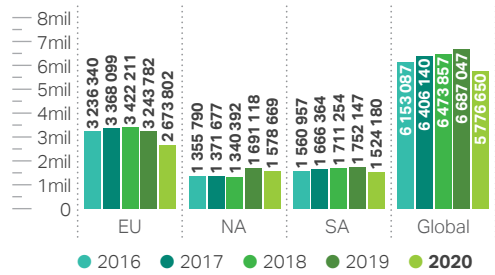


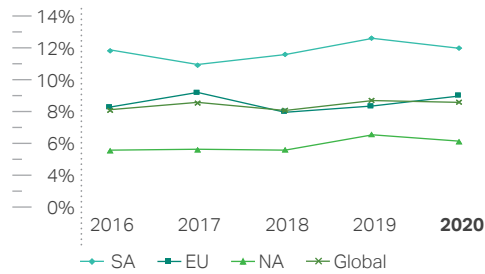
## OUR 2020 PLANET INDICATORS 1

Saleable production (adt/annum)



**Globally**, there was a decrease across all regions – all **SEU** graphic mills reduced production due to reduced paper demand caused by Covid-19. Alfeld Mill reduced production due to a 10- week breakdown of production caused by a fire at PM3. In both **SNA** and **SSA** the curtailment was due to the impact of Covid and, in **SSA**, commercial downtime.

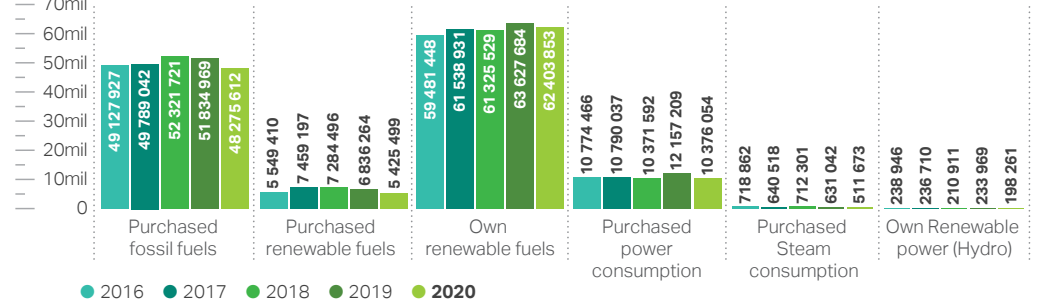
Purchased energy costs as a percentage of cost of sales (COS) (%)



**Globally**, there was a slight decrease. However, there was an increase in **SEU**. Although raw material prices decreased, there was an increase in specific energy consumption due to production curtailment which caused energy inefficiencies in the production process. The decrease in prices for energy sources did not compensate this effect. There was a decrease in **SNA** as purchased energy costs dropped significantly at all mills. The overall decrease is in large part due to lower natural gas and lower purchased power prices at Somerset Mill related to reduced Covid-related consumer demand. The decrease in **SSA** was due mainly to the decrease in cost for purchased power at Saiccor, Ngodwana and Lomati Mills. In addition, Saiccor Mills reduced heavy fuel oil and coal usage due to active management of steam venting, improved boiler availability, power generation by turbines as well as shutdown of the calcium line and increased availability of the magnesium boilers and the firing of liquor. Ngodwana Mill reduced coal usage on the pulverized fuel boiler due to improved coal quality. Coal quality also improved at Tugela Mill and the cost of transport fuels decreased across all mills.

## Energy

Energy consumption within organisation (GJ/annum)

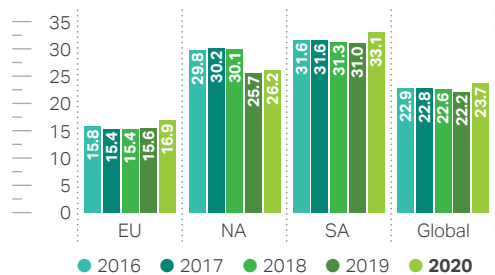


**Note:** Figures based on net calorific values

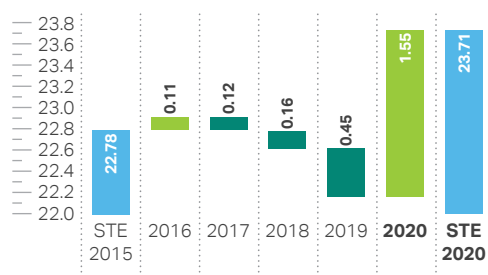
## OUR 2020 PLANET INDICATORS 1 continued

### Energy continued

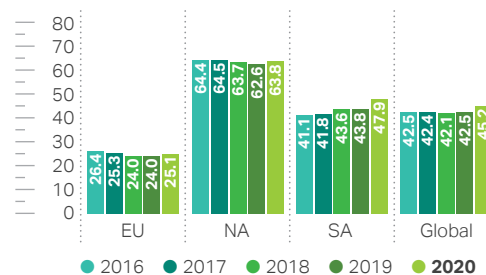
Energy intensity (GJ/adt) (STE)



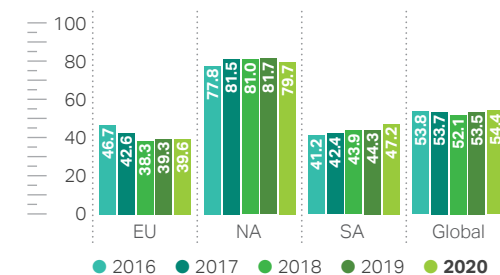
Reduction of energy intensity (GJ/adt)



Percentage energy self-sufficiency (%)



Percentage renewable energy (%)



**Note:** Figures based on net calorific values

**Globally** there was an increase in energy intensity, mostly caused by reduced production due to Covid-related curtailment. In **SEU**, there was an increase for all mills, except Carmignano Mill. There was an overall increase in **SNA**, due to a curtailment in paper and dissolving pulp production at Cloquet Mill, reduced production at Westbrook Mill. However, energy intensity decreased at Somerset Mill due to increased use of natural gas related to cost efficiency and less biomass firing. The increase in **SSA** was the result of curtailed production due to weak markets as well as mill instability, power outages and equipment downtime.

There was an increase across all regions. In **SEU**, energy self-sufficiency increased at Stockstadt Mill because of the new steam turbine generator, while at Gratkorn Mill it increased due to commercial downtime in paper production. In **SNA**, the increase was due to additional uptime for #2 boiler at Somerset as the normal planned outage was delayed until FY21 due to Covid-19. In **SSA**, Saiccor Mill increased energy self-sufficiency as power generation by the turbines improved and there was a reduction in usage of heavy fuel oil, electricity and coal usage reduction due to active management of steam venting and improved boiler availability.

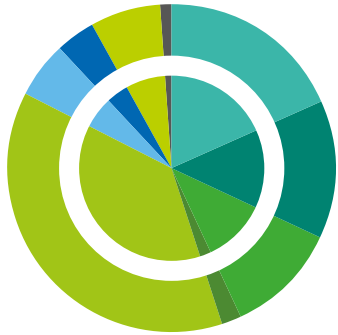
**Note:** Includes renewable and nuclear energy, renewable energy certificates not deducted

**Globally** there was a slight increase, mainly due to **SSA** where the shut-down of the calcium line at Saiccor Mill in Q3&4 resulted in lower coal boiler usage and an increase in liquor firing availability. There was a slight decrease in **SEU** as Alfeld Mill produced less 'green' power due to the repair standstill of the steam turbine generator #4 and Lanaken Mill used a higher percentage of fossil fuels. In **SNA** there was a slight decrease as pulp mill curtailment at Cloquet Mill meant more natural gas was consumed and less black liquor burned. Somerset Mill used more natural gas due to a Covid-related price decrease.

## OUR 2020 PLANET INDICATORS 1 continued

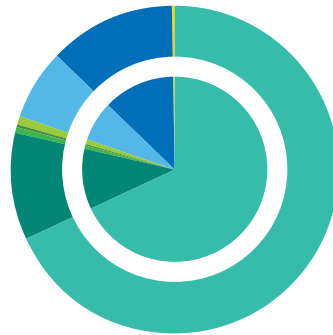
### Energy continued

Breakdown of fuel type (%)



- Purchased coal (18.42%)
- Purchased natural gas (13.70%)
- Non-renewable energy in purchased power (11.12%)
- Other fossil fuel (1.88%)
- Own black liquor (37.47%)
- Own biomass (mostly bark) (5.70%)
- Purchased biomass (3.82%)
- Renewable and nuclear energy in purchased power (6.91%)
- Other renewable fuel (0.8%)

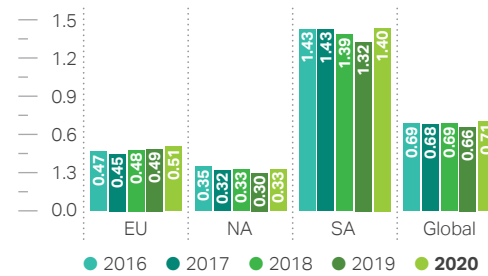
Renewable and clean energy breakdown (2020)



- Own Black Liquor (68,28%)
- Own Biomass (mostly bark) (10,38%)
- Own Biogas (0,56%)
- Own generated Hydro electricity (0,36%)
- Combusted Sludges (0,85%)
- Purchased biomass (6,96%)
- Renewable and Nuclear energy in Purchased Power (12,59%)
- Own Liquid Biofuel (0,02%)

### Emissions

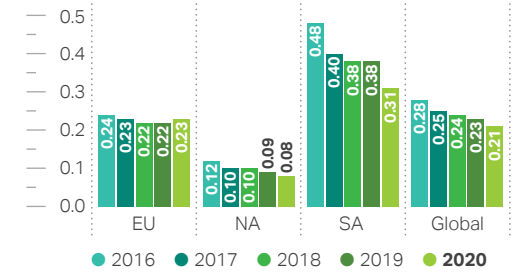
Direct emissions (Scope 1) (t CO<sub>2</sub>e/adt)



**Note:** Scope 1 emission calculations are based on the GHG Protocol, using IPCC emission factors (Chapter 2, Table 2.2, 2006) and 5th Assessment GWP factors.

**Globally**, there was an increase. In **SEU**, this was largely due to lower saleable production, attributable to increased product portfolio and trials at Condino Mill; lower Covid-19 related production at Gratkorn Mill and a lower load on the CHP system at Lanaken Mill. Emissions at Ehingen Mill increased due to a reduced volume of spent liquor (related to reduced pulp production). The increase in **SNA** was the result of more natural gas firing and less combustion of black liquor at Cloquet Mill due to curtailment of the pulp mill. Somerset utilised more natural gas because of Covid-19 related price reductions. The increase in **SSA** was due to curtailed production at Ngodwana and Stanger Mills; as well as boiler instability at the latter – the result of equipment failures and power outages which led to increase use of heavy fuel oil during start-ups. At Ngodwana Mill, less biomass was burned in the Pulverised Fuel (PF) boiler increasing coal consumption.

Indirect emissions (Scope 2) (t CO<sub>2</sub>e/adt)



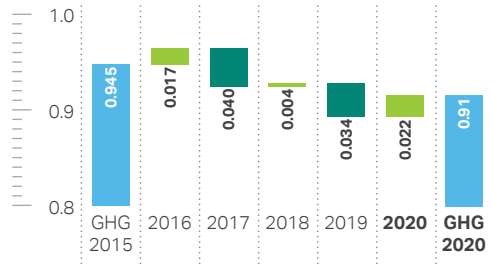
**Note:** Scope 2 emissions are calculated based on the market-based method as defined by the GHG Protocol.

**Globally**, there was decrease. However, there was an increase in **SEU** as Kirkinemi Mill purchased more power and reduced production at Stockstadt Mill led to process inefficiencies. Emissions decreased in **SNA**, mainly due to a significantly lower purchased power emission factor as a result of less coal power plants supplying the north east region with electricity. In **SSA**, emissions also decreased. This was due to an increase in recovery boiler availability at Saiccor Mill and a related increase in power self-sufficiency. Imported power at Ngodwana Mill decreased because of better quality coal (enhanced steam generation) leading to high levels of power self-sufficiency. However, the biggest driver for this was the commercial downtime on newsprint – a product generally associated with very high power demand). All the pulp produced for newsprint is either from groundwood or external sources and no energy is given back to the system as is the case with kraft linerboard.

## OUR 2020 PLANET INDICATORS 1 continued

### Emissions continued

Reduction of GHG emissions intensity (CO<sub>2</sub>/adt)



Scope 3 GHG emission categories (2020)



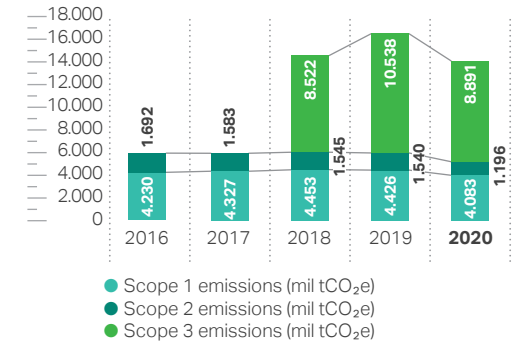
- Purchased goods (15.80%)
- Capital goods (0%)
- Fuel and energy related activities (7.06%)
- Upstream transport (11.70%)
- Waste (0.92%)
- Business travel (0.16%)
- Employee commuting (0.14%)
- Processing of sold products (31.79%)
- End of life treatment (32.43%)

Scope 3 emissions are defined as indirect emissions not included in Scope 2 from activities of the organisation, occurring from sources that they do not own or control and covering emissions along the value chain.

Our Scope 3 carbon footprinting is based on guidelines provided by the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (also referred to as the Scope 3 Standard). We are committed to acting responsibly throughout our value chain. Calculating Scope 3 emissions allows us to make decisions not only based on price but also on the environmental performance of suppliers and customers, as well as consumer behaviour. Integrated and non-integrated mills are also more comparable when the total Scope 1 + 2 + 3 emissions are considered.

The GHG Protocol divides Scope 3 emissions into 15 categories. Sappi reports upstream emissions (Categories 1 - 7 comprising of emissions from purchased goods and services, capital goods, fuel and energy related activities, upstream transportation and distribution, waste generated, business travel and employee commuting) as well as downstream emissions (Categories 10 and 12, comprising of emissions from processing of sold goods and end of life treatment of sold goods), the other categories are not relevant for Sappi. Upstream emissions comprise of 35.8%, and downstream emissions of 64.2% of total Scope 3 emissions.

Absolute Scope 1, Scope 2 and Scope 3 GHG emissions (mil tCO<sub>2</sub>e)



#### Excluded categories:

Category 8, Upstream leased assets, is not applicable. Category 9, Downstream transportation and distribution, is not applicable, because Sappi pays for the transport and is therefore included in Category 4, Upstream transportation and distribution. Category 11, Use of sold products, is not applicable as our products do not directly consume energy in the use phase.

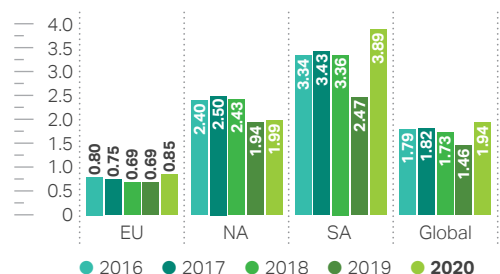
There was an increase in Scope 3 emissions from FY18 to FY19 due to an increase in data accuracy. Reduced production because of Covid-19 caused a reduction in Scope 3 emissions when comparing FY20 to FY19.

## OUR 2020 PLANET INDICATORS 1 continued

### Emissions continued

Absolute NOx (kg/annum)					
	2016	2017	2018	2019	2020
EU	2,576,423.0	2,526,593.9	2,352,324.0	2,243,482.8	2,279,176.4
NA	3,247,305.5	3,423,795.0	3,254,618.6	3,277,376.7	3,136,551.7
SA	5,206,145.5	5,707,639.6	5,748,817.1	4,322,674.6	5,936,212.2
Global	11,029,874.0	11,658,028.5	11,199,278.6	9,745,673.4	11,219,167.6

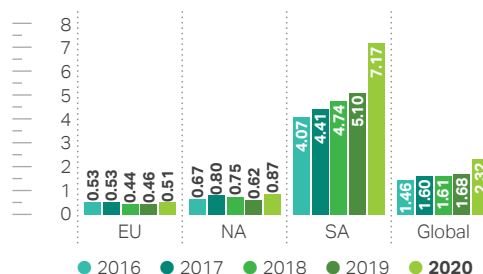
### Specific NOx air emissions (kg/adt) GRI: 305-7



**Globally**, there was an increase. In **SEU**, the increase was the result of reduced paper production at Alfeld, Gratkorn, Ehingen, Kirkniemi Lanaken and Mills; as well as changed operating conditions in the recovery boiler #6 at Stockstadt Mill. Emission increased at Maastricht Mill due to reduced paper production but no corresponding reduction in the CHP system. There was a slight increase in **SNA**, due to curtailment at both Cloquet and Westbrook Mills. The increase in **SSA** was due to curtailed production at Saiccor and Tugela Mills and a measurement issue at Ngodwana Mill: Stack flows are used to calculate NOx values. Stack flows are measured once or twice a year and then that value is used for the rest of the period till the test gets repeated. Based on the rate the plant was running when this was done, the flow can be over or understated. Pulverised fuel and #2CRF boilers were run as high as possible to determine performances on bag filters and precipitators when the test was done (hence the fact that high flows are reported – especially on #2CRF measuring over 13700 compared to averages of around 7500-8500 for previous years).

Absolute SOx (kg/annum)					
	2016	2017	2018	2019	2020
EU	1,711,519	1,779,337.6	1,503,915.7	1,480,129.9	1,373,241.3
NA	909,125.5	1,091,628.8	1,006,181.0	1,044,623.5	1,372,927.1
SA	6,347,665.5	7,349,302.5	8,111,867.0	8,935,852.4	10,922,029.7
Global	8,968,310.0	10,220,269.0	10,401,161.0	11,258,307.8	13,423,909.8

### Specific SOx air emissions (kg/adt)



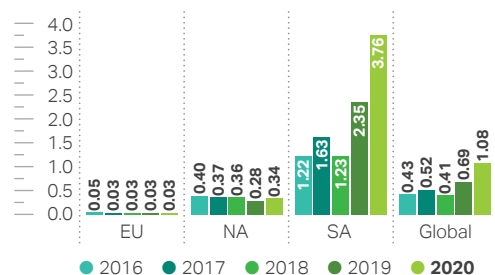
**Globally**, there was an increase, with the increase in **SEU** caused mainly by Stockstadt Mill – the coal used in boiler # 9 had a higher sulphur content of, as low sulphur coal was not available on the market. Curtailment at Ehingen Mill also had an impact and there was a slight increase at Gratkorn Mill. However, the latter mill is still on a low level. The increase in **SNA** was driven by downtime on the non condensable (NC) gas incinerator at Cloquet as the combustion air fan failed. This led to NC gas burning in the power boiler which does not scrub SO<sub>2</sub> emissions. There was also a slight increase at Somerset Mill related to higher emissions from turpentine burning. In **SSA**, Ngodwana, Stanger and Tugela Mills were impacted by curtailed production and by an increase in the percentage of sulphur in the coal used by Stanger Mill.

## OUR 2020 PLANET INDICATORS 1 continued

### Emissions continued

Absolute Particulate matter (kg/annum)					
	2016	2017	2018	2019	2020
EU	175,879.3	93,398.6	105,019.7	106,106.3	91,423.6
NA	538,081.2	505,456.3	487,104.5	479,490.1	535,475.1
SA	1,902,931.8	2,720,572.4	2,108,128.8	4,124,510.9	5,734,936.3
Global	2,616,892.3	3,319,427.3	2,642,870.3	4,616,732.9	6,233,564.1

### Specific particulate matter air emissions (kg/adt)

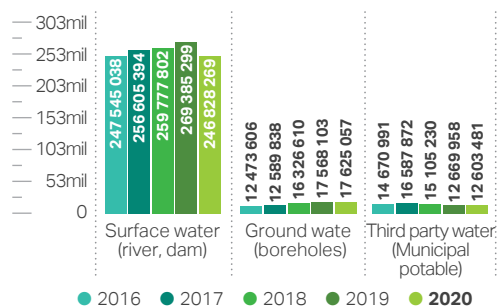


*Globally* there was an increase, with the increase in **SEU** on a very low level. The increase at Stockstadt Mill was due to changed conditions in operating the recovery boiler (#6) and at Ehingen Mill, to lower saleable production. In **SNA**, the increase in emissions was driven by curtailment at Cloquet and Westbrook Mill and by an unfavourable stack test on the #1 boiler at Somerset Mill. In **SSA**, the increase in specific emissions was due to curtailed production at Stanger and Tugela Mills. However, absolute emissions also increased. While maintenance on the grit collectors on boilers #3 and #4 was completed at Stanger Mill, additional abatement equipment is needed. An air heater was installed on boiler # 2 at the mill, with a heater on boiler #1 due to be installed in 2021.

## OUR 2020 PLANET INDICATORS 1 continued

### Water

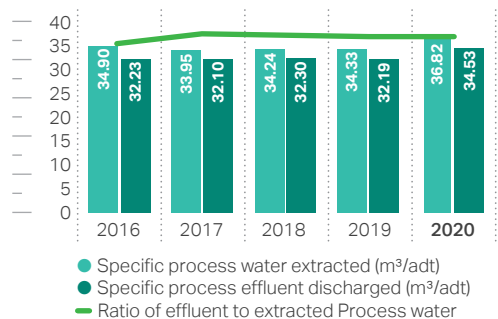
Total water withdrawal by source (m<sup>3</sup>/annum)



**Note:** Total water withdrawal includes water drawn for all purposes: water to process, water to communities, cooling water and third parties etc.

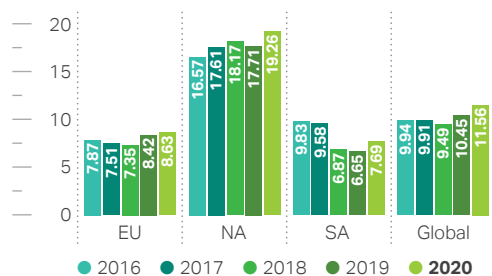
Total water withdrawal decreased **globally** by 7.5% due to reduced production.

Specific process water returned to extracted (m<sup>3</sup>/adt)



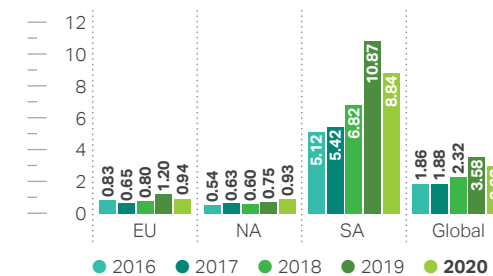
**Note:** Process water extracted and effluent discharged excludes non-contact cooling water for EU and NA.

Specific COD (kg/adt)



**Globally** there was a slight increase. In **SEU**, the slight increase was due to reduced paper production compared to pulp production at Ehingen Mill. At Stockstadt Mill, production was unstable, which caused upsets in the wastewater treatment plant. Looking forward, **SEU** plans to increase pulp integration, which will lead to increased specific COD load. To mitigate this, Alfeld Mill will increase its pulp mill evaporation capacity and the capacity of the anaerobic part of its effluent treatment plant. This in turn will increase the process stability of the biological effluent treatment and will lead to decreased values for TSS and COD in the final effluent. At Gratkorn Mill, in alignment with BAT requirements a switch to closed circle magnesium oxide-based pre-bleaching and a capacity increase of the sludge handling equipment with screw presses will be implemented in mid- 2021. In **SNA**, the increase was due to poor washing and evaporator condensate quality during Qs 1 & 2, with curtailment having a negative impact. Improvements at Matane and Somerset Mills only partially offset the increase. Note that integrated mills, like Cloquet and Somerset Mills where kraft pulp is produced, have higher COD values than not integrated mills. In **SSA**, the increase was due to cleaning of the pith clarifier at Stanger Mill as well as mill instability in terms of stop/starts). The increase at Tugela Mill was due to the cleaning of emergency dams and several liquor tanks.

Specific TSS (kg/adt)



Saiccor Mill has been excluded from this graph as it is the only mill in the group to use the sulphite pulping process in the production of DP. (Both Ngowana and Cloquet Mills use the prehydrolysis kraft pulping process). However, over five years, Saiccor Mill has reduced specific COD by 3.5% and will continuously improve its water quality footprint through further capital investment.

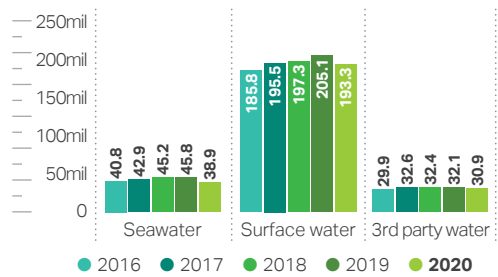
**Globally**, there was a decrease. In **SEU**, all mills except for Maastricht decreased TSS emissions or kept them stable, with Lanaken Mill returning to former values after finalising the pm 8 rebuild. As described above, as with COD, projects at Alfeld and Gratkorn Mills will have a positive impact on TSS levels. In **SNA** the increase was driven by curtailment at Cloquet Mill as well as primary clarifier rake failure in Q1. There increase at Somerset Mill was to carryover from the polishing pond, as dredging was delayed due to Covid-19. Matane and Westbrook Mills both showed improvements that only partially offset the increase. Nonetheless, both mills maintained compliance with the environmental regulations during these episodes. In **SSA**, there was overall decrease, attributable at Saiccor Mill to calcium line downtime and at Stanger decrease to successful chemical trials on the effluent system. The decrease at Tugela Mill was the result of improved clarifier and belt press efficiency, reduced fibre loss on the paper machine and reduced operation of the screw press.

OUR 2020 PLANET INDICATORS 1 continued

Water continued

Water: Total extracted and Total discharged					
	2016	2017	2018	2019	2020
Absolute process water extracted (m <sup>3</sup> /annum)	214,725,904.1	217,467,337.1	221,667,758.1	229,577,082.1	212,686,352.5
Absolute process effluent discharged (m <sup>3</sup> /annum)	198,343,208.9	205,655,534.7	209,087,345.0	215,274,345.6	199,472,286.4

Total water discharge by destination (m<sup>3</sup>/annum)

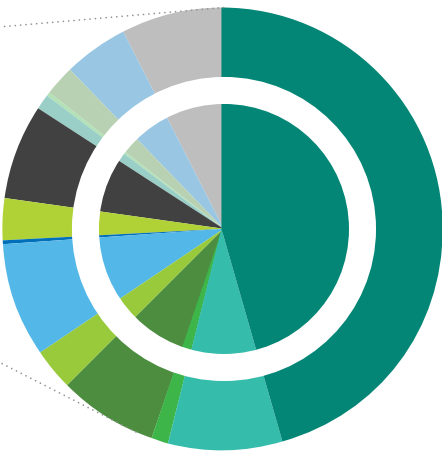


Global breakdown of solid waste types in Sappi (%) (2020)



- Bark (from own operations) (30,80%)
- Other (18,15%)
- Sludge (from pulp and paper mill and biological treatment) (23,79%)
- Boiler ashes (18,31%)

Global breakdown of "other" solid waste types in Sappi (%) (2020)



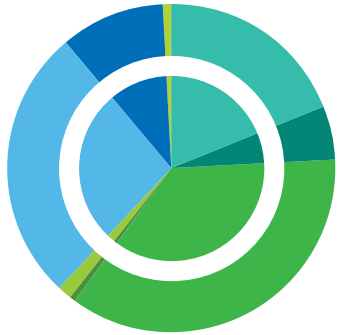
- Wood waste (knots, sawdust, slivers, fines oversize, pallets, other wood) (41,6%)
- Paper- and packaging waste (7,6%)
- Other combustible waste (1,2%)
- Green liquor dregs/sodium sulphate rejects (6,6%)
- Slaker rejects (2,8%)
- Lime mud (7,8%)
- Wires and felts (0,2%)
- Domestic waste (2,8%)
- Plastics, polystyrene, plastic packaging (6,2%)
- Hazardous waste (1,16%)
- Used oil (0,2%)
- Other/scrap metals, iron, empty cans (2,0%)
- Oil contaminated waste (0,1%)
- Other waste (rolls, small chemicals, grinding roll waste etc.) (4,1%)
- Other waste (6,8%)



## OUR 2020 PLANET INDICATORS 1 continued

### Solid waste

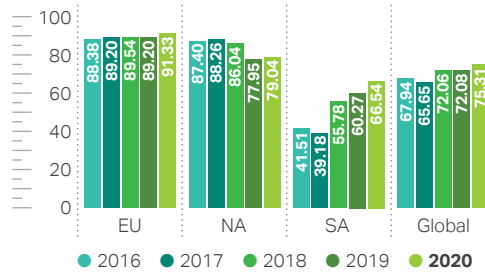
Disposal methods of solid waste (%) (2020)



- Landfilled on-site (19.15%)
- Landfilled off-site (5.42%)
- Combusted on-site for heat use (36.07%)
- Incinerated (0.11%)
- Composting (on- or off site) (0.49%)
- Other use (on-site) (1.31%)
- Other use (off-site) (27.09%)
- Quantity sold (10.35%)

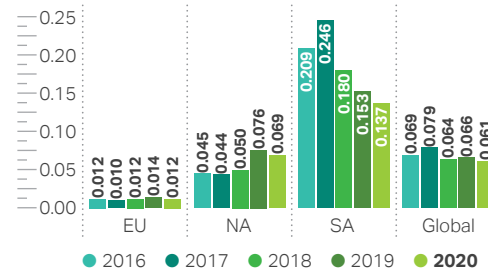
Other use (off-site) mainly consists of boiler ash, used for brick making, waste that is recycled (wood products, metals and plastics), lime mud used as a mineral fertiliser or filler material in mines, waste that is incinerated for heat recovery etc.

Beneficial use of solid waste (%)



**Globally**, there was an increase. In **SEU**, the increase was due to Condino Mill reusing the fibre containing sludges to produce various products. Beneficial use also increased at Carmignano and Lanaken Mills. In **SNA**, the increase in beneficial use was driven by Somerset Mill – the result of an increase in the rate of burning of own bark for steam generation following the woodroom upgrade. In **SSA**, the increase was due to Saiccor and Tugela Mills benefiting more wood waste and Ngodwana Mill increasing ash sales.

Specific landfilled solid waste (t/adt)



**Globally**, there was a decrease. In **SEU** this was due to a decline at Rockwell Solutions and Condino Mill reusing the fibre-containing sludges to produce various products (cartons, brick manufacturing, panels for different purposes and composting). In **SNA**, Somerset Mill sent less boiler ash sent to landfill. At Matane Mill, there was less sludge from the waste water plant and at Cloquet Mill specific landfilled rates were flat. However, they increased at Westbrook Mill due to curtailment. In **SSA**, more waste diverted from landfill due to increased beneficiation.