – Term used in this report to denote a metric ton of 1,000 kg.

tons per annum (TPA) – Term used in this report to denote tons per annum (tons a year). Capacity figures in this report denote tons per annum at maximum continuous run rate.

total suspended solids (TSS) – Refers to matter suspended or dissolved in effluent.

uncoated woodfree paper – Printing and writing paper made from bleached chemical pulp used for general printing, photocopying and stationery, etc. Referred to as uncoated as it does not contain a layer of pigment to give it a coated surface.

Glossary continued

United Nations Global Compact (UNGC) – A principle based framework for businesses, stating 10 principles in the areas of human rights, labour, environment and anti-corruption.

viscose staple fibre (VSF) – A natural fibre made from purified cellulose, primarily from dissolving wood pulp (DWP) that can be twisted to form yarn.

woodfree paper – Paper made from chemical pulp.

World Wildlife Fund (WWF) – The world’s largest conservation organisation, focused on supporting biological diversity.

1

Comply with lock-out and work permits.

2

Work safely at height.

3

Use machine guards and protective devices properly.

4

Operate vehicles and mobile equipment safely.

5

Conduct lifting and suspended load operations safely.

6

Wear the right personal protective equipment.

7

Prevent exposure to hazardous substances.

8

Assess all risks in your surroundings before you start.

Own safety.
Share safety.

Safety terminology key to graphs and terms used

LTI – Lost Time Injury. Lost days are calculated as days that an employee cannot report for the next work day or shift due to an illness, injury, disability or death arising from an incident occurring at work. Lost days are recorded from the day after the accident/incident until the employee returns. The day of the accident and the day returning to work are not included. A fatality or permanent disability is counted as 6,000 days.

NLTI – Non-Lost Time Injury.

LTIFR – Lost Time Injury Frequency Rate based on a Sappi groupwide standard for man hours.

$$LTIFR = \frac{(LTI \times 200,000)}{\text{Hours of exposure}}$$

LTISR – Lost Time Injury Severity Rate based on a Sappi groupwide standard for man hours.

$$LTISR = \frac{\text{Days lost to injury} \times 200,000}{\text{Hours of exposure}}$$

II Injury Index – Provides an overall sense of safety within the measured unit.

$$II = LTIFR \times LTISR$$

AIFR – All Injury Frequency Rate represents the number of all injuries.

$$AIFR = \frac{LTI + NLTI \times 200,000}{\text{Hours of exposure}}$$

OIR – OSHA Incidence Rate.

$$\frac{\text{Recordable incidents} \times 200,000}{\text{Hours of exposure}}$$