management that aligns with the principles of King IV, as well as generally-accepted good risk management practices. The Audit and Risk Committee assists the Board in the execution of its fiduciary duties regarding risk management. The Executive Committee, through the Risk Management Committee, reviews the output of the risk management process to ensure the appropriate management of risks.

Management is accountable to the Audit and Risk Committee and works with the relevant staff within the businesses to ensure the implementation of the risk management process. In line with Mpact's decentralised structures, risk assessment and management processes enable every business within the Group to take responsibility for the management of its own risks to encourage proactive action by the business units when faced with risks and opportunities. Business unit risk registers are aggregated into a Group Risk Register.

The Enterprise Risk Management Framework sets out the approach to be taken to address and improve risk management to achieve Mpact's objectives. The Group has a Risk Management Framework and Enterprise Risk Management Guideline built on the ISO 31001 standard. The risk management process is managed by the Group Risk and Sustainability Manager who reports to the Executive Committee via the Risk Management Committee, and to the Board through the Audit and Risk Committee.

The Risk Management Committee identifies and evaluates strategic and operational risks against our 10 business value drivers.

The Board considers the material business risks in its fiduciary oversight of Mpact when approving Group strategy, capital expenditure and the budget. Risk assurance is considered at managerial (level 1), corporate function (level 2) and external (level 3) levels by both the Risk Management Committee and the Audit and Risk Committee for reporting to the Board. Risks are reviewed and updated on a regular basis.

More information on Mpact's key risks, mitigating actions and opportunities is available on pages 68 to 72 of the 2020 Integrated Report.

ENVIRONMENTAL RESPONSIBILITY

As the largest paper and plastics packaging and recycling company in Southern Africa, Mpact has a key role in closing the loop on the circular economy. Responsible environmental management is therefore both a core value for the business and an important aspect of our strategy to create value.

Raw materials used in the Group's manufacturing operations include pulp, logs, pine chips and plastic polymers. The manufacturing process requires energy and water as inputs and produces atmospheric emissions that include carbon emissions, as well as waste.

We focus on responsible sourcing of raw materials and most of the fibre used in our paper mills is supplied by the Recycling division. The additional virgin pulp used comes from responsible sources and the paper mills and corrugated plants are certified to the Forest Stewardship Council standards. An increasing percent of the high-density polyethylene used in the manufacture of crates and wheelie bins comes from recycled sources in the Bins and Crates unit as the operations increase their recycling capabilities.

Mpact is committed to managing its environmental impact responsibly by using scarce resources efficiently, minimising harmful emissions and reducing waste. All capital decisions are made with these considerations in mind and improving production efficiencies is a strategic focus as a key aspect of business excellence.

By collecting recyclable paper and plastics through Mpact Recycling, the Group actively contributes to the circular economy, performing a valuable environmental role that effectively reduces waste to landfill and creates jobs through the collection process.

COMPLIANCE

Environmental legislation in South Africa continues to evolve and become increasingly complex and onerous. Ensuring compliance with all relevant legislation that applies to Mpact is a priority. The Environmental Management Systems at sites that could have significant environmental impacts are externally certificated to the ISO 14001 standard. Regular environmental legal audits are conducted to ensure compliance with the legislation and an annual review of environmental management at all sites is conducted by Legal Consulting Services (see page 23).

The Group Risk and Sustainability Manager, Group Energy Manager and Environmental Manager sit on the Paper Manufacturers Association of South Africa (PAMSA) Environmental Committee and participate in interactions with government regarding emerging legislation.

ENVIRONMENTAL EXCELLENCE

Mpact's annual Scarab Awards are named after nature's prime example of recycling – the Scarab Beetle. These internal environmental awards recognise environmental excellence at our operations and create healthy competition. Performance is measured against a set of internally audited standards aligned to ISO 14001, with Bronze, Silver, Gold and Platinum awards available.

ENERGY

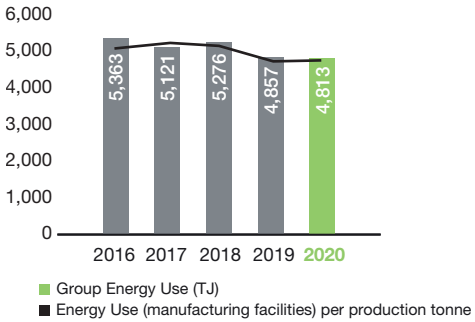
Coal is the main source of energy consumed at Mpact's manufacturing operations and is used for on-site steam generation. Electricity is another significant energy input in our facilities. The Group energy management strategy aims to optimise energy usage and evaluate energy generation technologies. Mpact's Group Energy Manager analyses the energy usage profiles at the manufacturing plants, develops programmes to monitor and report usage, and assists with projects to reduce energy use and generate alternative energy where possible.

Online metering systems are in place at our manufacturing sites to ensure accurate reporting and availability of real-time and routine energy reporting data. Energy savings are evaluated at every site each month against the 2014 baseline consumption.

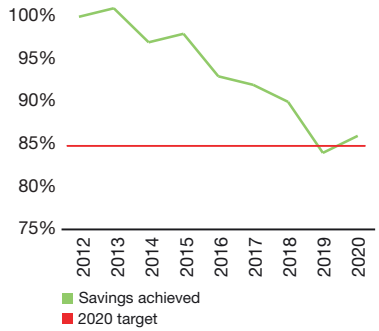
Initiatives are in place to reduce energy use, our environmental footprint in terms of greenhouse gas and other atmospheric emissions, fossil fuel use and ash generation.

Mpact's energy management plan to 2020 was aligned with our Greenhouse Gas Pollution Prevention Plan, which was developed

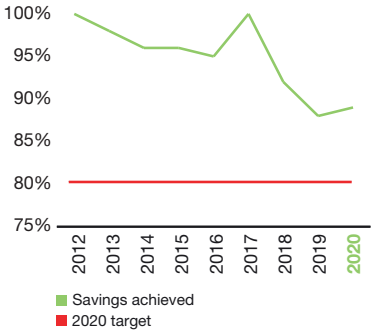
Group energy use [1]



Reduction in energy per manufactured tonne



Reduction in Scope 1 and 2 CO_2 emissions per manufactured tonne



and submitted in 2017. Progress on implementing our energy strategy during the year 2020 included:

- 16 energy champions and plant technical staff were trained in Energy Performance Management Indicators at the 2020 Energy Centre of Excellence event to assist the operations to set their five-year energy plan that will be used for the Group targets to 2025 and the next round of government reporting in the Pollution Prevention Plan process.
- A new rooftop solar PV installation was commissioned at Mpact's Plastics Containers Brits operation, bringing the Group's total installed solar PV units to 2.87 MWp.
- Capital expenditure has been approved for solar PV installations at Corrugated Springs and Detpak and the roofs of these plants are being prepared for installations in 2021.
- Plans for a further 11.57 MWp of solar PV installations are being evaluated.

Mpact's manufacturing operations consumed 4,765 TJ of energy in 2020 (2019: 4,797 TJ) and Group total energy consumption, including energy for non-manufacturing sites, decreased 1% to 4,813 TJ (2019: 4,857 TJ).

Production was affected in both 2019 and 2020 by unusual factors that impacted total energy use and production efficiencies. In 2019, Mpact's three paper mills took commercial downtime of approximately 10% of their annual capacity, due to decreased demand for paper. In 2020, production was affected by the disruptions arising from the Covid-19 pandemic, a limited amount of production downtime in the first quarter, load-shedding and electricity supply disruptions due to municipal infrastructure failures at the Springs Mill and Brits Plastics Containers. As a result, while total energy consumption for the Group reduced 1% for the year, the production inefficiencies in 2020 resulted in energy use per tonne of production increasing by 2% to 6.29 GJ per tonne of production (2019: 6.15 GJ/t).

Mpact targeted a 15% reduction in energy consumption per tonne of saleable product from its manufacturing operations by 2020, off a baseline year of 2012. While this target was achieved in 2019, the disruptions in 2020 mentioned above resulted in the savings slipping to a 14% saving per tonne of product since 2012.

The Group is in the process of finalising five-year water, energy and waste savings targets to 2025. The targets are being derived using a bottom-up approach that includes an assessment of peer practices, market expectations, "science-based targets" for CO_2e emissions, and what is achievable with our current projects and plans. The Department of Environment, Forestry and Fisheries is developing regulations defining how Green House Gas Pollution Prevention Plans (GHG PPP) and Carbon Budgets are to be produced. Finalisation of these regulations is required before Mpact can finalise five-year energy and carbon emission management plans and commit to targets.

GREENHOUSE GAS EMISSIONS

Mpact's Scope 1 and 2 carbon emissions mainly arise from coal used to generate steam and electricity generated from fossil fuel purchased from the national grid. We embrace the global drive to reduce greenhouse gas (CO_2e) emissions and set an ambitious goal to reduce combined Scope 1 and Scope 2 CO_2e emissions per tonne of manufactured saleable product by 20% by the year 2020, against a 2012 baseline. However, combined carbon emissions per tonne of manufactured product in 2020 totalled 0.893 tCO_2e/t (2019: 0.8831 tCO_2e/t) which represents a reduction against the 2012 baseline of 11%. Notably, Mpact did achieve CO_2e emission reductions of 20% for Scope 1 in 2019.

Total Scope 1 CO_2e emissions increased 1% to 315,742 tCO_2e (2019: 313,305 tCO_2e) while Scope 2 emissions decreased 4% to 366,727 tCO_2e (2019: 382,952 tCO_2e). The municipal electricity transformer failure that affected the Springs operations led to the Springs Mill being without municipal electricity for more than 50 production days. The Corrugated Springs plant was able to continue operations but had to rely on electricity from diesel-fired generators for that time, leading to an increase in stationary fuels consumed (Scope 1) and a decrease in electricity consumption (Scope 2). Group combined Scope 1 and 2 carbon emissions decreased 2% to 682,469 tCO_2e in 2020 (2019: 696,258 tCO_2e). The decrease is also attributable to the other factors discussed in the energy section above.

Progress is being made on setting targets for the five-year period to 2025 but, as noted above, finalisation of the plans is contingent on publication of proposed new regulations regarding the development and reporting of GHG PPP and Carbon Budgets.

1 Some prior year energy use and carbon emission comparatives have been adjusted for improved data collection subsequent to last year's reporting date. These are not considered material as they are less than 1.5% in all cases.

WATER

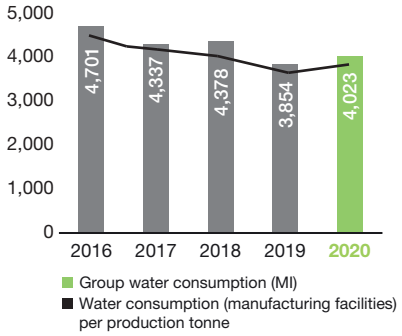
Paper production requires large amounts of water and 94% of the water used in the Group is used by the Paper Division. Our manufacturing processes aim to optimise water use, however, two of the three paper mills have reached the point where the degree of process water recovery and recycling is impacting on paper quality and further savings will require application of innovative water management systems. Total water consumption for 2020 increased by 4% to 4,023 megalitres (2019: 3,854 Mℓ) compared to a 3% decrease in total production. Specific water use for manufacturing sites increased by 7% from 4.94 kilolitres per tonne of production to 5.30 kℓ/t.

Our long-term water savings target was for a 20% saving of water used per manufactured tonne of product by 2020 against the baseline year of 2012. 2020 consumption per tonne of production represents a saving of 23% (2019: 28%) against the baseline, or just over 5,800 Mℓ over the period.

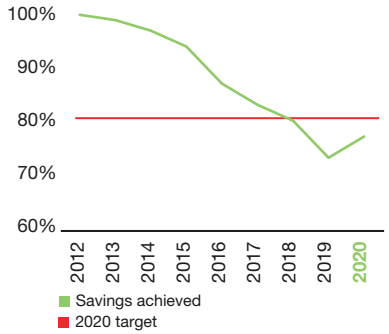
WASTEWATER

Wastewater discharged from the Group in 2020 increased by 3% to 2,654 Mℓ (2019: 2,574 Mℓ) and specific wastewater discharge for the manufacturing operations increased by 6% to 3.50 kℓ per tonne of product (2019: 3.31 kℓ/t).

Water consumption (Ml)



Reduction in water use per manufactured tonne



WASTE

Our sites segregate and sort waste material generated, and recycle wherever possible. Residual materials that cannot be recycled, or are spoiled, are disposed of through registered waste service providers or municipalities, according to their waste categories.

Non-hazardous waste recycled in 2020 totalled 53,562 tonnes (2019: 66,703t). For the manufacturing sites this amounted to 68kg per tonne of product (2019: 66kg/t). Total non-hazardous waste disposed of by the Group amounted to 35,048 tonnes (2019: 34,048t) which for the manufacturing operations amounted to 45kg per tonne of product (2019: 41kg/t). Waste disposed to landfill mainly comes from the Paper Division (including Mpact Recycling) and is affected by the amount of non-recyclable material that is included in recovered fibre from the waste collectors. The current challenging economic environment resulted in waste collectors digging deeper into contaminated sources, resulting in more non-recyclable material having to be removed from the recycling stream.

Hazardous waste disposed of decreased to 830 tonnes for the Group (2019: 1,004t) or 1.1kg per tonne of product (2019: 1.2kg/t) for the manufacturing sites.

MATERIALS

Mpact focuses on responsible sourcing of raw materials and most of the fibre used in our paper mills is supplied by the Recycling division and recycling practices at corrugating operations. Operations still use some virgin fibre and polymer, and certain residual materials are not yet recyclable and must be disposed of as waste.

Felixton Mill uses only recycled fibre, while Piet Retief Paper Mill purchases sawdust, offcuts and logs from local sawmills and plantations for virgin fibre to supplement their use of recycled fibre. The bulk of the paper produced at Springs Mill is derived from recycled fibre, although the mill also purchases white virgin pulp from local suppliers for the outer white layers of its folding boxboard products.

The plastics businesses purchase polymers preferentially from local suppliers whenever possible.

National Recycling Week 2020 media campaign

Mpact Recycling ran a social media campaign to promote recycling around National Recycling Week (14 – 20 September 2020). The campaign far exceeded our targets, reaching more than 1.3 million people across South Africa and creating a positive increase in engagements per social media post. Our aim was to drive behavioural change that encouraged consumers to find out more about recycling and to help them collect and drop off recyclables at collection points. More than half of the contacts created through the campaign requested details of nearby drop-off centres to drop off recyclables, sell their materials or to start their own recycling business. Visitors to Mpact Recycling's website increased over 150% in September.

RECYCLING

Mpact Recycling collects waste paper, plastics and other recyclable materials from pre- and post-consumer sources. Recovered paper is sold internally to the three Mpact paper mills for manufacture of containerboard and cartonboard, and to other external customers. This considerably decreases our reliance on virgin materials and diverts significant quantities of material from landfills

Our Springs plant has a liquid packaging recycling facility that separates liquid packaging cartons into their constituent parts – recovered paper (75%), polyethylene (20%) and aluminium (5%). The recovered paper is used by Springs Mill and improves board strength. We continue to investigate feasible uses for the recovered polyethylene and aluminium.

Mpact Plastics Containers has a recycling and exchange programme that collects old and damaged wheelie bins, crates and baskets from municipalities and retail outlets for recycling. These items are cleaned and ground down, extruded into pellets and blended with virgin material to mould new products for sale. Over the last five years, 700 tonnes of plastic have been diverted from landfill in this way.

Mpact's recycling businesses recovered 522,565 tonnes of material for recycling in 2020 (2019: 624,000t), which diverted 29,697 tonnes of plastic waste from landfill for recycling and enabled 347,541 tonnes of waste paper to be recycled.

Recycling also promotes local beneficiation of raw materials, job creation and small enterprise development, reduces greenhouse gas emissions and prevents landfilling or incineration of the recovered material