

2020

Responsible Care[®]

PERFORMANCE REPORT



CAIA Vision and Mission

Vision **Responsible Care®** envisages a profitable, sustainable chemical sector in South Africa that contributes to the quality of human life and the economy through innovation and production – without harm to people, property, or the environment. **Responsible Care®** aims to ensure that South Africa's chemical sector is recognised by all stakeholders as a responsible industry that plays an important role in providing a wide range of benefits to society – while remaining open, honest, accountable, and credible in all its dealings. **Responsible Care®** strives to achieve zero employee and contractor injuries, zero manufacturing process safety incidents, zero distribution incidents, zero environmental incidents, and zero fatalities.

Mission The voluntary **Responsible Care®** Initiative aims to bring about continual improvement in the safety, health, environmental (SHE) and security performance. Signatories to this Initiative commit to implement the **Responsible Care®** Guiding Principles and to constantly monitor, measure, and report performance in a transparent way. This allows signatories to measure progress, identify areas for future improvement and determine whether **Responsible Care®** is having a positive impact on industry performance.

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Zero
employee
and contractor
injuries

Zero
manufacturing
process safety
incidents

Zero
distribution
incidents

Zero
fatalities

Zero
environmental
incidents



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Chairperson's Statement

André Harding

The year since my election as chairperson of CAIA seems to have flown by very quickly. In a time when our country has a weak economy, COVID-19 presented itself, rating agencies downgraded South Africa and the high rate of corruption is having a further crippling effect on the already fragile economy. At the same time, every cloud has a silver lining, and many valuable lessons were learnt, best practices experienced, and opportunities provided. The period under review saw CAIA membership grow and its leadership confirming the overarching theme of the work undertaken by the association as "Development of an Enabling Environment".

The company I represent has been a member of CAIA for many years. The annual Responsible Care® Performance Report has always been very informative regarding the activities of the association; mostly from a Responsible Care® perspective. Due to the strong links between policy, legislation, advocacy work as well as the Initiative and its implementation, the two core areas of CAIA's activities are understandably not easy to separate.

The performance results, and recent inclusions of the Highlights, and Opportunities, Challenges and Risks sections, are concise informative sections of the report that provide an overview of the aggregate performance of Responsible Care® signatories from a SHE perspective. I trust that you will enjoy the report and find value in it, along with the reports that are provided to individual companies/sites each year. These company-specific reports provide an indication of performance in up to 25 SHE indicators, and a company's position in respective

subsectors. Providing these resources to signatories is also important from an internal CAIA operational perspective. The data that signatories share with CAIA are of utmost importance in determining where focus areas should be in the future, identifying best practices, year-to-year top achievements, and sustained high performance. Thank you to those signatories that meet their Responsible Care® commitments with such enthusiasm, making this report possible.

As is the responsibility of the chairperson, I need to report upfront on the fatalities that have been experienced. Two fatalities took place during 2019, both being company employees. The fatalities were not related to "material" that CAIA defines as "raw materials, chemical products, waste, samples and empty containers". Like recordable injuries, non-material related incidents account for most injuries amongst signatories and their contractors, rather than material-related incidents. It is intriguing that the recordable injury incident rate reported for signatories'

contractors is always lower than that for signatories themselves. In 2018 and 2019, the rate for in-house activities was between four and five times the rate reported for contractors. This trend has been the case for several years and needs to be further investigated by signatories. Encouragingly, the continued increase in the in-house recordable injury incident rate has been broken and CAIA trusts that members will pay close attention to this indicator in their day-to-day operations. Notably, recordable injuries could be linked (although loosely) to fatalities in the sense that the more recordable injuries there are, the more risks may be present at the workplace, and the higher the chances of more serious incidents occurring.

Due to the added responsibility of keeping workers safe from infection with the COVID-19 virus, companies have been heavily impacted by the steps needed to be taken, which in turn affected the way work needs to be carried out. These measures also had a negative impact on productivity. As stated in the Executive Director's



“CAIA has strategically located itself in the country’s **business and Government echelons** to advocate its views on measures being negotiated for implementation in a variety of sectors. These efforts are made to **minimise the impact on operations** as far as possible.”


Statement, companies are being required to do more with fewer resources, including workers and cash flow, to introduce the required measures to limit transmission of the virus. The measures that have been introduced by members needed to be urgent and have had an impact on daily operations. From more stringent entrance control to worker screening, administrative controls and new or modified procedures being put into place (such as risk assessment, risk mitigation and required reporting to Government), there has been unusual demand on workers outside of routine activities. It is however crucial that the sector continues to pay close attention to the standard SHE and security requirements to ensure that key areas are not neglected.

CAIA has strategically located itself in the country’s business and Government echelons to advocate its views on measures being negotiated for implementation in a variety of sectors. These efforts are made to minimise the impact on operations as far as possible. In many cases, CAIA

has led discussions on important matters, developed and contributed to documents and legislation that have been developed, driven the need for the review of legislation and developed one of the two national sector guidelines for the COVID-19 pandemic, as provided for in the Department of Employment and Labour (DEL)’s COVID-19 Directions.

In the 2019 Responsible Care® Performance Report, the importance of economic growth was emphasised as critical for the upliftment of South Africa and to attract investment. There is a need for key reforms to be introduced for a growth focussed agenda. Many of these reforms have been scrambled by the impacts of the COVID-19 pandemic. A stable business environment is critical for any investment to land on our shores, and the various hurdles that are impeding companies to expand or do business in South Africa need to be urgently removed and a business-friendly environment created.

The need to mitigate Greenhouse Gas (GHG) emissions wherever possible, provides a unique opportunity to invest in South Africa in more sustainable operations; thereby securing international competitiveness. The security of electricity supply at prices that are affordable and competitive, as well as the need to decarbonise the electricity generation sector, are important matters to overall business sustainability that CAIA advocates for. CAIA pays attention, from a policy and legislative perspective, to areas of strategic and technical importance to present members’ views on critical matters; thereby adding our voice to these important dialogues. The importance of contributing to CAIA’s advocacy, policy, legislative and Responsible Care® activities cannot be overemphasised. It is your views and needs, as members, that are ultimately what CAIA strives to consider in its activities. I thank members who have shared insights, challenges and opportunities related to their operations as well as for the enthusiasm shown during discussions that are held.



"CAIA has indicated that it is ready to support Government to carry out its mandate by providing, where possible, capacity and expertise, and urges Government to engage."

CAIA looks forward to continue being a key partner in Government's implementation of measures to limit the transmission of COVID-19 and contribute to the further economic development of South Africa, through the implementation of rational legislation and the South African Economic Reconstruction and Recovery Plan. This plan has identified key enabling factors as well as interventions needed per priority area, amongst other imperatives such as resource mobilisation, monitoring, evaluation, and implementation. It is welcomed that one of the key interventions pertains to crime and corruption, while others speak to the need for skills, productivity, macro-economic and fiscal stability, and building consumer and business confidence by engaging with social partners. The following additional key interventions have been identified that will contribute to framing and prioritising CAIA's activities:

- ensuring energy security;
- infrastructure that meets the National Development Plan (NDP) 2030;
- macro-economic interventions;
- green economy; and
- food security.

CAIA has indicated that it is ready to support Government to carry out its mandate by providing, where possible, capacity and expertise, and urges Government to engage.

South Africa has just one last chance to turn the economy around and needs to consider the short-, medium and long-term sustainability and sovereignty of the country. We are all stakeholders in the growth of the country and plans should be inclusive – both for people and the challenges that must be solved. Combined approaches, with co-benefits in the green economy and climate change mitigation, will go a long way to restoring South Africa's competitiveness and increase employment opportunities.



André Harding
Chairperson of the Board

Highlights



Additional mandatory reporting during the 2020 submission cycle

For the 2020 submission cycle, the following additional data were collected:

Submissions were disaggregated to the extent possible, resulting in a greater number of submissions for improved tracking and recognition of performance.

This was also undertaken to align as far as possible with Responsible Care® audit requirements.

Product Stewardship questions were revised.

New questions on:

- > Process safety-related near misses
- > Desktop simulation exercises

Occupational diseases –

more relevant Nature categories were introduced that align with the Compensation for Occupational Injuries and Diseases Act

Operational and capital expenditure fields included – disaggregation is required when reporting SHE investments.



Submission and Reporting Statistics for the 2020 submission cycle

97.4%

(149 out of 153) of the expected questionnaires were finalised for inclusion in reporting.

PERFORMANCE INDICATORS

The year-on-year improvements in this publication are from 2018 to 2019, unless stated otherwise.



Safety and Health

Recordable Injuries

- > The in-house, non-material-related recordable injury incident rate, the total in-house recordable injury incident rate, as well as the contractor, non-material-related recordable injury incident rate **all decreased year-on-year.**

The in-house, non-material-related recordable injury incident rate **decreased by 26.4%**

The contractor, non-material-related recordable injury incident rate **decreased by 40%**

Overall, the in-house recordable injury incident rate was **0.694 per 200 000 hours worked.**

Fatalities

- > Fatalities were at the **lowest level since 2013** (reporting period).
- > **Two in-house, non-material-related fatalities** were reported for 2019.



Handling and storage incident rate was **50%** of contractor-related operations, i.e. 0.009 incidents per 200 000 hours worked.

Occupational Diseases

For the fourth year in a row, in-house occupational diseases decreased; standing at **0.016 occupational diseases reported for in-house activities, per 200 000 hours worked.**

No occupational diseases were reported by contractors.



Environment

The amount of traded product decreased by
2.97%

Aggregate environmental indicators were calculated based on the volume (metric tonnage) of traded product.

Environmental Incidents

The absolute number of **environmental incidents**, taking those legally reportable and those non-reportable into account, **decreased from 587 to 437.**

Solid Waste

Of all solid waste generated, a higher proportion **was driven up the waste management hierarchy (74%) compared to 2018 operations (56%).** Waste management hierarchy includes recycling, re-use, recovery for energy and transferring waste to others for use.

Licensed sulfur dioxide emissions are
10.4%

lower, while nitrogen oxide emissions are 9.6% lower, per tonne of traded product.

Effluent



> Indicators showing the total effluent recycled, the effluent discharged per unit of water consumed, and the effluent recycled per unit of effluent discharged, **all improved relative to the volume of traded product.**

Atmospheric Emissions under Licence

Over the three years from 2017, **atmospheric emissions of sulfur dioxide and nitrogen oxides per tonne of traded product, have continued to decrease.**

Executive Director's Statement

Deidré Penfold

Never have words been as true as those of the closing remarks made in the 2019 Responsible Care® Performance Report, namely, "The year ahead no doubt will present challenges, but those should be seen as opportunities that the sectors must embrace to drive economic growth and job creation." Indeed, the year 2020 has presented its challenges with the COVID-19 pandemic sweeping the globe. Extraordinary measures have had to be implemented by governments, which have resulted in an inordinate amount of change and challenges that businesses, economies, countries and – most of all – people, have had to tackle head-on.

In South Africa, the Government responded swiftly to reports of the outbreak of the COVID-19 virus, potentially limiting transmissions and infections to a large degree that would otherwise have had a catastrophic impact on people's health; many of which also face the human immunodeficiency virus and even tuberculosis, at the same time. Our population is well-known for its high levels of comorbidities, unemployment and poverty which could have further contributed to the pressures that the under-resourced state healthcare system was already facing. National Government took conclusive action in moving from Alert Lockdown Level 5 to Alert Lockdown Level 1 in a matter of months; while being cautious in its approach to easing restrictions. The question however is posed, could the Government not have taken measures earlier under controlled circumstances to open the economy faster, as the South African economy was limping prior to COVID-19 hitting our shores.

The impact that the pandemic has had on the private sector has been felt by everybody – from workers at all levels, to the flow of goods, supply and demand and the need for research, development and innovation across the globe. Much work will need to be undertaken to ensure that the emphasis on the health of the people can now also be turned into an emphasis on the urgent need to rebuild the country's

economy. CAIA, as a key contributor to the work of business, continues to advocate for rational, decisive and quick action to be taken to place the country on a journey of economic growth. Furthermore, what has been achieved by social partners, namely, business, labour, Government and community, during these trying times has been unprecedented – showing what can be achieved when South Africa works together towards a common goal. If South Africa is to regain its leadership status as a key intercontinental and regional trading partner as well as supplier of competitive goods and services, new strategies need to be developed by all collectively; and then effectively and decisively implemented. Easier said than done! For this to be achieved, clear leadership is necessary as well as accountability and transparency, and sourcing of the skills sets that are going to take the country forward. As regards corruption, there needs to be a zero-tolerance approach to unethical and corrupt practices and a sense of urgency needs to exist to bring persons and companies to book.

During the period March 2020 to date, I was part of Business For South Africa (B4SA), a structure borne out of Business Unity South Africa (BUSA) as the all-encompassing forum created by the private sector to respond to the economic crisis caused by the pandemic. I participated as a lead in a number of the work streams under the Economic Intervention Platform

with the final outcome being the Economic Recovery Plan presented to social partners and to Government a few weeks back. Some of the good work undertaken and which needs to continue, will be transferred back to BUSA and its various divisions for further engagement and outcomes.

As CAIA looks forward to celebrating the next 25 years of implementing Responsible Care® the recent review of the Initiative's implementation in South Africa resulted in a number of key changes to the management system with signatories encouraged to look towards business sustainability and ensuring competitiveness. There is no doubt that additional challenges are on the horizon, with a further global challenge emerging through impacts on weather being felt on a daily basis. Climate change policy and legislative development has most certainly ramped up in South Africa, and CAIA implores Government to sit around a table with the business sector to reach win-win scenarios where the mitigation of GHG emissions can be effectively and rationally incentivised.

During 2020, CAIA completed the review of the new Codes of Management Practice (CMP) that have replaced the Management Practice Standards (MPSs); placing emphasis on both Pollution Prevention and Resource Efficiency by disaggregating the two from a combined code, and added a new code to the

“CAIA has launched the once-off COVID-19 Award this year specifically tailored to **recognise companies’ and chemistry’s contributions to easing the hardship that many citizens have experienced over the last few months.**”



Responsible Care® Management System (RCMS) suite – the Security Code. Signatories have a year to implement the revised and new CMPs before mandatory auditing against the codes. CAIA looks forward to sharing the accomplishments of members in their journey of continual improvement, and takes pride in recognising signatories’ top year-on-year performance, sustained high performance, as well as company and Corporate Social Responsibility (CSR) projects that are implemented each year. Furthermore, CAIA would like to recognise that signatories to the initiative have continued implementation of the initiative even where this has been challenging due to a plethora of other demands being placed on companies and their employees. Your commitment to continual improvement is remarkable and applauded!

CAIA has launched the once-off COVID-19 Award this year specifically tailored to recognise companies’ and chemistry’s contributions to easing the hardship that many citizens have experienced over the last few months. In addition to the opportunity for a company to be recognised for its goodwill, the award also demonstrates CAIA’s responsiveness to the needs of its members at all times.

CAIA received excellent feedback from members regarding the information that was provided during the difficult times of the various Alert Lockdown Levels, and the assistance provided to individual members where this was necessary. Through CAIA’s networking, engagement and advocacy activities, strong links have been forged with key decision-makers in Government, enabling shorter pathways to discuss

key policy matters and strategic leadership where required, in challenging areas.

The importance of providing information to Government, as legislator and regulator, cannot be over-emphasised in terms of advocating for informed, risk-based decision-making – where there is political will. So too is the importance of providing aggregate information to the International Council of Chemical Associations (ICCA), of which CAIA is a key member. This year, thanks to signatories consistent and improved reporting during the CAIA Key Performance Indicator (KPI) submission season, CAIA was able to provide the ICCA with a larger dataset than ever before – which has led CAIA to be seen as a leading association member internationally. These links are critical to understand the dialogues that are taking place on chemicals management matters, and how the developed world is driving change. By staying abreast of these developments, CAIA is able to provide members with strategic opportunities to transform their businesses to remain ahead of the curve and competitive, as far as possible.

During the year, CAIA participated in a number of ICCA virtual meetings and is part of the ICCA Steering Committee, ICCA Board, Responsible Care® Leadership Group (RCLG), Responsible Care® Self-Assessment Tool Work Group, Peer Mentoring/ Experts Network Work Group, Trade Policy Network and the Chemicals, Policy and Health Leadership Group.

The provision of value to members is a key driver of the association’s activities and this has never been more of a

focus area than now for CAIA, given the tough economic times that are being faced. If there is any way that CAIA can be of assistance to your company, do not hesitate to reach out.

As businesses grapple with new revenue models, product-responses due to shifts in demand (and supply), the need to do more with less, and new ways of doing business in the virtual world, one can already note the innovation that has been sparked in the market; both domestically and internationally. This is very encouraging as it shows that humankind can find answers in the direst circumstances if we work towards a common goal. In innovation, there is value!

As we gear ourselves up for the “New Normal”, now is the time for businesses to re-invent themselves and be ready to take on the next challenges that they may face, in a competitive and innovative manner. The association remains committed to supporting companies’ economic activities to ensure the sustainability of business, and to contribute to increased sustainability both socially and environmentally. It is important that during the forthcoming year that CAIA continues to expand its engagements with the leadership of the South African Government, but also to that of other international organisations.



Deidré Penfold
 Executive Director

Opportunities, Challenges and Risks



RECORDABLE INJURIES

- > The in-house, material-related recordable injury incident rate **increased by 8.3%**.
- > The largest contributor to the overall recordable injury incident rate remains in-house non-material-related injuries, **0.444 recordable injuries per 200 000 hours worked**.



ROAD TRANSPORTATION

- > Both the rate for incidents caused as a result of the release of material, as well as that for **total road transportation incidents, increased dramatically by 84.4% and 141.8%** respectively. The rate is now reflected relative to kilometres travelled, rather than tonnage transported.
- > The proportion of signatories that implemented behaviour-based safety programmes for in-house and contracted drivers (where relevant) **has decreased to 73.6%**.

HANDLING AND STORAGE



- > The incident rate for handling and storage of material **per 200 000 hours worked, increased by 57.6%**.

PROCESS SAFETY



- > The number of **Tier 1 and Tier 2** process safety incidents increased, relative to the number of hours worked, by **69.9%**.

- > **Tier 1** process safety incidents increased by **79.5%** per 200 000 hours worked.

- > **Tier 2** process safety incidents increased by **66.7%** per 200 000 hours worked.

STAKEHOLDER ENGAGEMENT



- > Results from a number of indicators that show the level of stakeholder engagement fell during 2019 operations. These included:
 - from **65.3%** to **50.3%**, for the proportion of signatories holding external stakeholder meetings;
 - from **87.6%** to **69.1%**, for the proportion of signatories having, or involved with, Community Awareness and Emergency Response Structures; and
 - the proportion of signatories with external stakeholder complaints procedures in place remained below **90%**.

EMERGENCY RESPONSE PLANS



- > Although the proportion of signatories with emergency response plans in place remained high (**97.3%**), there is a gradual decrease in regular testing with external stakeholder involvement.

- > The proportion of signatories testing emergency response plans with external stakeholder involvement stood at **57.9%** for 2019 operations.

ENERGY



- > All indicators of **energy consumption efficiency have declined for the second year in a row.**
- > For total energy consumption that includes the use of electricity, natural gas, liquid petroleum gas, diesel, petrol, other liquid fuel, paraffin, steam, solid fuel and other fuel, **the rate of consumption per tonne of traded product was 13.2% higher.**
- > For total energy consumption that includes all of the above except solid fuel, **the rate of consumption per tonne of traded product was 15.0% higher.**
- > For electricity consumption only, **the rate of consumption per tonne of traded product increased by 26.1%.**

SOLID WASTE



- > The amount of solid waste (both hazardous and non-hazardous) generated per tonne of traded product increased to **29.6 kilograms per tonne of traded product, representing a 16.9% increase.**
- > The proportion of signatories that confirmed the **implementation of waste minimisation plans fell to 80.5%.**

WATER AND EFFLUENT



- > Both the rate for water consumption, as well as for effluent discharge, per tonne of traded product **increased, which represents a decrease in water use and effluent discharge efficiencies.**
- > For water consumption relative to the volume of traded product, an **18.2% reduction in efficiency was observed.**
- > Similarly, the **effluent discharge efficiency decreased**, although to a lesser degree, by **4.3%.**

GREENHOUSE GAS EMISSIONS



- > Of those signatories that reported GHG emissions (beyond those required to report to comply with Regulations), **the carbon dioxide equivalent GHGs emitted, per tonne of traded product, has plateaued.**
- > **GHG emissions per tonne of traded product increased by 1.7%** compared to the five-year average.



RESPONSIBLE CARE® TRAINING

- > For two years in a row, there has been a **decline in the proportion of signatories with formal, documented Responsible Care® training programmes in place.**
- > There has been a **2.7% decrease in implementation.**

RESPONSIBLE CARE® THIRD-PARTY AUDITS



- > The RCMS, as well as Safety and Quality Assessment for Sustainability (SQAS)-AFRICA third-party **audits were suspended** until April 2021, due to COVID-19 lockdown restrictions. However, companies that have the capacity are permitted to carry out the audits as scheduled.
- > **Remote auditing** was considered by CAIA and is now partially part of the existing auditing protocols.



The Key Role Players in Implementing Responsible Care®



Preamble

The South African CAIA-driven Responsible Care® programme is based on the Responsible Care® ethics and fundamental features that are put forward under the guidance of the ICCA. The programme does not only address the chemical manufacturing activities but has been extended to cover transportation, tank cleaning, warehousing, and spill response activities. CAIA is a full member of the ICCA.

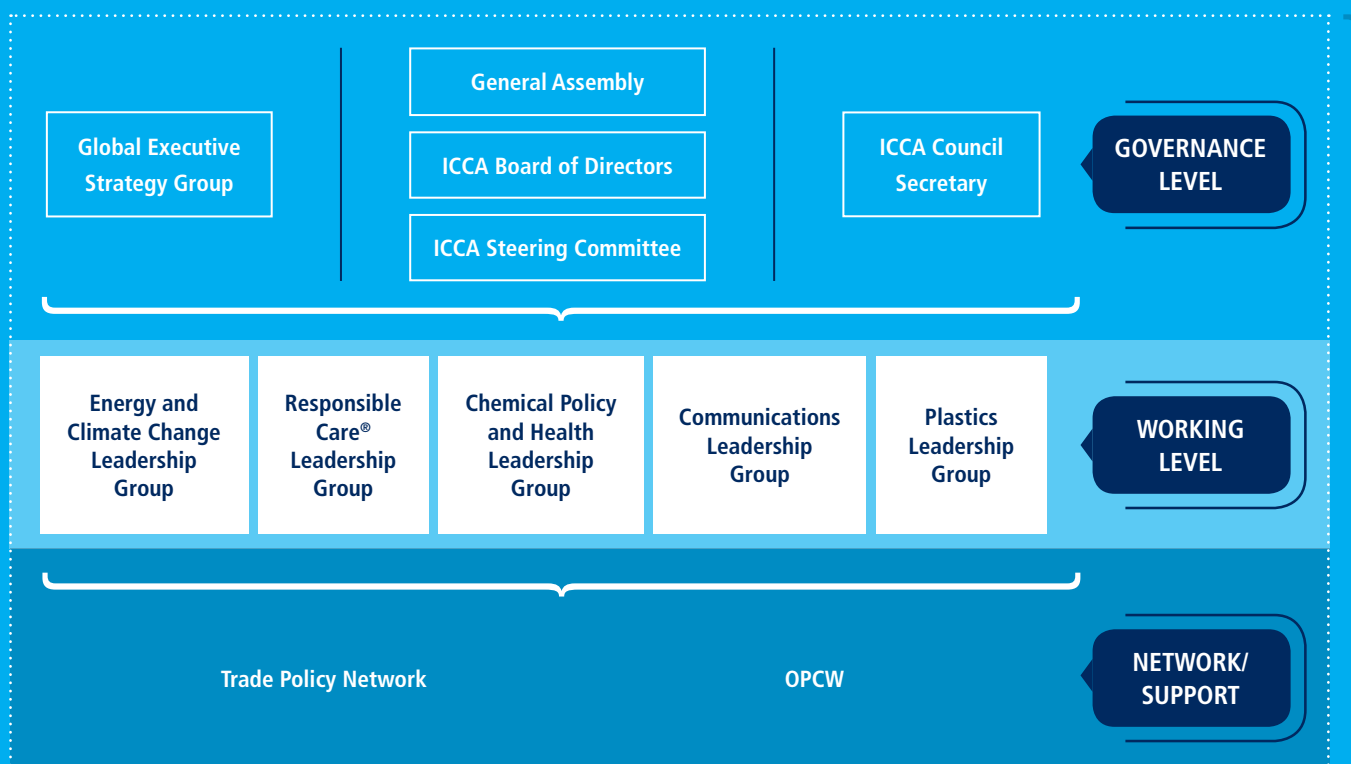
The chemical and related industries in South Africa have made several commitments under Responsible Care®. In addition to improved performance, these include engaging stakeholders to understand their concerns about industry operations and products, promoting transparency with the intention of building trust with stakeholders, and working with commercial partners to extend the Responsible Care® ethic throughout the value chain.

The International Council of Chemical Associations

The ICCA is the global association for chemical associations, representing the chemical industry on the international stage. It is a legal entity registered as a non-profit company in Belgium and was established in 1989. It is a virtual organisation that operates on a consensus basis. Its members are trade associations and chemical companies.

The ICCA's advocacy positions are developed at the international level to influence treaties and/or agreements negotiated among governments through international organisations, such as the United Nations (UN) and other inter-governmental and non-governmental organisations, to build stronger ties. It serves as the main channel of communication between industry and various international

organisations, such as the United Nations Environment (UNE), United Nations Institute for Training and Research (UNITAR), World Trade Organization (WTO), Organization for Economic Cooperation and Development (OECD) and the Organization for the Prohibition of Chemical Weapons (OPCW). The ICCA promotes and co-ordinates Responsible Care®, as well as other voluntary chemical industry initiatives such as the Strategic Approach to International Chemicals Management (SAICM), a policy framework to promote chemical safety around the world. The organisational structure of the ICCA is shown in the following diagram.



The Chemical and Allied Industries' Association

CAIA has an important role in promoting and supporting Responsible Care® amongst its existing members, as well as attracting new members and communicating the commitments and value of Responsible Care® to all relevant stakeholders.

CAIA's scope of membership is broad and covers the entire chemicals value chain. Members are divided into three categories – namely, affiliate, associate and full. Full members are chemical companies that manufacture, trade, distribute and warehouse chemicals. Associate members are service providers, including transporters, tank cleaners, warehouse, waste managers and spill response companies. CAIA's affiliate members include academic institutions, consultants, financial institutions, and container re-conditioners.

CAIA has implemented an appropriate and flexible way of representing its members effectively, when engaging matters such as national legislation and policies. As it is important that Responsible Care® is applied in all countries in a uniform manner, CAIA implements Responsible Care® within the overall direction set by the ICCA. The core elements for the role of CAIA in managing and promoting Responsible Care® in all activities are found in the **eight fundamental features of Responsible Care®**. These are:

- 1 The development and use of a set of national **Guiding Principles** to help businesses with their commitment to the national Responsible Care® priorities, consistent with the Responsible Care® Global Charter. In South Africa, the **Guiding Principles** are contained in a document called the **Declaration**.
- 2 To adopt the **Responsible Care® name and logo**, and clearly identify national Responsible Care® initiatives as being consistent with, and part of, the concept of Responsible Care®. This includes promoting the use of the Responsible Care® name and logo, as well as developing and communicating the **Responsible Care® name and logo usage guidelines**. The Responsible Care® name and logo are registered and protected by CAIA.
- 3 To develop, establish and communicate a **set of systems or codes and checklists** to assist companies in implementing the Responsible Care® Initiative to achieve continual SHE and security improvements.
- 4 To progressively develop **KPIs** against which improvements and performance can be measured. CAIA collects and reports aggregate data and statistics annually.
- 5 To take the lead in **promoting and communicating** the commitments and benefits of Responsible Care® to members and relevant stakeholders. In South Africa, members are required to reaffirm their commitment to the Responsible Care® Initiative every three years.
- 6 To promote **sharing of views and the exchange of experiences** on implementing the initiative through the provision of platforms such as Responsible Care® committees and fora.
- 7 To **encourage participation** by putting into place mechanisms to recognise high performers and assist less advanced companies, as well as processes for dealing with persistent poor-performers. CAIA has developed and is maintaining an annual Responsible Care® award programme.
- 8 To **verify the implementation** of elements of the Responsible Care® Initiative by signatories. The development of verification procedures meeting ICCA guidelines, as well as the communication of verification by companies or CAIA to interested parties, is of paramount importance.

The **Global Executive Strategy Group** consists of leading chemical industry chief executive officers and provides guidance and recommendations to the Board of Directors on strategic direction and priorities. The General Assembly and the Board of Directors are the central governing bodies of the ICCA that have direct authority for priorities, policies, programmes, and budgets.

The **Board of Directors** is composed of a maximum 25 chief executive officers from companies belonging to the ICCA member associations. The Steering Committee which is made up of leadership from the national and regional associations, supports the work of the Board of Directors and with the help of the Council Secretary, manages the work of the organisation. The Steering Committee prepares the ICCA budget and reviews membership applications. The company executive leading the association holding the Council Secretary position, acts as President of the ICCA Board of Directors.

The **Leadership Groups** are directly responsible for advancing the priorities identified by the ICCA Board of Directors and have approved charters for work in specific areas/topics on behalf of the ICCA. They are composed of representatives from member companies of the ICCA member associations and staff from member associations.

The **RCLG** manages and coordinates the global Responsible Care® Initiative. The RCLG accepts, reviews, and endorses applications from various regions and countries seeking to gain Responsible Care® status. In addition, the RCLG carries out capacity building projects, tracks, and reports global performance, monitors national/regional Responsible Care® progress, and is responsible for the overall international governance of Responsible Care®. Currently the RCLG is working on two priorities namely, capacity building and efforts to expand the Responsible Care® Initiative.

The **ICCA** maintains a constant dialogue with the OPCW. It is also a member of the group of chemistry practitioners created by the OPCW to promote peaceful uses of chemistry for the benefit of all.

CAIA is actively involved with the Steering Committee and is part of the RCLG, the Chemical Policy and Health Leadership Group as well as the Trade Policy Network.

Signatories

Companies play a key role in implementing Responsible Care®. Together with their stakeholders and the public, signatories to the initiative are the beneficiaries of their participation in the Responsible Care® Initiative. Furthermore, the respect obtained from being part of the chemical industry's global initiative for the safe management of chemicals is invaluable. From a company's perspective, the practical aspects of implementing Responsible Care® are as follows:



01 Commitment to Responsible Care®

Participation in the Responsible Care® Initiative is mandatory for full and associate CAIA members. Responsible Care® does not require companies to replace their current SHE and security programmes and/or policies, but rather encourages companies to integrate and expand upon existing systems, learn from their peers, and incorporate industry best practices. The formal commitment at chief executive level to uphold the pillars of Responsible Care® is an important first step – it sends a strong signal to staff at all levels, as well as to external stakeholders, about the intention of the company. In South Africa, this formal commitment is achieved through signing the Responsible Care® Declaration by a senior executive (who may be a chief executive or managing director depending on the company structure). The Declaration contains the national Guiding Principles that are fully consistent with the Responsible Care® Global Charter. The Guiding Principles have been expertly developed by CAIA, with the assistance of the Responsible Care® Standing Committee (RCSC), to go beyond the six elements of the Responsible Care® Global Charter to address local needs. In the case of multinational companies, the CEO also signs the Responsible Care® Global Charter, if the company's headquarters are located in South Africa. The Responsible Care® Global Charter commits the organisation to Responsible Care® adoption and practice throughout its global operations.



02 Integration of Responsible Care® Principles into Daily Activities

The CEO's commitment to the Responsible Care® Guiding Principles must be apparent through active involvement and visible demonstrations of support. CEOs must ensure that the principles of Responsible Care® are embedded in operational activities and considered in strategic developments. The integration of Responsible Care® principles into daily activities must be regarded as an integral part of the company's operational excellence and performance improvements. The company should also translate the Responsible Care® Guiding Principles into a management system, in line with Deming's Plan-Do-Check-Act (PDCA) approach.

Every company is expected to appoint a Responsible Care® Management Representative (RCMR). The role is pivotal in the successful implementation of Responsible Care®. The RCMR, with full support from the CEO, is the central point of contact within the company on all matters related to Responsible Care®. The RCMR directs planning and implementation of Responsible Care®, throughout the organisational functions, in a way that makes the most business sense and provides the greatest benefits to the organisation.

In addition to the RCMR, every employee has a role to play in planning and implementing Responsible Care® within their organisation. Responsible Care® serves as a unifying force, bringing an organisation together around common principles and operating guidelines.



03 Monitoring Performance

Companies should monitor performance and self-assess their Responsible Care® implementation levels on an annual basis as per the current audit protocol communicated by CAIA. The companies are further required to perform third-party verification audits using CAIA certified auditors, as well as collect and report KPI data as determined by CAIA.

The Responsible Care® Logo

To identify their participation in the Responsible Care® Initiative, companies and CAIA are encouraged by the ICCA to use the approved Responsible Care® brand logo.



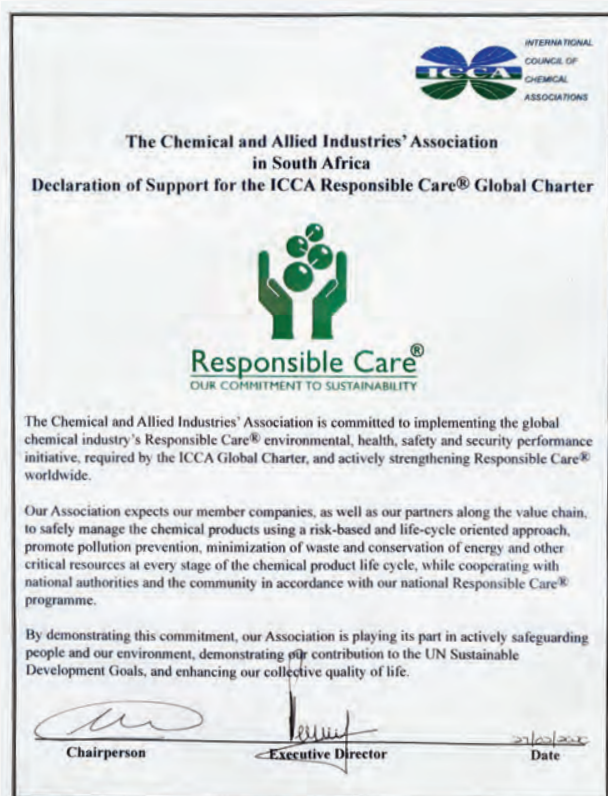
The logo consists of two hands pointing upwards cupped around a collection of symbols, which represent a hypothetical chemical structure. The right to use the logo is granted to CAIA by the ICCA and to South African companies by CAIA. CAIA is the custodian of the Responsible Care® Initiative in South Africa and has been entrusted by the ICCA with the role of granting companies in South Africa, the right to use the Responsible Care® logo.

Implementing Responsible Care® – The Key Elements

Responsible Care® Global Charter for National Associations

The Global Charter for national associations was approved in 2019 by the ICCA Board of Directors. It clarifies the role of national associations to guide member companies in the implementation of Responsible Care®. The document is similar to the 2014 Responsible Care® Global Charter for companies and also includes a set of eight fundamental features specific to associations.

In February 2020, CAIA signed the updated Responsible Care® Global Charter for National Associations. The document reaffirms the existence of shared responsibilities between CAIA and individual companies in achieving Responsible Care® goals in South Africa.



Responsible Care® Fundamental Features

The eight Responsible Care® fundamental features, previously discussed under the role of CAIA in implementing Responsible Care®, are important for the development of the initiative. They provide the framework for all Responsible Care® programmes. With time, new fundamental features will be implemented as Responsible Care® matures, based on guidance and timelines established by the ICCA.

Working in conjunction with signatories to the Responsible Care® Initiative, CAIA has over the years modified the original ICCA Fundamental Features to meet local needs.

Guiding Principles

The Guiding Principles describe the ethic and objectives pertaining to commitment to continual improvement of SHE and security performance by members of CAIA. They are contained in the Responsible Care® Declaration, which is signed by the most senior executives (chief executive officers and managing directors) to commit to Responsible Care®.

Responsible Care® Global Charter

The Responsible Care® Global Charter is designed for individual companies that pledge to implement Responsible Care® in their operations globally, regardless of whether there is a local Responsible Care® programme. The document does not supersede the local Responsible Care® programme obligations but reminds companies to extend their Responsible Care® commitments throughout their operations.



The Responsible Care® Global Charter sets out broad commitments for Responsible Care® companies and addresses the following:

- Corporate leadership culture
- Safeguarding people and the environment
- Strengthening chemicals management systems
- Influencing business partners
- Engaging stakeholders
- Contributing to sustainability

The company's most senior executive signs the Responsible Care® Global Charter on behalf of the organisation in the country where the head office is located. The ICCA maintains a listing of signatories on its public website. Guidance on the application of the Responsible Care® Global Charter in South Africa can be found in the Responsible Care® Management System (RCMS).



Requirements document that can be downloaded at www.caia.co.za/responsible-care/resources/.

CAIA
Chemical & Allied Industries Association

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Responsible Care® Declaration

Company Name _____

Through the Responsible Care® initiative we declare our commitment to sustainability through continual improvement of our performance. Accordingly, we believe and subscribe to the following Guiding Principles:

- To lead our company in ethical ways that minimise adverse safety, health, security and environmental impacts on our employees, contractors and other stakeholders.
- To strive towards zero accidents, injuries or harm to human health and the environment from our products, services and operations.
- To promote pollution prevention, minimisation of waste and conservation of energy and other critical resources at every stage of the life cycle of our products, services and operations.
- To collaborate in the development and implementation of effective legislation and standards.
- To support education and research on the safety, health and environmental effects of our products, services and operations.
- To communicate product, service and operational risks to our stakeholders and take their concerns into consideration.
- To transparently report our performance by completing the annual Key Performance Indicators submission timely.
- To verify the implementation of Responsible Care® by undertaking the Responsible Care® Management System Audit, using CAIA-approved independent auditors.

Signed at _____ on this _____ day of _____

Signature _____
Name Surname - Designation

The Declaration is a national-equivalent of the Responsible Care® Global Charter.

Codes of Management Practice and the Safety Quality Assessment for Sustainability-AFRICA

The ICCA requires national associations to establish codes or guidelines and checklists that identify common expectations for their members. CAIA has developed and maintained a set of ten CMP and an Audit Guidance Document (AGD), that identify expected actions by CAIA full members in specific disciplines. The AGD is a checklist used by members for self-assessment and by CAIA approved auditors during third-party audits. The disciplines covered by the CMP and AGD are:

- Management commitment
- Process safety
- Product stewardship
- Resource efficiency
- Emergency response
- Occupational health and safety
- Pollution prevention
- Stakeholder engagement
- Storage and transportation
- Security

In South Africa, Responsible Care® participation has been extended beyond chemicals manufacturing to other activities along the chemicals value chain. Associate members, mostly Logistics Service Providers (LSPs), use the Safety Quality Assessment for Sustainability – AFRICA (SQAS-AFRICA) questionnaires for self-assessments and third-party audits. The questionnaires are divided into four categories, namely: Transport Service, Warehousing, Tank Cleaning and Spill Response. All the different categories have a common Core questionnaire.

Responsible Care® Communication

Communication is an important pillar of Responsible Care®. Since the beginning of the initiative, communication has been a key concept. Signatories to the Responsible Care® Initiative should engage stakeholders in dialogue about their operations and products. At facility level, companies are expected to communicate with individual communities and with multiple groups of stakeholders. Associations are not exempt, as they should communicate at national and international level with relevant stakeholders, including government departments, government agencies, other associations and Non-governmental Organisations (NGOs).

At a global level, the ICCA maintains a website which includes information on the industry and its contributions to the betterment of society through the products created. Every three years, the ICCA publishes a Responsible Care® Status Report.

At a national level, CAIA maintains a website with information on Responsible Care®, including SQAS-AFRICA, and publishes a Responsible Care® Performance Report annually. Further communication is achieved through traditional print and electronic media, as well as via social media, i.e. Twitter, Facebook, and LinkedIn.

Responsible Care® Key Performance Indicators

Associations are required to establish processes to collect KPI data from their members and report aggregates to the ICCA. The objective is to allow the association to measure progress of its members and determine whether Responsible Care® is having a positive impact on industry performance.

CAIA publicly reports aggregated KPI data in the annual Responsible Care® Performance Report. The same data is reported to the ICCA annually through the ICCA KPI website. The sharing of aggregate results can help identify and address problem areas and enhance industry performance.

Verification of Responsible Care® Implementation

Companies that have committed to implement Responsible Care® should check their progress and national associations are required to develop and maintain processes to verify that companies are implementing Responsible Care®.

In South Africa, CAIA requires companies to annually self-assess their progress in implementing the CMP and/or SQAS-AFRICA and be independently audited by CAIA-approved auditors every three years for full members and every two years for LSPs. In both cases, certificates are awarded.

Currently members are certified after an RCMS verification audit and a successful SQAS-AFRICA Management System audit.

Benefits of Responsible Care®

Implementing Responsible Care® helps signatories to not only improve their SHE and security performance, but also to improve business operations. The figure below shows some of the benefits that companies get from participating in Responsible Care®.



Business Case for Safety

Safer workplaces result in financial savings. Effective implementation of Responsible Care® should result in safe workplaces and fewer shutdowns. People prefer to work for and do business with companies that have strong safety records. Such organisations also have the confidence of regulators.

According to the European Agency for Safety and Health at Work 2014 publication, **The business case for safety and health at work: Cost-benefit analyses of interventions in small and medium-sized enterprises**, businesses with employees taking responsibility for their own health and safety are more profitable than those only subscribing to statutory occupational health and safety requirements. This could mean that voluntary initiatives, such as Responsible Care®, are more profitable to organisations. The cost benefits that companies can realise from effectively implementing Responsible Care®, are listed below.

QUALITATIVE COST BENEFITS

- 1 Investors perceive a lower risk when making buying/selling decisions
- 2 Protects company reputation
- 3 Improves value of corporate image and brand
- 4 Enhances lender confidence/access to lower interest rates
- 5 Provides credibility with regulators
- 6 Enhances attracting and retaining quality staff

Cost-benefit analyses of interventions in small and medium-sized enterprises, businesses with employees taking responsibility for their own health and safety are more profitable than those only subscribing to statutory occupational health and safety requirements.

QUANTITATIVE COST BENEFITS

- 1 Saves lives – cost of death and injury is spared
- 2 Reduces property damage costs
- 3 Saves business interruption costs
- 4 Preserves market share stakes
- 5 Saves incident investigation costs
- 6 Avoids regulatory penalties
- 7 Reduces regulatory attention and avoids increased audits and inspections

The New and Revised Codes of Management Practice

The CMP, formerly known as the Management Practice Standard (MPS) are updated periodically, considering the availability of new information, new technology, new expectations, and the constant re-assessment of SHE and security performance, as well as objectives.

CAIA, with the assistance of the RCSC and members, revised nine CMP and developed a new Security Code, complete with a self-assessment tool – the AGD – to establish common standards for Responsible Care® across South Africa. The CMP were developed in support of the Responsible Care® Guiding Principles as a commitment to actively strengthen Responsible Care® wherever signatories manufacture and sell products or services.

Codes of Management Practice Review Process

PRE-REVIEW

The CMP review process received focused attention from October 2017. The Product Stewardship and Process Safety codes were prioritised to be reviewed first, as these were the areas that members most expected a re-assessment of implementation protocols.

Representatives from signatories volunteered to serve on the review work groups, according to their expertise. Each CMP had one work group and meeting schedules were drawn up for the reviews to take place.

REVIEW

Each work group elected a chairperson who was not a CAIA staff member, to lead the review process. The administration part of the review processes was managed by CAIA and any comments on the codes previously received by CAIA were provided to the work groups as a starting point. The reviewed CMP and AGD were further reviewed and approved by the RCSC. CAIA published the documents on 7 August 2020.

POST REVIEW

Due to the COVID-19 pandemic and subsequent nationwide lockdowns, a planned in-person CMP and AGD bridging workshop could not take place. A virtual workshop will be held at a date to be announced.

Members can implement the new codes voluntarily for a period of one year from the date of publication. As from August 2021, it will be mandatory for full members of CAIA to implement the new revised Codes.

Overall Layout and Structure of the Codes of Management Practice

During revision of the CMP, the work groups agreed to work on a uniform structure, with a few exceptions, where it was necessary to deviate slightly. The following are the generic sections of the CMP:

1 Introduction

2 Scope

3 Terms and Definitions

4 Relationship to Responsible Care® Guiding Principles

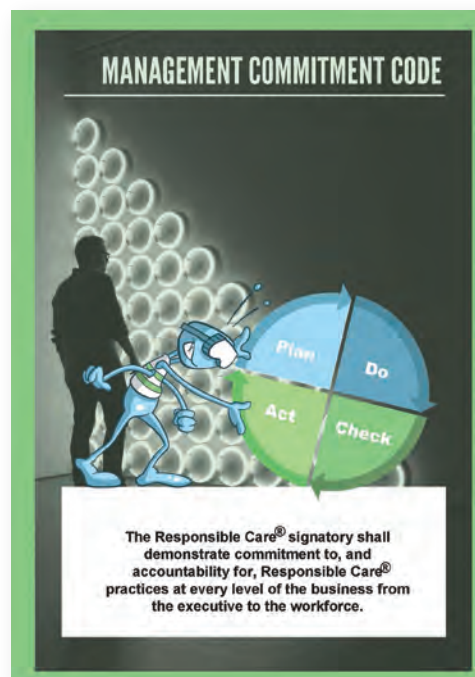
5 Relationship to Other Codes of Management Practice

6 Relationship to Audit Guidance Document

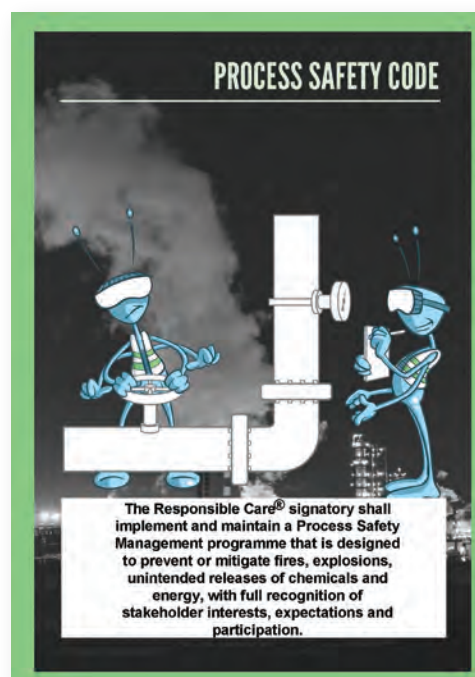
7 Programme (i.e. CMP requirements to be implemented by signatories)

8 Document Amendment History

The Ten New and Revised Codes of Management Practice



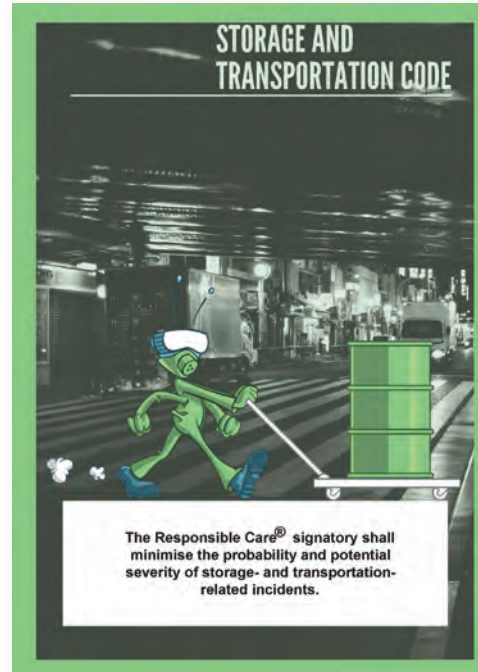
1 This code is intended to provide guidance to the leadership of signatories on how to demonstrate leadership and commitment as well as enable the implementation of Responsible Care®. The management system applied in this document is founded on the concept PDCA.



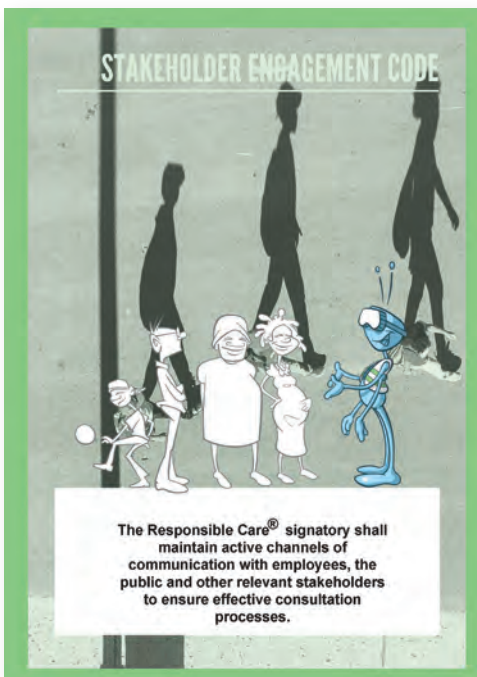
2 The scope of this code includes manufacturing, processing, handling, and on-site storage of chemicals. It must be implemented with full recognition of stakeholder interests, expectations, and participation in achieving safe operations.



3 Product stewardship addresses all the important considerations contained in the principles of: "The right to know, the need to know and the duty to inform." Signatories shall design, implement, and maintain product stewardship programmes built on a management systems approach, making SHE protection and security an integral part of the product life cycle.



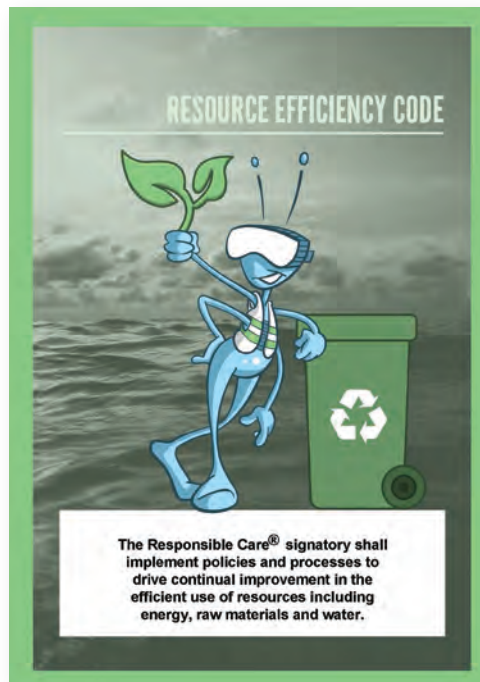
5 The purpose of this code is to reduce the risk of harm posed by the storage, transportation, handling, and disposal of products to stakeholders and the environment.



4 This code guides signatories to communicate programme activities and performance including, but not limited to, environmental matters, health effects of chemicals, corporate social responsibilities, and efforts to ensure the safe storage and transportation of chemicals.



6 This code aims to reduce, eliminate, or prevent pollution. The pollution prevention programmes shall cover, where relevant, air quality management, water quality management, soil quality management, ambient noise management and other identified priority pollution as defined by the legal requirements.

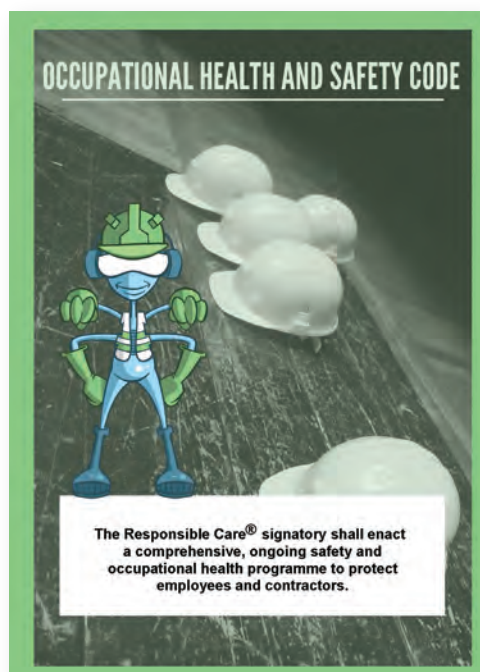


7 The Resource Efficiency Code covers strategies implemented to use resources efficiently. Consideration shall be given to building internal and external partnerships, developing relationships with relevant stakeholders, setting targets, and continual improvement.



9 The purpose of the Emergency Response Code is to:

- Ensure emergency preparedness.
- Increase the confidence of the community, employees, and other people on-site.
- Ensure effective sharing of emergency response plans with relevant external parties.
- Promote a positive company and industry image within the community.



8 The scope of this code is to provide for the health, well-being, and safety of persons at facilities/sites as well as to protect persons other than those at work against hazards in connection with the activities of persons at work.






10 Security is a shared responsibility. The Security Code encompasses the entire value chain which includes, but is not limited to design, procurement, production, marketing, storage, distribution, transportation, use, recycle and disposal of chemicals.

The Audit Guidance Document

The AGD is a tool used to reinforce Responsible Care® practices and help signatories to comply with the CMP. Performing regular Responsible Care® first-party, second-party and third-party inspections using the AGD is a proactive approach to continually improve SHE and security performance

by preventing work-related incidents, injuries, and illnesses. It is a Responsible Care® requirement that relevant signatories carry out self-assessments (first-party audits), annually and external third-party audits once every three years using the AGD.

The AGD, like the CMP, is a dynamic document that is subject to periodic review by CAIA. During the review of the codes, each work group was also tasked with the review of that part of the AGD covering the code reviewed. Post review, the updated sections of the AGD were incorporated into a new and updated AGD, shown below.

  						
RESPONSIBLE CARE® MANAGEMENT SYSTEM AUDIT GUIDANCE DOCUMENT						
Name of Responsible Care® Signatory:						
Name of Audited Site/Facility:					Audit Date:	
Responsible Care® Management Representative	Name:		Signature:		Tel No:	
Authorised by Highest Authority	Name:		Signature:		Designation:	
Auditor(s)	Name(s):		Signature(s):			
Observer(s)	Name(s):					
Audited Site/Facility Contact Details	Tel No:		Fax No:		E-mail Address:	
SCORING INSTRUCTIONS						
Comments are required from the auditor on each question. Please DO NOT score on shaded areas. Scores shall be given according to the following guidance:						
Score	Interpretation					
N/A	Not applicable					
0	No Responsible Care® practices in place and no documentation in place					
1	Responsible Care® practices in place but no documented information / Documented information in place but no Responsible Care® practices in place					
2	Responsible Care® practices and documented information in place					
SUMMARY OF THE AUDIT QUESTIONS						
AGD Section	No. of Questions	No. of "N/A" Questions	Maximum Possible Score	Score	Percentage	
Management Commitment	22	#REF!	#REF!	#REF!	N/A	
Process Safety	91	#REF!	#REF!	#REF!	N/A	
Product Stewardship	100	#REF!	#REF!	#REF!	N/A	
Stakeholder Engagement	21	#REF!	#REF!	#REF!	N/A	
Storage and Transportation	58	#REF!	#REF!	#REF!	N/A	
Pollution Prevention	28	#REF!	#REF!	#REF!	N/A	
Resource Efficiency	12	#REF!	#REF!	#REF!	N/A	
Occupational Health and Safety	17	#REF!	#REF!	#REF!	N/A	
Emergency Response	54	#REF!	#REF!	#REF!	N/A	
Security	33	#REF!	#REF!	#REF!	N/A	
TOTAL	436	#REF!	#REF!	#REF!	-	
Brief Notes by Auditor:			OVERALL AVERAGE			
			N/A			



CAIA members can download the AGD at
www.caia.co.za/responsible-care/resources/.



Chemistry Can Make the United Nations Sustainable Development Goals a Reality – Sharing Strategies

As the manufacturers of innovative, life-enhancing products and technologies, the chemical industry is playing a unique role in overcoming the world's sustainability challenges. South African businesses participating in Responsible Care® have shown dedication to sustainability through investing in technology and continually improving practices for the betterment of society, the environment, and the economy. In this year's report, the South African part of the global Responsible Care® family will be featuring the work of three Responsible Care® Global Charter signatories towards making the UN Sustainable Development Goals (SDGs) a reality namely, AECI Ltd, Omnia Group (Pty) Ltd and Sasol South Africa Limited.

CAIA's Position on Sustainability

The ICCA published its official Responsible Care® and Sustainability Position Paper in 2019. The elements of Responsible Care® naturally contribute to sustainability. The ICCA and its members – including CAIA – are committed to contributing towards achieving the UN SDGs through improved performance, expanded economic opportunities and the development of innovative technologies and other relevant solutions to various societal challenges. The chemical and related industry in South Africa plays an essential role in driving progress across all three pillars of sustainable development – environmental, social, and economic.

Responsible Care® enables industry to promote sustainable development practices, community relationships and a culture of continual improvement. Nevertheless, Responsible Care® should not be confused with sustainable development, but rather a tool that allows the chemical and related industries in South Africa to contribute towards sustainability. The

implementation of sound practices through Responsible Care® is one of the ways utilised by the chemical and related industries to tackle sustainability challenges within our society.

As a basis for sustainable development, CAIA is committed to continually improve SHE and security performance, as well as open communication with communities, through Responsible Care®. CAIA members are better placed to embrace sustainable development initiatives and goals more broadly by merely participating in the implementation of Responsible Care®. The initiative helps signatories to innovate technologies, processes, and products, as well as implement practices that can make people's lives better, healthier, and safer. Responsible Care® enables the chemical and related industries to contribute to most of the UN SDGs, as well as address some of the major sustainability footprint issues that face industry such as product stewardship, pollution prevention, occupational and process safety, emergency preparedness, stakeholder engagement, safe chemicals distribution and chemical security.



CAIA is committed to improving sustainability within the South African chemical and related industries. It collaborates with policy makers and relevant stakeholders across the chemicals value chain to spread the ethic. As a member of the ICCA, CAIA encourages its members to commit to:

- Expanding the safe and sustainable management and use of chemicals throughout the value chain.
- Improving sustainability practices and accepting accountability for their actions.
- Protecting the environment by supporting efforts to reduce, recycle, reuse, and generally managing waste so that the environment, including land, oceans, and water sources, are not polluted with mismanaged plastic or other materials.
- Tracking progress through metrics to assist in continually improving performance.
- Ensuring the safety of workers, products, and surrounding communities.
- Improving the availability, performance and cost-effectiveness of renewable energy, clean drinking water, and energy efficient technologies enabled by chemistry.
- Elevating the quality of life through technologies that improve health and wellness, enable food security, reduce pollution, increase access to clean water and provide comfortable shelter.
- Reducing GHG emissions in the manufacturing and use of products.
- Empowering community leaders and helping build capacity to enhance safe chemicals management.
- Promoting innovations in product design, product reuse, repurposing, and recycling to improve and extend the useful life and value of all products and contribute to a more circular economy.

Although contributions to sustainable development can evolve over time, Responsible Care® will remain the foundation of the global chemical industry's commitment to sustainability.

Progress Towards Achieving the United Nations Sustainable Development Goals – Taking Action Today



Responsible Care® signatories in South Africa are taking notable steps towards achieving the UN SDGs. The chemical and related industries have been investing in new products and technologies. These products have been assisting with the provision of clean drinking water, safe food supplies, and ensuring that deadly diseases, such as COVID-19, are under control through the manufacture of products, for example, sanitisers. Responsible Care® signatories are also helping to improve energy efficiency, to contribute to a less fossil fuel-dependent society.

The country is committed to achieving the UN SDGs. South Africa's first Voluntary National Review (VNR) in 2019 is testimony to the national commitment to the full and integrated implementation of Agenda 2030. The shortcomings highlighted in the review – particularly the need to improve multi-stakeholder engagement, need to be addressed. The NDP – with goals aligned to the UN SDGs – prioritises the elimination of poverty, reduction of inequality and growing an inclusive economy by 2030. These goals are also integrated into Government planning systems and processes at national, provincial, and local level. The country is therefore well placed towards meeting the SDGs, and the VNR highlighted significant progress.

However, major challenges remain, such as securing a just transition to a lower carbon economy, while a high degree of dependence on fossil fuels prevails. Together with the rest of the country, Responsible Care® signatories are dedicated to achieving the UN SDGs.

The graphics alongside and on the following pages showcase the work of three CAIA members together with their stakeholders and business partners; illustrating that together, communities can ensure a **better life for all**.



Omnia Group (Pty) Ltd. Contributions Towards Achieving the UN SDGs



Priority SDG: **No**

End poverty in all its forms everywhere

Activities/Programmes

- Omnia is committed to fair employment opportunities for all and to create an environment that permits such equal opportunities for advancement to redress past imbalances and to improve the conditions of individuals and groups who have been previously disadvantaged on the grounds of race, gender and disability. In the spirit of promoting organisational policies and practices that are fair and equitable, the company affirms its commitment to comply with the Employment Equity Act to the strategic benefit of Omnia.

Outcome

- Employment security
- Reward and recognition
- Performance management
- Career progression
- Education and training
- Transformation



2
ZERO
HUNGER



Priority SDG: **Yes**

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Reporting Indicators

Targets set ending in 2030: Year-on-year performance against base year FY2020:

- Upskill and enable small scale farmers with techniques to double their agricultural productivity against a FY2020 baseline by 2030
- Improve the economic output of large-scale agricultural customers by 20% against a FY2020 baseline by 2030

Activities/Programmes

- Emerging farmers programme
- Research and development in metabolomics
- Develop solutions to improve agricultural productivity and resilience (solution-based agriculture)
- COVID-19 Hunger Relief Programme

Outcome

- Upskill and, enable small scale farmers with techniques (Nutriology®) to double agricultural productivity
- During FY2019 approximately R25.3 million was spent, of which the majority relates to the emerging farmers programme
- Improve land and soil quality through turning barren land into fertile land
- Distribution of food hampers, in South Africa and other Southern African Development Community (SADC) regions, during the COVID-19 lockdown. One hamper feeds a family of four for a month

3
GOOD HEALTH
AND WELL-BEING



Priority SDG: **Yes**

Ensure healthy lives and promote well-being for all at all ages

Reporting Indicators

- Targets set ending in 2030: Year-on-year performance against base year FY2020: Reduce total injuries by 50% against a FY2020 baseline by 2030

Activities/Programmes

- Foster a workforce that operates in a safe environment conducive to personal and professional growth and well-being
- Support the growth of healthy, educated, and resilient communities
- Prevention of air, water and soil pollution and contamination by hazardous chemicals

Outcome

- Safety, health and well-being of staff and communities
- Responding to the plight of communities that are in need, food hampers were donated to promote well-being

Omnia Group (Pty) Ltd. Contributions Towards Achieving the UN SDGs continued

Priority SDG: **No**

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

Activities/Programmes

- Ongoing focus on training and process improvement
- Corporate Social Investment (CSI) Projects:
 - Develop and empower disadvantaged communities through skills transfer and training

Outcome

- Omnia committed to support the Khulisane Academy that has started a formal entrepreneur's development programme from the Sir Lowry's Pass Village and surrounding areas.
- Omnia donated funds to the Lettie Fouche School to assist with education and training of severely mentally handicapped children to give each learner the opportunity to optimally develop his/her potential.
- Omnia responded to the need for a science laboratory that would benefit high school learners in the Fochville community.
- Financial support to the University of Cape Town's South African Minerals to Metals Research Institute was provided, which seeks to promote sustainable development of the South African minerals processing industry through the development of globally competitive technology, driven by people with world-class skills.
- Omnia partners with establishments such as Thandulwazi Maths and Science Academy, Thulasizwe Primary and Unobhala High School; to provide skills development to educators as well as extra tuition and curriculum enrichment for learners.

Priority SDG: **No**

Achieve gender equality and empower all women and girls

Reporting Indicators

- The demographics of the workforce

Activities/Programmes

- Omnia is committed to fair employment opportunities for all and to create an environment that permits such equal opportunities for advancement; to redress past imbalances and to improve the conditions of individuals and groups who have been previously disadvantaged on the grounds of race, gender and disability. In the spirit of promoting organisational policies and practices that are fair and equitable, the company affirms its commitment to comply with the Employment Equity Act to the strategic benefit of Omnia.

Outcome

- Education and training
- Transformation

6 CLEAN WATER AND SANITATION



Priority SDG: **Yes**

Ensure availability and sustainable management of water and sanitation for all

Reporting Indicators

Targets set ending in 2030: Year-on-year performance reporting against base year FY2020:

- Reduce absolute water use from natural resources by 15% against a FY2020 baseline by 2030
- Reduce discharge by 15% against a FY2020 baseline by 2030
- Increase water recycling by 15% against a FY2020 baseline by 2030

Activities/Programmes

- Improve plant (crops) water use efficiency through Nutriology®
- Rain water harvesting
- Increasing efficiencies through internal enforcements
- Reduce pollution and contamination of water resources through optimisation
- Management of the nitric acid plants' cooling towers cycles
- Increasing the production efficiency of the granulation plant to facilitate reuse of water

Outcome

- Reduce absolute water use from natural resources.
- 4% decrease in water consumption in FY2019 when compared to 2014 baseline

Water Availability:

- Two boreholes drilled for rural communities in Zambia

Sanitation:

- Refurbished ablution of one block at a school in the SADC region

7 AFFORDABLE AND CLEAN ENERGY



Priority SDG: **Yes**

Ensure access to affordable, reliable, sustainable and modern energy for all

Reporting Indicators

Targets set ending in 2030: Year-on-year performance reporting against base year (FY2020):

- Reduce absolute energy use by 20% against a FY2020 baseline by 2030
- Increase the energy efficiency of our products by 25% against a FY2020 baseline by 2030
- Increase renewable energy consumption by 15% against a FY2020 baseline by 2030

Activities/Programmes

- Various energy saving initiatives e.g. solar panel project in Wadeville, South Africa
- Improve lighting in warehouses
- Electricity co-generation plant in Sasolburg
- Maintenance– replacing old parts with energy efficient parts

Outcome

- Increase renewable energy consumption
- Achieve improvement in energy efficiency
- Double improvement in energy efficiency by 2030 per tonne of product produced
- **FY2019:** 6% decrease in total energy usage when compared to 2014 baseline

8 DECENT WORK AND ECONOMIC GROWTH



Priority SDG: **Yes**

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

Reporting Indicators

- Improve profit and empower employees over the next 10 years

Activities/Programmes

- Develop solutions to improve agricultural productivity and resilience

Outcome

- Achieve higher levels of economic productivity through diversification, technology, and innovation.

Omnia Group (Pty) Ltd. Contributions Towards Achieving the UN SDGs continued



Priority SDG: **No**

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

Activities/Programmes

Enterprise Development Support:

- Increasing access for small scale farmers and enterprises to financial services, technical skills and their integration into value chains and markets

Research and Development:

- AgriBio products
- Water use
- Efficient fertiliser products through Nutriology®



Priority SDG: **No**

Ensure sustainable consumption and production patterns

Reporting Indicators

- % waste generated
- % waste recycled/reused
- % effluent discharged

Activities/Programmes

- Management of chemicals and all wastes throughout their life cycle
- Reduce waste generation through prevention, reduction, recycling, and reuse
- Reducing effluent discharges
- Management and efficient use of natural resources
- Supplier Code of Conduct: encourage companies, especially suppliers, to adopt sustainable practices
- Implement Sustainable Practices:
 - Management of chemical life cycle from product to packaging
 - Sustainable packaging solutions
- Increase the use of used oil in the manufacturing of blasting emulsion

Outcome

- **FY2019:** 9% decrease in volume of hazardous waste due to improved waste management, resulting in increasing volumes of waste being reused or recycled (compared to 2014 baseline)



Priority SDG: **Yes**

Take urgent action to combat climate change and its impacts

Reporting Indicators

Targets set ending in 2030: Year-on-year performance reporting against base year FY2020:

- Reduce GHG emissions by 25% against a FY2020 baseline by 2030

Activities/Programmes

- Development of solutions to adapt to the effects of a changing climate
- Description of company's existing goods and/or services classified as lower carbon products or whether they enable a third party to avoid GHG emissions – description of product/group of products; lower carbon product/s or avoided emissions
- The installation of EnviNox units on both nitric acid plants at Sasolburg – up to 99% of NOx emissions were abated
- Use of cleaner fuels

Outcome

- Abatement of up to 99% of NOx emissions as soon as the new installed catalysts are operational
- Reducing GHG emissions through cleaner fuel usage
- Adaptation and resilience to the effects of a changing climate



Priority SDG: **No**

Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

Activities/Programmes

Reduce marine pollution by:

- Assessing transportation methods of raw materials and products
- Reduce plastics in packaging material
- Increasing the use of used oil in emulsion production



Priority SDG: **No**

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

Activities/Programmes

- Restore degraded soils – application of soil nutrient optimisation



Priority SDG: **No**

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

Reporting Indicators

- Report on the company's inclusion of environmental, social and governance issues into the corporate governance system
- Report on the company's policy to promote fair business (e.g. corruption prevention and whistleblowing policies)

Activities/Programmes

- Forensic/corruption matters are managed through a whistle blowing programme and all investigations are managed by an external forensic company
- Environmental, social and governance matters are included in the corporate governance system



Priority SDG: **Yes**

Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

Reporting Indicators

- Funds invested in multi-stakeholder partnerships

Activities/Programmes

- Multi-stakeholder partnerships (educational, innovation, civil society)

Outcome

- Omnia has actively engaged with The Gauteng Food Security Committee (GFSC), established in partnership with Gauteng business leaders, civil society, and Government, to provide approximately 3 000 food hampers during COVID-19 lockdown.
- Omnia has provided an engineer, to the National Ventilator Project (NVP) in contributing towards the national fight against the COVID-19 virus.
- Omnia partnered with an NGO – International Development Enterprises (iDE), that sets up greenhouses for small-scale farmers in Mozambique.
- The Vaal Action Group is a community organisation that aims to clean the Vaal river (Parys area) by removing waste in the river. Omnia will provide technical assistance such as advising on activities that might require licences, permits and engineering designs.
- Also see outcomes from SDG 2, 3, 4, 6, 8 and 9.



Sasol South Africa Limited

Contributions Towards Achieving the UN SDGs



Priority SDG: **No**

Ensure healthy lives and promote well-being for all at all ages

Reporting Indicators

- Occupational disease incident rate
- Work-related noise induced hearing loss
- Mining occupational diseases
- Irreversible lung disease
- Number of employees participating in physical health screenings
- Number of employees participating in psycho-social wellbeing programmes
- Total tonnes of criteria pollutant emissions
- Adherence to atmospheric emissions licence conditions, including implementation of air quality offsets
- Total tonnes of hazardous and non-hazardous waste generated

Activities/Programmes

- Sasol's various chronic disease management programmes support high risk individuals to remain fit for work. An outcome-based approach allows for unique well-being interventions to be implemented which include, but are not limited to, specialist interventions and short-term counselling sessions through the Employee Assistance Programme
- The Employee Well-being Programme is aimed at delivering the following service improvements:
 - Improved employee well-being and line manager well-being support
 - Improved service response times
 - Expansion of services
 - Realisation of economies of scale and scope
 - Increased utilisation of well-being services
 - Reduction in absenteeism
- Implementing Sasol's air quality improvement roadmap
- Sustaining accreditation of thirteen ambient air quality monitoring stations, as well as the real-time supply of data to the South African Air Quality Information System.

Outcome

- Occupational diseases:
 - Sixteen cases of work related musculo-skeletal disorder were reported.
 - An ergonomics management plan is being actioned to address these, aligned with the regulatory requirements.
 - In 2020, 6 093 employee and service provider screenings were conducted compared to 8 181 in 2019.
- 12 980 employees enrolled in psycho-social well-being programmes in 2020 compared to 10 411 in 2019.
- In 2020, at least 170 employees attended financial literacy training and 2 228 employees accessed financial well-being services. Employees accessing financial well-being services realised R52.4 million in instalment savings from personal debt, R11.8 million in interest savings from personal debt and a 48% decrease in average debt to income ratio for employees was recorded.
- Sasol's ongoing effort to reduce employee debt is evidenced by a 50% decrease in the number of employee garnishee orders in South Africa. Thirty percent reduction in Volatile Organic Compounds at Sasol's Secunda operations, off a 2009 baseline.
- Improvement in emissions (particulate matter and oxides of nitrogen):
 - Particulate matter emissions reduced by 50% since 2014 in Secunda, due to intensive maintenance and renewals programmes, operational improvements and process/technology improvements
- Air quality offset projects at Sasolburg:
 - Removal of approximately 4 091 tonnes domestic waste in areas without municipal services
 - Vehicle emissions testing commenced and will be expanded
 - Approximately 888 591 m² of grass was cut to reduce the potential of veld fires
 - Education and awareness campaign on air quality matters to the broader community
- Air quality offset projects Secunda:
 - Insulation of Reconstruction and Development Programme homes to improve thermal efficiency and exchange of solid fuel burning coal stoves. 5 537 houses have been completed
 - Many small, medium, and micro enterprises (SMMs) are employed to undertake various activities during the insulation of homes
 - Seven thousand households were reached in the door-to-door awareness campaign which addresses air quality related matters
 - Education and awareness campaign – together with the Department of Basic Education (DBE) and principals of schools (27 primary schools in Govan Mbeki Municipality). Specific activities and materials were developed for primary school learners to teach them about air quality. 26 000 learners participated in various activities
- Hazardous waste generation increased from 328 kilotonnes in 2019 to 333 kilotonnes in 2020. The company generated 195 kilotonnes of non-hazardous waste, down from 237 kilotonnes in 2019, due to COVID-19 lockdown measures. Total recycled waste decreased from 105 kilotonnes in 2019 to 83 kilotonnes in 2020.



Priority SDG: **No**

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

Reporting Indicators

- Corporate Social Investment (CSI) spend on science, technology, engineering and mathematics (STEM) education
- Number of Youth Employment Service (YES) learners accommodated

Activities/Programmes

Through the CSI portfolio (growing shared value in society):

Contributing to education of the national workforce

- Early childhood education
 - Management and practitioner development
 - Learner and parent development
- Infrastructure and resources improvement
- Promoting STEM education at schools
 - Management and teacher development
 - Learner and parent development
 - Infrastructure and resources improvement enabling access to tertiary education
 - Bursaries
 - Postgraduate research funding and university collaboration
 - Infrastructure improvement
- The Sasol Foundation partnered with the DBE and Africa Teen Geeks, to provide free online classes to ensure that learning and teaching continued during the national lockdown which was introduced in response to the global COVID-19 pandemic. The STEM Lockdown Digital School, as it was called, formed part of the Foundation's commitment to support and enable access to quality education and to promote excellence in science, technology, engineering, and mathematics. The platform provided learners with a virtual classroom experience enabling interaction between the teacher and the learners.

Outcome

Also see outcomes in SDG 10.

- Sasol's interventions contributed to improvements in the 2019 matric results. In Sasolburg, the Metsimaholo schools obtained a 93% pass rate and the Fezile Dabi District is in the top four education districts nationally.
- In Secunda the performance of learners in the Sasol/Osizweni focused subjects (Accounting/Life Sciences/Mathematics and Physical Sciences) improved on average by 4,5 percentage points from 67.6% in 2018 to 72.1% in 2019.

Teacher support

- In the ever-changing STEM learning environment, it is essential for teachers to improve their curriculum
- Knowledge and delivery methods – Sasol's teacher interventions supported 46 teachers in the tertiary teachers' support project in Secunda
- Forty teachers attended workshops to enhance their mathematics and science teaching skills through the Primary Science Project in Ekandustria
- In Sasolburg, 162 teachers were supported through Boithorisong Resource Centre and the Jumpstart Programme.

Promotion of STEM careers

- In August 2019, Sasol hosted its annual science exhibition known as TechnoX. More than 26 000 learners attended this STEM career expo in Secunda.
- The exhibition offers teachers and learners science workshops, tours, experiments, talks and competitions aimed at enthusing learners, students, and the public about the endless possibilities of science and technology. The week-long show ensured more than 900 local jobs were created for the unemployed youth and local SMMEs in and around Secunda.

Learner support

Learner support is a critical element in increasing participation in STEM education. Sasol learner support projects offer extra tuition to more than 4 732 learners in Metsimaholo Local Municipality in the afternoons, during weekends, through holiday camps and classroom support. In addition, Sasol's mobile laboratories offer more than 2 483 learners' access to science experiments that they would otherwise not cover because of lack of resources in their schools. These experiments were conducted during Science Week in August 2019.

Sasol also promotes and rewards academic excellence in schools around the company's operations. Sasol, in partnership with the provincial department of education in Mpumalanga and Gauteng, awarded certificates of recognition to 111 (Secunda) and 547 (Badplaas and Bronkhorstspuit) learners respectively for their outstanding academic performance in Grade 12 during 2019.

Sasol South Africa Limited Contributions Towards Achieving the UN SDGs *continued*Priority SDG: **No**

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

Outcome

Infrastructure support

- New kitchen facilities and equipment were handed over to three schools in South Africa in support of the school nutrition programme
- Two classrooms were rebuilt at a secondary school in Delmas, Mpumalanga
- Two mobile laboratories were donated by the Sasol Foundation to Sci-bono and the North-West University. An additional mobile lab was donated to Osizweni Education Resource Centre to service schools in Badplaas, to ensure that learners in under-resourced schools have access to science laboratories

Technical education in schools

Over the years, the Sasol Foundation has played a pivotal role in embedding technical subjects, building teacher capacity, and providing the resources required for technical education to succeed in the South African schooling system. The foundation is supporting five technical high schools across the country and has contributed to the increase in performance and the number of learners enrolled for technical subjects in these schools. About 6 000 learners are benefiting from this intervention, and 40 teachers receive on-site support and training through workshops. One of Sasol's learners from the Gauteng North District was among the top ten learners in the country for Technical Mathematics and Science in 2019.

Access to tertiary education

Sasol awarded approximately 200 new bursaries for undergraduate to postgraduate students in 2020; these include seven bursaries that were awarded to students living with disabilities in South Africa. The company's bursary programmes offer a comprehensive package that includes academic support, and psychosocial support to enable students to deal with the academic demands as well as other issues that may impact their performance.

To ensure that students start their careers on a strong footing, Sasol offers work readiness courses to all the students through online support. As a part of building skills in response to our communities' needs, Sasolburg is supporting 23 local students to further their studies through distance education while they receive tutorials and access to electronic learning material at the Boitjhorisong Resource Centre.

Sasol collaborates with universities to strengthen their research and development capacity. Regarding national capacity development and scientific excellence, five students graduated with postgraduate qualifications, 63 papers were published in peer-reviewed journals and 126 oral or poster presentations were made at local and international conferences during 2019.

Enabling digital access to education during South African COVID-19 lockdown

Since the launch of the initiative, more than 250 000 Grade R to 12 learners accessed these online lessons, with the majority reporting the courses to be engaging and stimulating. More than 1 600 videos have been produced from this initiative, covering lessons from Grade R to 12 curricula with a focus on Mathematics, Mathematics Literacy, Natural Sciences, Physical Sciences, Numeracy, Computer Application Technology (CAT), Information Technology, Coding and Literacy. The project also recruited and trained 54 teachers to develop and deliver online classes. All lessons were recorded and uploaded on YouTube and are available for learners who may have missed the classes or those wishing to re-watch the lessons.

The challenge with delivering online classes has been the digital divide; creating issues of access. Only children who have devices such as laptops, tablets or smart phones could access the classes. The high cost of data, for those that had devices, was prohibitive – impacting consistency in participation. The Sasol Foundation is working towards migrating all the content developed through the digital school platform, to the zero-rated DBE portal. This is to ensure that millions of learners across the country have equitable access to learning resources that permeate not only digital but also socio-economic and geographical divides.



Priority SDG: **No**

Achieve gender equality and empower all women and girls

Reporting Indicators

- Representation of women in management positions
- Representation of women in bursary and artisan learnerships

Activities/Programmes

- Implementation of our Women Empowerment Programme and fit-for-purpose programmes

Outcome

- Improved female representation across all layers of the organisation – specifically in senior leadership. Representation at vice president and senior vice president layer increased by 11 women.
- Female representation in our bursary and artisan learnership pools stands at 53% and 35%, respectively (also linked to SDG 8).



Priority SDG: **Yes**

Ensure availability and sustainable management of water and sanitation for all

Reporting Indicators

- Potable and river water consumption
- Total liquid effluent
- Water recycled
- Water efficiency targets (set at each plant)

Activities/Programmes

- UN Global Compact CEO Water mandate

Outcome

Since 2017, the following trends can be reported:

- Total water use has increased from 134.2 million m³ in 2019 to 142.6 million m³ in 2020
- River water use increased from 107.4 million m³ in 2019 to 115.5 million m³ in 2020 due to the commissioning of new production assets in the United States of America
- Potable water use has increased from 12.6 million m³ to 12.9 million m³ which is attributed mainly to an increase in demand for potable water in Secunda for industrial purposes, to offset a deterioration in river water quality
- Other water use has decreased slightly by 0.5% from 2019

Investing in water management best practices and recycling initiatives:

- The Nitro Dam Water Treatment facility at Secunda Chemicals Operations is made up of two units, the Ultrafiltration or Reverse Osmosis (RO) Unit and the Triple Effect Evaporation or Thermal Unit. Beneficial operation was reached on both units by December 2019.
- Sasolburg Operations has embarked on a process to reduce wastewater discharge volumes from the Midland site. Some projects have already been implemented, for example the recovery of flocculated water, which is now rerouted to the Midland site to displace potable water intake (phase 1). This also had a beneficial effect on the abstraction and potable water requirements.
- Secunda Synfuels Operations (SSO) concluded several investments this year to improve its water management systems including:
 - R43 million to refurbish a cooling tower blowdown recovery unit. This unit upgrades blowdown quality water (450 µS/cm) to condensate (10 µS/cm) and polish water (0,1 µS/cm) quality.
 - R39 million on implementing three separate projects, to improve stormwater management and seepage reduction through cut off trenches, thereby reducing SSO's potential environmental impact.
 - Over R100 million to construct a pollution control dam for the onsite domestic waste landfill site, to effectively manage stormwater runoff and seepage.
- Mining is finalising the development of a water use authorisation tool to develop a risk profile of the water use-related risks for each mine. This is a proactive approach of assessing high-risk water activities, to facilitate timeously prioritised and implemented actions to address the identified potential risks.

Sasol South Africa Limited Contributions Towards Achieving the UN SDGs continued

Priority SDG: **No**

Ensure access to affordable, reliable, sustainable and modern energy for all

Reporting Indicators

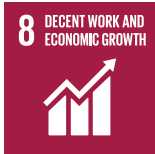
- % improvement in energy efficiency against 2005 baseline

Activities/Programmes

Energy efficiency improvement programmes. In 2018, the company committed to the Energy Productivity 100 (EP100) Initiative. Sasol's energy efficiency roadmap includes many different initiatives covering operational energy interventions and deploying capital-based solutions that improve the overall utility energy efficiency.

Outcome

Sasol's energy efficiency performance was negatively impacted compared to 2019, due to changes of the company's production mode. Sasol continues to track overall performance against the 2005 baseline. Through its energy efficiency drive, Sasol has delivered a 14.3% energy efficiency improvement from 2005 to 2020, towards a 30% energy efficiency improvement target by 2030. Since 2005, the company's cumulative South African energy efficiency improved by 16.8%.



Priority SDG: **Yes**

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

Reporting Indicators

- Fatalities
- Recordable Case Rate
- Lost Workday Cases
- Investment in skills development
- % of employees that are members of trade unions and works councils
- Investment in bursaries
- Employee turnover
- Talent readiness within key talent segments
- Human rights and ethics codes and policies in place:
 - Code of Conduct
 - Supplier Code of Conduct
 - Human Rights Policy
- Whistle-blower Policy
- Anti-bribery, anti-trust, and competition law training

Activities/Programmes

Sasol refined its Employee Well-being Programme to shift focus from reactive disease and health management, to proactive care aimed at identifying factors that have a direct impact on overall labour stability, employee well-being and productivity. In 2020 Sasol invested R1.17 billion in skills development, which includes:

- Employee training and development
- Bursaries
- Graduate development and learnership
- Apprenticeship and internship programmes
- Talent fora to identify future skills required to enable Sasol's business strategy and develop a human capital plan to address any skills gaps
- R118.3 million investment in bursaries to build the company's critical skills pipeline. Partnerships with local Technical and Vocational Education and Training colleges, with the support of the Chemical Industries Education and Training Authority (CHIETA). These colleges provide vocational training for chemical operations' processes and maintenance trade qualifications (mechanical, instrumentation, electrical, boiler making, welding, and turning).
- Conducting pulse surveys across various operations globally, to understand employees' views, concerns and effect appropriate intervention.

- Sasol employees and service providers are regularly screened for lifestyle diseases including hypertension, cholesterol, and diabetes.
- The High Severity Incident Programme, focused on:
 - Behaviour, as it relates to operational discipline and adherence to Sasol's Life Saving Rules.
 - Adequate risk management with respect to the quality of Sasol's Pre-Task Risk Assessments and critical control identification and implementation.
 - Review of procedures for task execution.
 - Aligning training and competency of individuals with requirements.
 - Institutionalising lessons learnt from previous incidents.
- Culture transformation programme.
- Sasol Cares Programme to support the quality of life of South African employees, through:
 - Education support;
 - Sasol share savings plan;
 - Out-of-pocket medical expenses support;
 - Money Matters Programme; and
 - Home Ownership Programme.

Sasol is supporting the YES Programme, as part of the CEO Initiative and 1 000 YES positions were committed over a four-year period.

Outcome

- Sasol experienced six tragic fatalities in 2020. The company's recordable case rate (RCR) is 0,27 over the 12-month reporting period.
- The lost workday case rate is 0.11 against a target of 0.11.
- 80% of learnerships permanently appointed within Sasol operations upon completion of their training was achieved. Unemployed youth from the fence-line communities comprise 98% of beneficiaries of Sasol's bursary, learnership and internship programmes. Globally, 65% of employees are currently members of trade unions or works councils. Since the official launch of the Sasol YES Programme on 1 July 2018, 533 YES Learners have been employed, with 95% of these recruited from Sasol's fence line communities.
- During 2019, more than 5 000 employees completed the Anti-Bribery, Anti-Trust and Competition Law training modules.

Sasol South Africa Limited Contributions Towards Achieving the UN SDGs continued

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE

Priority SDG: No

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

Reporting Indicators

- Research and Development investments

Outcome

- R35 million budget for product development in South African chemicals portfolio.

10 REDUCED
INEQUALITIES

Priority SDG: No

Reduce inequality within and among countries

Reporting Indicators

- Preferential procurement spend
- CSI spend on small business development

Activities/Programmes

Sasol does not tolerate any form of prejudice or unfair discrimination in any of the jurisdictions within which the company has a presence and continues to value diversity and inclusion.

Through the CSI Programme, Sasol is:

- Enabling access to economic opportunities
- Nurturing entrepreneurship talent
- Developing and funding of small businesses
- Transforming the supplier base through:
 - Identifying opportunities
 - Providing access
 - Spending with qualifying suppliers
- Enterprise and supplier development programme

Outcome

- Expenditure with black-owned enterprises increased to R26.3 billion and with black women-owned businesses to R17.3 billion.
- Assisting back-owned suppliers with coaching, mentoring and training.
- 400 SMMEs have received development support with many graduating from an Enterprise Development to Supplier Development path; with revenue growth. Over 119 employee volunteering hours have been spent to date by Sasol employees who have provided technical business support to the SMMEs.
- Sasol Siyakha Trust continues to accelerate SMME growth by providing loans to black owned suppliers, enterprises, and entrepreneurs.
- Opportunity identification for sustainable opportunities across the various supply chain categories have delivered in the order of R2.1 billion worth of opportunities which are in the process of being allocated to SMMEs over the next two to three years.
- Total Black-owned spend with suppliers increased to R26.3 billion against a target of R21.8 billion for 2020.
- Satellite Operations spent R474.4 million with black-owned suppliers in different areas across South Africa.
- A technical accreditation handbook has been developed to enable SMME suppliers to successfully prepare and participate in the accreditation processes.
- The company's spend with local (Secunda and Sasolburg) black-owned companies increased from R8.2 billion in 2019 to R10.5 billion in 2020.
- The company's loan book provided funding of R488.7 million against a target of R522 million for Supplier Development. It came in lower than budgeted as a result of SMME payment relief applications and approvals brought about by the COVID-19 pandemic.



Ensure sustainable consumption and production patterns

Reporting Indicators

- Responsible sourcing objectives, including:
 - Conflict minerals declaration
 - Responsibly sourced palm oil and palm kernel oil
 - Screening all orders for inbound chemicals and materials to ensure illegal substances, or restricted substances without necessary permits in place, are not procured
- Effectively and efficiently convert feedstocks to quality products, for Sasol and customers, through safe and stable operations that:
 - Optimise saleable volumes
 - Optimise unit cost of production
 - Reduce cash fixed costs
 - Reduce capital expenditure and working capital
- Total hazardous and non-hazardous waste recycled

Activities/Programmes

- Ongoing product portfolio review process to ensure that Sasol offers the market a safe and competitive product portfolio for today and the future
- Regulatory scanning, screening of peer-reviewed scientific research on chemical safety and product development work occur on a continuous basis to ensure that changes in legal requirements are addressed in advance of formal regulatory changes being adopted
- Conflict minerals declaration
- Support for Extended Producer
- Responsibility mechanisms that enable the effective collection and beneficial recycling or re-use of plastic materials, through the company's Plastics Sustainability Programme, including:
 - Participation in the 2019 South African Plastics Colloquium
 - Supporting converters through the Polymer Technology Science Centre
 - Reducing polymer pellet and powder loss throughout our value chain as part of a stewardship programme
 - Packa-Ching mobile recycling collection unit rollout (25 units targeted)
 - KwaZulu-Natal Waste Marine Network South Coast Baseline study
- Customer assessments and training to ensure the responsible and effective use of the company's products is an important contributor to the company's Responsible Care® commitment under the Product Stewardship CMP.

Ash has now been excluded from the legal definition of waste when used for specific applications in South Africa. The Waste Exclusion Regulations introduce a mechanism whereby ash users can access and use Sasol's ash without a waste management licence. This facilitates the company driving the market for small to medium ash beneficiation operations, providing employment and economic growth while managing ash responsibly.

Outcome

- There were 23 process safety incidents in 2020 (two major and 21 significant incidents) against a target of 16 or fewer incidents.

Product formulation to reduce inherent hazards, and taking advantage of superior product safety attributes include:

- nonylphenol ethoxylates replacements in agrochemicals; and
- ultra-high purity ethanol for pharmaceutical applications
- In response to the surge in demand for disinfectants and hand sanitisers as a result of the COVID-19 pandemic, Sasol used ethanol in its first sanitiser, made according to the World Health Organization formulation.
- Sasol continues to train approximately 2000 employees each year of caustic soda, cyanide, and chlorine customers, and conducts customer site SHE assessments before agreeing to supply these products.
- Each month, approximately 1 000 customer queries of a technical or product stewardship nature are handled (globally).
- Total recycled waste decreased from 105 kilotonnes in 2019 to 83 kilotonnes in 2020. Furthermore, the volume of ash recycled at Sasolburg Operations was 473 kilotonnes and at Secunda Synfuels Operations was 141 kilotonnes.

Sasolburg waste

- One hundred percent of the bio sludge waste stream diverted from landfill for application in land remediation.
- Waste methanol is converted to a product that can now be sold.
- All wax and solvent spent catalyst was recycled during the financial year.
- All the "heavy ends" streams are used as an alternative fuel at a cement kiln, avoiding landfill.

Secunda waste

Waste avoidance is one of the options Sasol is exploring, where the material is reprocessed back into the value chain to extract additional products. A good example is the progress in identifying alternative handling options for the Phenosolvan gas liquor sludge. A waste management service provider supplied a centrifuge system to clean-out the tank online and separate the stream into various fractions, including fine coal, gas liquor and oily sludge. All material is then returned into the process. Previous cleanouts resulted in this stream being disposed of or handled at alternative fuel facilities. This year, all 7 500 tonnes were returned into the value chain, adding value to Sasol as well as saving money on the cleanout and processing.

Sasol South Africa Limited Contributions Towards Achieving the UN SDGs continued

Priority SDG: **Yes**

Take urgent action to combat climate change and its impacts

Reporting Indicators

- Achieve the 2030 GHG reduction target (10% reduction by 2030, off 2017 baseline).

Activities/Programmes

- Scope 1 and 2 emission reduction programme as part of 2030 roadmap
- Scope 3 emission reporting baseline improvement programme – Sasol issued its second climate change report to comprehensively cover climate change risks, performance, and mitigation plans
- Life cycle inventory work to include products from South African operations.

Outcome

- Sasol's carbon footprint is dominated by scope 1 and 2 emissions from South African operations. In 2020, the company's total GHG emissions decreased to 66 015 kilotonnes CO₂e from 66 558 kilotonnes CO₂e. Sasol's GHG emissions have been decreasing over the last four years, through mitigation interventions since 2017.
- The reduction of GHG emissions has resulted primarily from energy efficiency initiatives.

2030 GHG emission reduction roadmap

- Sasol has analysed more than 100 mitigation opportunities in support of its 2030 roadmap. To date, a 3.1% reduction towards the 10% target, from the 2017 baseline, has been achieved through energy and process efficiency measures.
- The first phase of the emissions reduction roadmap continues to leverage process and energy efficiency options as the primary mitigation options dealing with scope 1 and 2 emissions.
- Sasol has entered the market and invited bids to supply 600 MW of renewable energy by 2030. Integrating renewable energy will initially target reduction in scope 2 emissions and will reduce operating cost.
- Sasol's second phase of the emission reduction roadmap, 2025 – 2030, is focused on transforming the operations by securing additional natural gas. Gas, as a complementary feedstock, coupled with lower carbon renewable energy, are key enablers for reducing the company's GHG emissions into the future.
- Further energy and process efficiency improvements will be pursued if gas is unavailable or unaffordable.
- Sasol's long-term ambition and associated roadmap for 2050 is ongoing and continues to explore collaboration and partnership opportunities in multiple technology areas including hydrogen production.





Priority SDG: **No**

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

Reporting Indicators

- Impact of the business on terrestrial ecosystems
- Report on the company's programme to address future risks from terrestrial ecosystem resource depletion

Activities/Programmes

- Land remediation programme
- Biodiversity management programme
- Removal of invasive plants and species on our land and conservation areas

Outcome

Energy business

- The retail team of Sasol Energy received recognition from the Department of Environment, Forestry and Fisheries (DEFF) for submitting notifications (Part 8 of the National Environmental Management: Waste Act) for retail sites with known soil and/or groundwater contamination, so that appropriate remediation measures can be conducted. This award was handed over at the Waste Khoro, Asbestos and Land Remediation summit held in September 2019 in Kimberley. This is a good reflection on Sasol and the oil industry at large for the efforts being made to responsibly manage the impacts associated with the company's activities.

- Secunda Tank farm received a remediation order amid the Part 8 process, only requiring ongoing monitoring of the site. The related investigations greatly assisted both Sasol and the DEFF to better understand the land risks and align on the process going forward. Other areas in Secunda will be subject to the same process as the investigations proceed.

Sasolburg operations

- Sasol manages two nature reserves in the vicinity of Sasolburg. The reserves host 14 game species including gemsbok, eland, giraffe, springbok, impala, and black wildebeest; to protect grassland for future generations.
- Consolidation of waste materials from remedial activities on the old tar pit footprint is continuing.
- Sasol aims to implement a permeable reactive barrier to address elevated nitrates in groundwater. The proposal under consideration is to install the barrier alongside the downstream boundary of the Bunsen site.

Secunda operations

- Secunda Synfuels Operations contribution towards the conservation of biodiversity assets pivots on annual biodiversity management plans, monitoring assessments and feedback reports.
- Publication of scientific articles related to the biodiversity efforts on the Secunda site continued.
- The British Broadcasting Corporation recognised Sasol again in a wildlife documentary on the serval cat research project.
- Priority biodiversity focus initiatives include rehabilitating some wetlands through better stormwater management, maintaining a continued focus on alien invasive species and other conservation initiatives to safeguard protected species.

Sasol South Africa Limited Contributions Towards Achieving the UN SDGs continued

17 PARTNERSHIPS
FOR THE GOALS

Priority SDG: Yes

Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

Activities/Programmes

- Partnership with the ICCA and representative country associations on Responsible Care®, including CAIA in South Africa.

Outcome

- Doing business based on fair, lawful, efficient, and transparent practices.
- Product Stewardship: Sasol's product stewardship commitment is to work diligently to limit the SHE impacts of products, as well as manage security throughout the product life cycle, in partnership with suppliers and customers.
- Plastic waste response: Sasol's approach to respond to the challenge of plastic waste in the environment and oceans includes own and partnership initiatives supporting plastics education, improved waste collection, bolstering recycling, job creation and contributing to marine litter collection. A significant component of this response will take place through the global Alliance to End Plastic Waste (AEPW) of which Sasol is the only founding member headquartered in Africa. A South African plastics value chain response called the South Africa Initiative is also being supported.
- GHG reduction roadmap: The work regarding long-term ambition and associated roadmap for 2050 is ongoing and Sasol continues to explore collaboration and partnership opportunities in multiple technology areas including hydrogen production.
- Artisan training: 20 welders recently graduated from the Inhassoro Training Centre in Inhambane province which falls under a partnership between Sasol and the Mozambique Institute of Vocational Training and Labour Studies Alberto Cassimo (IFPELAC). The Inhassoro Training Centre, which has been operational since 2014, offers training in a variety of trades, including welding, scaffolding, steel fixing and painting. Over 320 artisans have been trained to date, a total of 460 is expected to be trained within the coming years. The Inhassoro Training Centre is a commitment made in the Production Sharing Agreement (PSA) Field Development Plan (FDP).
- Community health programmes: In improving the health of communities, over 4 500 community members in Govan Mbeki Local Municipality accessed health services during the HIV/AIDS awareness and anti-retroviral treatment campaigns through which 90 jobs were created. In Fezile Dabi district, 76 448 people were reached through Sasol's HIV and TB awareness, testing and screening campaign including schools and prisons in the area. This project created six jobs and retained others. This was done in partnership with the Free State Department of Health, Epilepsy South Africa and a local HIV/Aids non-governmental organisation.
- One of the strategic levers in accelerating the development of SMMEs is to provide them with market access opportunities. Collaborative platforms where SMMEs could meet, share ideas and learn more about growing their businesses, were created.
- Small business development: At the ESD Ecosystems event held in Sasolburg, Sasol, in partnership with Innovation Hub and SEDA hosted SMMEs to trade with each other. SMMEs supported by these institutions were invited and encouraged to pitch their businesses to other SMMEs with the intent of stimulating local trade. In addition to this, Sasol hosted a three-day Fourth Industrial Revolution (4IR) masterclass where engineering and IT specific industry developments were shared with our SMMEs. On the last day SMMEs were afforded an opportunity to pitch their businesses to Sasol service providers for partnership opportunities. (See SGD 10)
- Employee volunteerism: Sasol for Good, the company's employee volunteerism programme, structures and formalises employees' inherent willingness to give – placing people at the centre and realising the essence of partnership and co-operation. The programme encourages employees to get involved in humanitarian support in their communities by volunteering their time, skills and resources through company and employee-initiated social development causes. This allows causes to benefit from employee giving, and also enriches employees' understanding of community issues, making them advocates of communities on those issues. Sasol grants employees 40 hours per annum to dedicate their time to volunteering initiatives of their choice. It supports employees by granting paid volunteering time, and also complement their financial contribution and fundraising initiatives to organisations of their choice via payroll deduction, matching gifts, and volunteer grants. Over 4 000 Sasol employees have registered to volunteer to causes, donating over 2 499 volunteering hours. Sasol and employees contributed over R5 million to more than 290 organisations as part of Sasol's payroll and match giving.



AECI Ltd.

Contributions Towards Achieving the UN SDGs



Priority SDG: **Yes**

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Reporting Indicators

Food parcels

- Value in Rands collected and number of food parcels delivered to the needy.

Plant/Fruit yields

- Improve yield by working with nature

Make food healthier and more affordable

- Reduce food waste
- Food-safe, effective shelf-life extenders

Activities/Programmes

IPledge – The initiative has raised over R3 million in three months to address food security. AECI Ltd has partnered with Joint Aid Management to deploy food parcels to over 23 communities around its operations.

Current projects in Development (Agriculture and Food)

NuWay – holistic approach to farming

- Fortified (high protein juices) and functional (gut health, cholesterol, BP) food ingredients
- Natural colours, alternative sweeteners and herbal products
- Ingredients for basic, affordable foodstuffs (e.g. mageu cultures)
- Alternative proteins (plant-based, microbial)

Outcome

To date, 10 450 parcels have been deployed to families in need. One parcel can feed a family of 5 which has impacted 52 264 beneficiaries.



Priority SDG: **Yes**

Ensure healthy lives and promote wellbeing for all at all ages

Reporting Indicators

- Number of employees completing annual medical surveillance without restrictions
- Number of occupational illness and diseases (lagging indicator)
- Reduction in work related fatalities, life altering injuries and recordable injuries

Activities/Programmes

- Company Wellness Programmes
- Voluntary consultation with an Occupational Health Nurse
- Annual flu vaccines
- Zero Harm

Outcome

- Approximately 345 people per month attend medical surveillance in South Africa.
- On average 98% of employees are declared fit for duty with no restrictions.
- The number of occupational illnesses has been decreasing over the years.
- Consistent reduction in fatalities, life altering injuries and recordable cases over the last four years.
- Zero fatalities or life altering injuries in 2020.
- The Total Recordable Incident Rate has improved from 0,61 in January 2019 to 0,34 in January 2020.

AECI Ltd. Contributions Towards Achieving the UN SDGs continued


Priority SDG: **Yes**

Achieve gender equality and empower all women and girls

Reporting Indicators

- Representation of women in management positions in the organisation

Activities/Programmes

- Women in the Workplace Programme
- Diversity and Inclusion International Programme

Outcome

- Improvement in representation by Women in senior levels, from 2012 to 2020
- F Level (executives) is up from 14% to 17%
- E Level (senior management) is up from 14% to 25%


Priority SDG: **Yes**

Ensure access to affordable, reliable, sustainable and modern energy for all

Reporting Indicators

- Increase a % of energy from renewable sources

Activities/Programmes

Approval for installation of two solar farms on vacant land

Outcome

Two installations approved


Priority SDG: **Yes**

Ensure availability and sustainable management of water and sanitation for all

Reporting Indicators

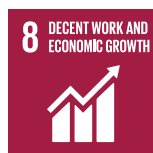
- Make clean water more accessible to people
- % reduction in potable and abstracted water
- % reduction in discharge to sewer, rivers, and the sea
- Proportion (%) of waste water safely treated

Activities/Programmes

- Purification of water for alternate use
- Desalination
- Acid-mine drainage treatment
- Bacteria and enzyme treatments for high Chemical Oxygen Demand (COD) effluents
- Modernise irrigation systems

Outcome

- Baselines were confirmed in 2019 and tracking started in 2020. Information on outcomes is not yet available.


Priority SDG: **Yes**

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

Reporting Indicators

- Employee engagement survey results
- Management development programmes

Activities/Programmes

- Talent-Fit-For Purpose
- Performance Development
- Skills development programmes
- Employee Engagement Culture
- Innovation and Reward Practice

Outcome

- Number of employees who have attended The Gordon Institute of Business Science (GIBS) Leadership Programmes:
 - 2017 – 143
 - 2018 – 130
 - 2019 – 112
- Employee Study Assistance:
 - 2017 – 283
 - 2018 – 262
 - 2019 – 272
- Bursaries (external and employee dependants):
 - 2017 – 69
 - 2018 – 60
 - 2019 – 52
- Learnerships, internships, apprenticeships and graduates:
 - 2017 – 219
 - 2018 – 223
 - 2019 – 306

10 REDUCED INEQUALITIES



Priority SDG: **Yes**

Reduce inequality within and among countries

Reporting Indicators

- % compliance to agreed DEL targets in RSA
- Indigenisation Compliance e.g. Broad-based Black Economic Empowerment (BBBEE)

Activities/Programmes

- Women in the Workplace Programme
- Talent Succession Pipeline Development

Outcome

- % of staff in various levels who are Black (African, Indian, or Coloured). Increases from 2012 to 2020:
 - F Level (executives) up from 29% to 50%
 - E Level (senior management) up from 22% to 34%
 - D Level (middle management) up from 32% to 52%
 - C Level (junior management) up from 60% to 75%
 - AECI total up from 69% to 81%
- Board representation inclusive of executive and non-executive directors in 2012 was 10% women and 40% black (African, Coloured, and Indian). In 2020, Board representation has improved to 27.3% women and 54.5% black.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Priority SDG: **Yes**

Ensure sustainable consumption and production patterns

Reporting Indicators

- Improve energy efficiencies
- Increase usage of waste as a resource
- Reduction in % of waste to landfill
- Increase in recycled waste
- Reduction in process safety incidents – Process Safety Total Incident Rate (PSTIR)

Activities/Programmes

- Manufacturing of bricks from waste ash in Modderfontein
- Installation of variable speed drives in Modderfontein
- Using waste oils to fuel bulk emulsion explosives
- 'Mining' waste dumps for construction mining at Ruashi Mine, Democratic Republic of Congo (DRC)
- Zero Harm – Process Safety Management

Outcome

- From June 2011 to December 2019, 1 772 788 tonnes of ash have been reclaimed from the historic Ash Dam 6 in Modderfontein for the manufacturing of bricks.
- No major process safety incidents since recording commenced in 2018. In 2019 102 total incidents occurred, down from 124 in 2018. 17 were reportable, down from 21 in 2018

13 CLIMATE ACTION



Priority SDG: **Yes**

Take urgent action to combat climate change and its impacts

Reporting Indicators

- 18% reduction in Scope 1 GHG emissions
- Drive full compliance to Air Emissions Standards

Activities/Programmes

- Various capital projects have been completed and more will follow in 2021 to achieve full compliance to Minimum Emission Standards (MESs)

Approval for installation of two solar energy units.

Outcome

- Baselines for 2018 have been determined for GHG.
- Approximately 80% compliance across the AECI Ltd Group against 2020 MESs.

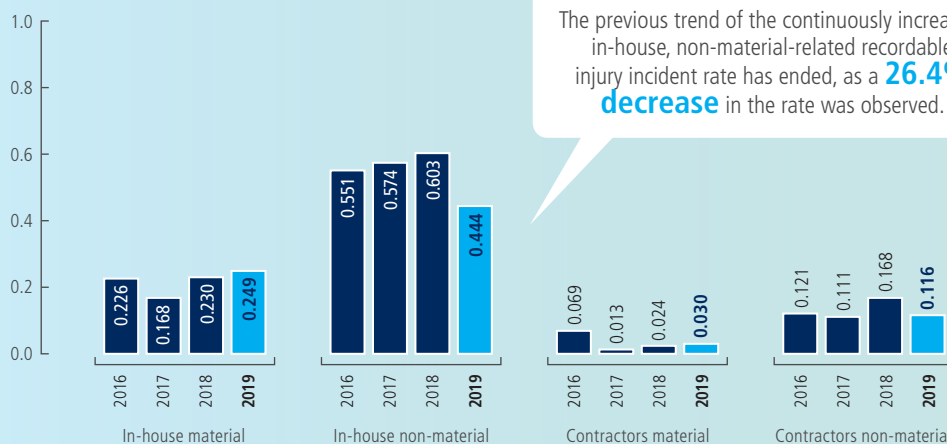
2019

2019 Annual Performance Results

Safety and Health Indicators

Recordable Injuries

Recordable injury incident rate/200 000 hours worked



The previous trend of the continuously increasing in-house, non-material-related recordable injury incident rate has ended, as a **26.4% decrease** in the rate was observed.

The in-house, material-related recordable injury incident rate is continuing to increase each year – showing an **8.3% increase**.

The higher rate for contractor-, non-material-related recordable injuries **decreased by 40%**.

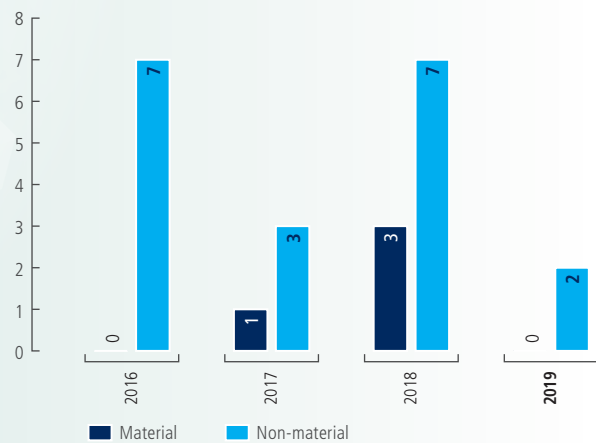
The largest contributor to the overall in-house recordable injury incident rate remains **non-material-related** injuries.

Although the contractors' material-related recordable injury incident rate increased, it remains below **0.05 per 200 000 hours worked**.

Fatalities

In the reporting periods starting 2013, fatalities are at the **lowest level**.

Fatalities

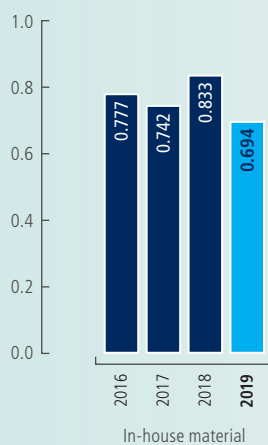


Both fatalities occurred during **in-house operations**.

There was a total of **two** fatalities related to members' operations.

Both fatalities were **non-material related**.

In-house recordable injury incident rate/200 000 hours worked



The total in-house recordable injury incident rate has fallen to the **lowest rate since 2016**.

There was **one** in-house recordable injury for every **288 184** hours worked.

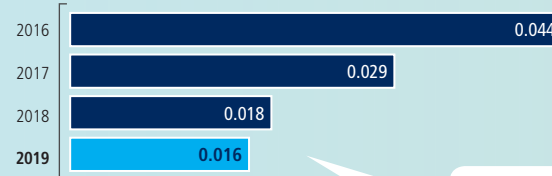
Occupational Diseases

The in-house occupational disease rate has fallen for the **last four years**.

No occupational diseases were reported by signatories in relation to the work being undertaken by their contractors.

Occupational diseases/200 000 hours worked

In-house



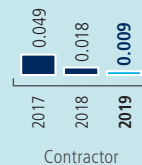
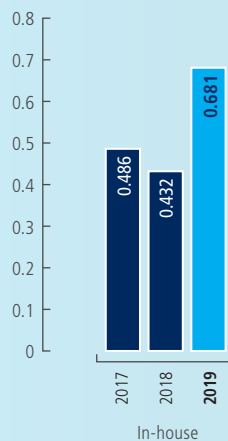
The in-house occupational disease rate **decreased by a further 11.1%**.

Contractor



Handling and Storage

Handling and storage incidents/200 000 hours worked (%)



The handling and storage incident rate **increased for in-house activities by 57.6%**.

The rate for contractors **decreased**; with the rate halving from that observed during 2018 operations.

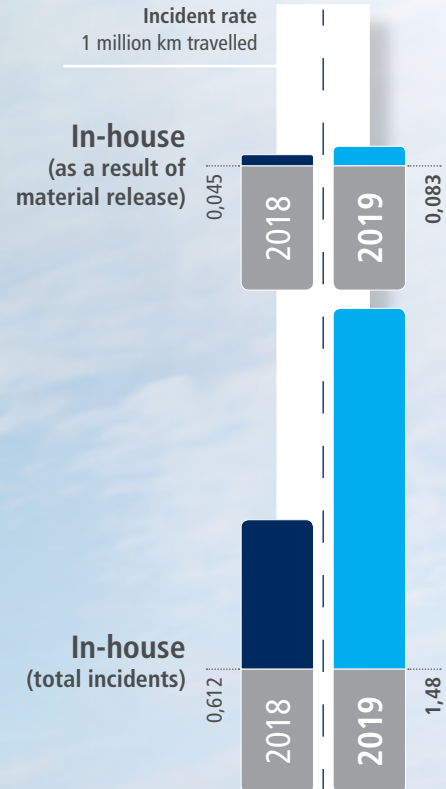
The 2019 in-house incident rate is equivalent to one incident per **293 686 hours worked**.

Road Transportation

CAIA introduced a new way of reporting based on consultation with signatories – calculated as a rate based on in-house kilometres travelled. **Year-on-year analysis can now be shown as there are two years' data available.**

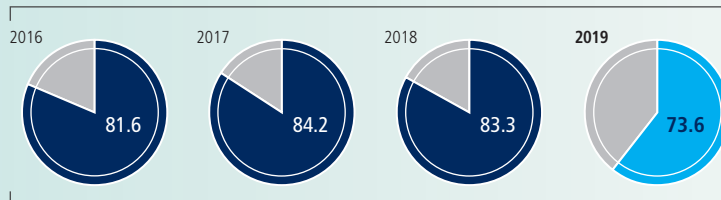
There has been an **84.4%** increase in road transportation incidents that have been **caused by the release of material**.

There has been a **sharper increase** in the total number of in-house road transportation incidents; by **141.8%**.



Behaviour-based Safety

Behaviour-based safety programme (%)

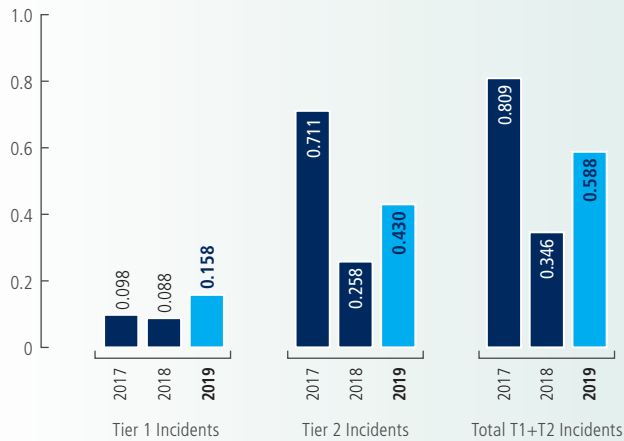


Since reaching a peak level of implementation in 2017, the 1.1% reduction observed for 2018 has been compounded **further with a reduction of 11.6%.**

Implementation of behaviour-based safety programmes for drivers and contractors now stands at **73.6% of signatories.**

Process Safety

Process safety incidents/200 000 hours worked



Excluding the 2017 data where there may have been reporting challenges, both the process safety tier 1 and tier 2 incident rates have **increased by 79.5% and 66.7%, respectively.**

Responsible Care® Training

The proportion of signatories that have formal, documented Responsible Care® Training in place was approaching 100% in 2017, **but subsequently there has been a decline.**



For 2019 operations, **93.3%** of signatories confirmed this was in place.

Community Awareness and Emergency Response

Site Visits, >0 (%)



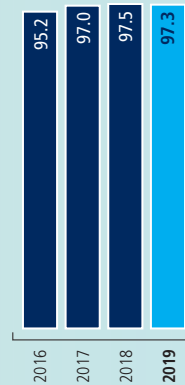
Site visits

External Stakeholder Meetings, >0 (%)

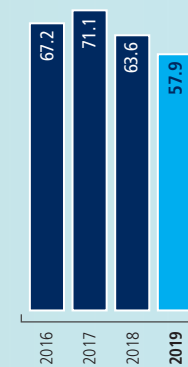


A sharp drop in the proportion of signatories that engage with external stakeholders has been noted. **Only fifty percent of signatories confirmed that these meetings took place during 2019.**

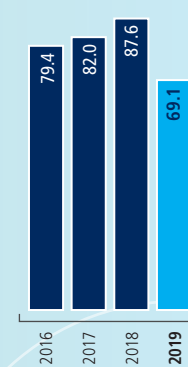
Emergency Response Plans (%)



Emergency Response Plans Tested (of those with plans) (%)



Community Awareness and Emergency Response Structure (%)



The proportion of signatories having a Community Awareness and Emergency Response Structure has **declined to the same level observed in 2013.**

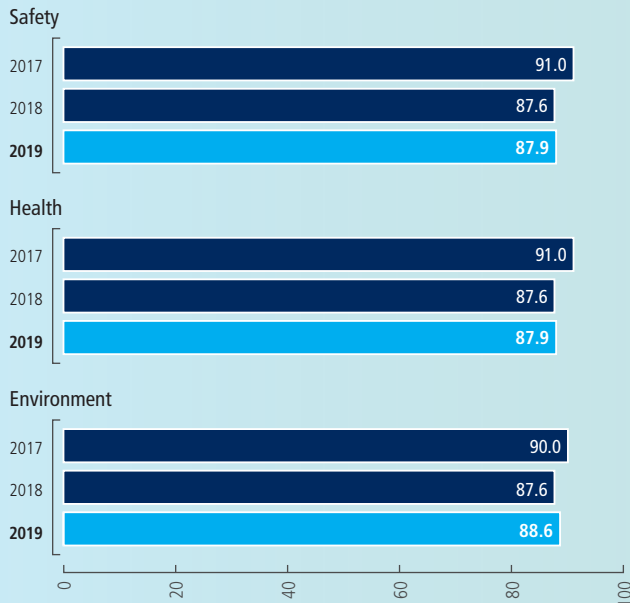
The continual increase in the proportion of signatories with an Emergency Response Plan in place **has plateaued since 2016, at approximately**

97%

There has however been a decrease in the regular testing of the Emergency Response Plans with external stakeholder involvement as indicated by the **9.0% decline.** This was the third year of decrease.

External Stakeholder Complaints

External complaints procedure (%)

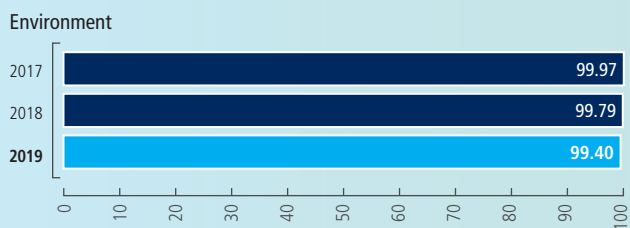


A similar trend to decreased stakeholder awareness can be observed by the decline in the proportion of signatories that have external complaints procedures in place, although still being implemented by more than

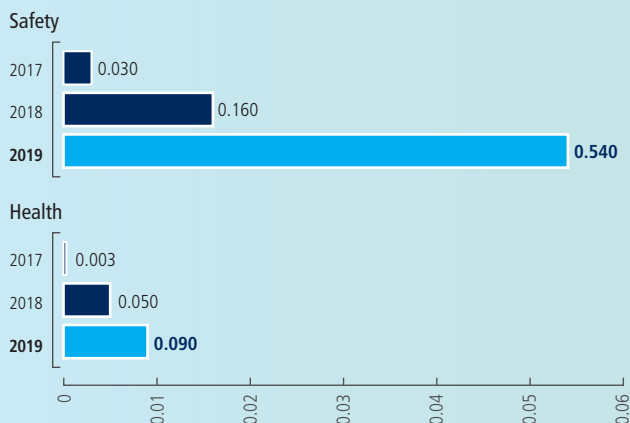
87%
of signatories.

The data for the last three years have been reviewed based on improved reporting.

External stakeholder complaints (%)



External stakeholder complaints (%)



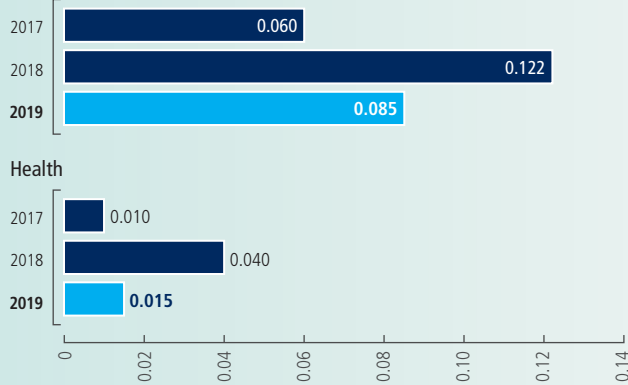
The proportion of environmental complaints is above

99%

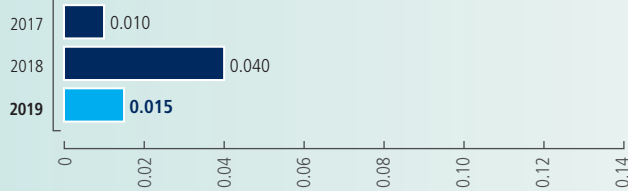
due to the reporting of a very large number of waste management-related environmental complaints.

External complaints/200 000 hours worked

Safety



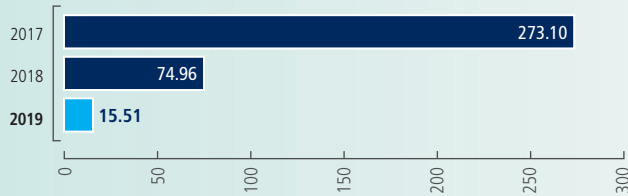
Health



The data for the three years have been **reviewed given improved retrospective reporting.**

External complaints/200 000 hours worked

Environment



The rate of **environmental complaints is decreasing** each year as the number of waste management-related environmental complaints decrease.

Both external safety and health **complaints decreased by more than 30%**



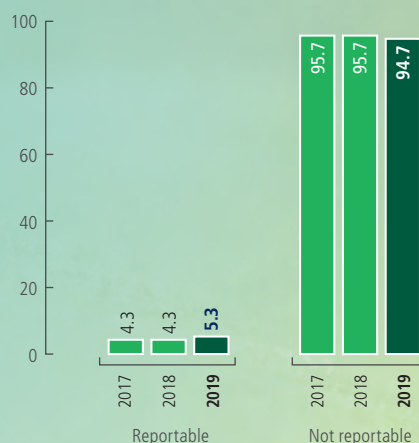
Environmental Indicators

Environmental Incidents

The proportion of environmental incidents that occurred during 2019 that were reportable as per the legal requirement of Section 30 of the National Environmental Management Act, increased to

5.3%

Environmental incidents (%)



Non-reportable environmental incidents are defined for reporting purposes to **include all substances regardless of whether they are hazardous or not** and both on- and off-site incidents.

Total Environmental Incidents

The number of environmental incidents decreased by

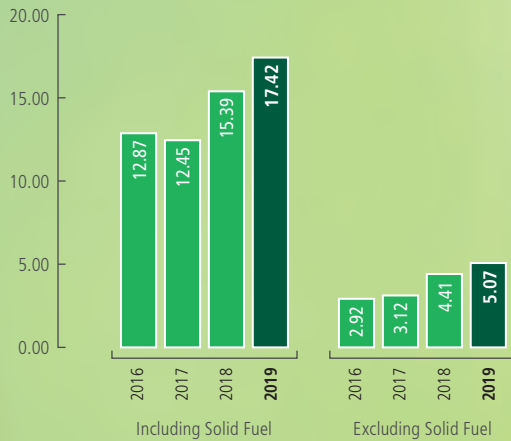
25.5%

The number of **reportable and non-reportable environmental incidents** is approaching the number observed in 2017; with only a

4.2%
difference.

Energy Consumption

Energy consumption (GJ/tonne)



Energy consumption per tonne of traded product is at its highest level since disaggregated reporting was introduced.

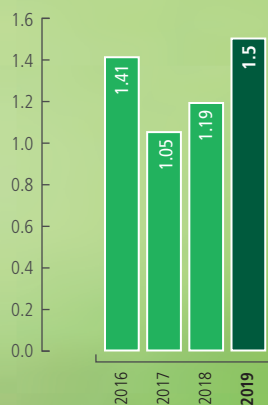
Energy efficiency is declining whether or not solid fuel (coal) is considered.

Energy consumption per tonne of traded product continued to increase, eroding the energy efficiency gains made up to 2017.

Electricity consumption

Similar to the trend for overall energy efficiency, electricity consumption efficiency has **decreased for the second year in a row** and is similar to levels observed in 2014.

Electricity consumption (GJ/tonne)



Relatively large deteriorations in water consumption and effluent discharge efficiencies have been observed.

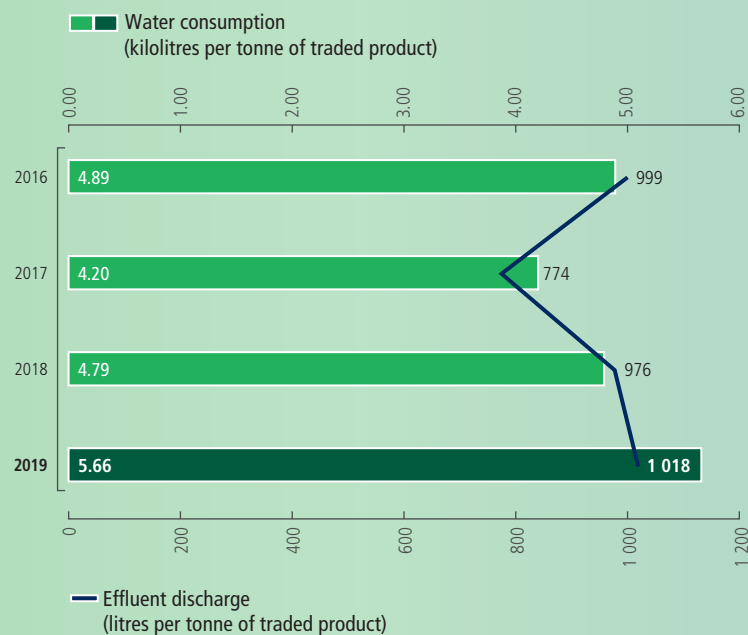
For each tonne of traded product,

5.66 kL
of water was consumed,
compared to 4.79 kL in 2018.

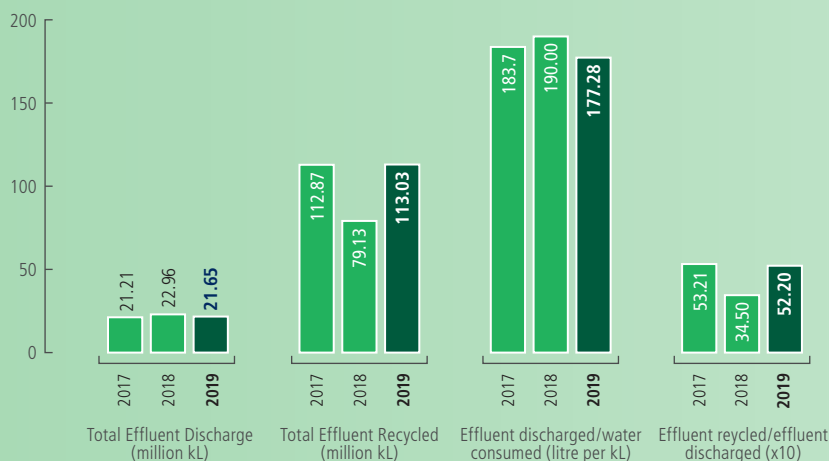
The water consumption efficiency decreased by

18.2%
and effluent discharge efficiency by
4.3%

Water consumption and effluent discharge



Effluent discharged and recycled

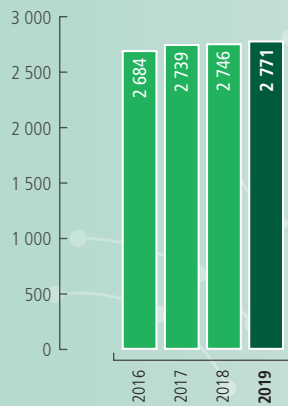


However, the total effluent discharged has decreased year-on-year, **while there has been an increase in the volume of effluent that has been recycled**, and there is a higher level of effluent recycling for every unit of effluent that is discharged.

Effluent discharged per unit of water consumed has remained **relatively stable over the three-year period presented**.

GHG Emissions

GHG emissions (kgCO₂e)



Since 2015, there has been a **plateau in GHG emissions released per tonne of traded product.**

CAIA tracks licenced atmospheric emissions annually. **Reporting of licenced sulfur dioxide and nitrogen oxides emissions can now take place as data quality has improved.**

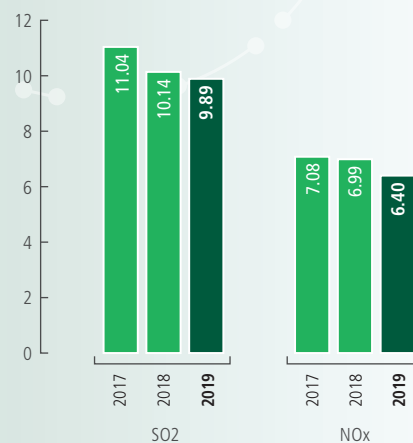
Since 2017, **sulfur dioxide emissions have decreased by**

10.4%,

while for **nitrogen oxides the**

decline has been 9.6%.

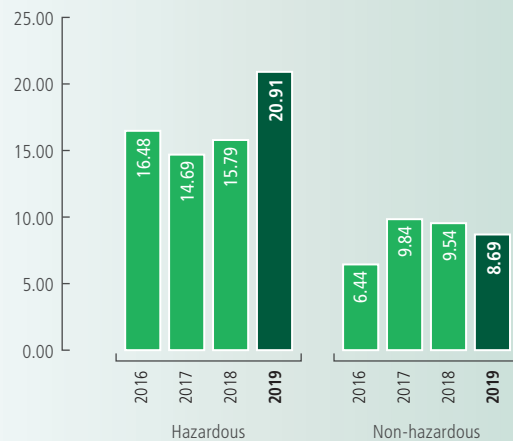
Emissions (kg/tonne)



Over the last three years for which data are available, **emissions per tonne of traded product have been declining.**

Solid Waste

Solid waste generated (kg/tonne)

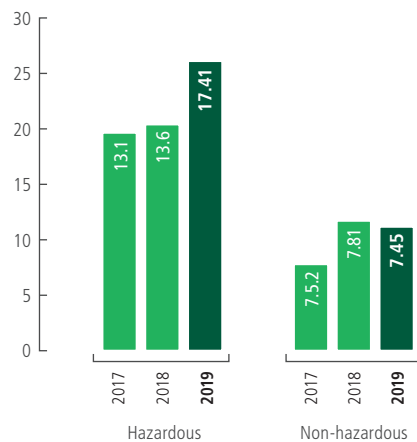


The total amount of waste generated per tonne of traded product **increased for the third year.**

A **16.9%** increase in the generation of solid waste was observed.

Although solid non-hazardous waste generated has declined, the **generation of hazardous waste per tonne of traded product increased.**

Solid waste disposed (kg/tonne)

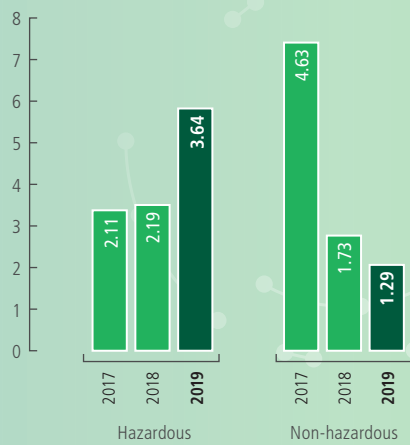


With the increase in the generation of hazardous waste per tonne of traded product, **there was an increase in the volume disposed.**

The **disposal of solid, non-hazardous waste per tonne of traded product** decreased by

4.6%

Solid waste recycled/recovered/re-used/transferred – hierarchy (kg/tonne)

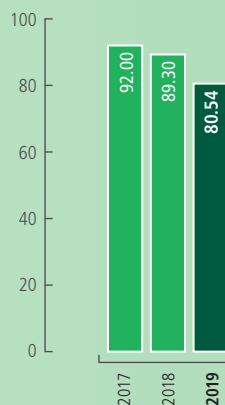


The proportion of **solid hazardous waste to solid non-hazardous waste** moving up the waste management hierarchy increased.

While the proportion of signatories with **waste minimisation plans** in place was over

92% in 2017,
this decreased to only
80.5% in 2019.

Waste minimisation plans (%)



Committees and Fora

As part of the commitment to Responsible Care®, CAIA works closely with its members, the ICCA, the Government, and other relevant stakeholders to help facilitate best practices in chemicals management and sustainable growth to spread the Responsible Care® ethic in South Africa.

CAIA has been collaborating with the following committees, fora, and work groups to build capacity in the sound management of chemicals, as well as prevent incidents around the country.

Responsible Care® Standing Committee

Main Objectives:

- To sensitise CAIA and its members to public concerns that relate to the chemical industry
- To identify areas for enhanced information exchange, dialogue and improved relations between association members and stakeholders which include identifying public information needs
- To establish a continuing dialogue and information exchange between the association and its members and key thought leaders at the local, national, and regional levels
- To establish collaborative efforts between association members, the association, and stakeholders along the chemicals value chain to address aspects of concerns and opportunities to advance Responsible Care® and safe chemicals management
- To define a coherent approach amongst association members to implement the elements of Responsible Care®
- To provide specialist input on the elements of Responsible Care® and the CAIA strategy where required
- To consider CAIA's proposals regarding the KPI questionnaire on an annual basis and provide advice on metrics



Chairperson

ELLIE SCHOONWINKEL

BASF Holdings
South Africa (Pty) Ltd



Vice Chairperson

SANDRA DOYLE

Safripol (Pty) Ltd

Summary of Accomplishments and Current Activities:

- The nine newly updated CMP were published on 7 August 2020.
- The new Security CMP was published for the first time in South Africa on 7 August 2020.
- The Responsible Care® Implementation Action Plan was finalised and will be published after internal approval by CAIA.
- The meeting agenda structure has been reviewed and aligned with the RCSC strategic focus as well as with the Terms of Reference.
- The RCSC provided direction to fora members.
- The ICCA Self-assessment questionnaire was reviewed.
- The RCSC Terms of Reference were reviewed, updated and approved.
- Responsible Care® signing ceremonies are being done virtually.
- The development of a new RCMS third-party auditing protocol, that aims at lightening the audit burden on members is currently underway.
- Member companies to identify internal industry experts to provide CAIA and the ICCA Peer Mentoring/Experts Network Working Group with a pool of subject matter experts that could be consulted for training and workshop purposes.

Process Safety Fora

The Process Safety Forum platform is comprised of two groups that meet independent of each other in KwaZulu-Natal and Gauteng but under a common set of objectives and Terms of Reference.

Main Objectives:

- To enable the prevention of catastrophic process safety incidents through an effective risk-based process safety management system
- To provide a platform that addresses industry process safety challenges and further meets these requirements through successful implementation of the CMP and industry best practices
- To facilitate an exchange of information and dialogue between members on process safety
- To support a process safety culture within applicable chemical and allied industries' organisations and strengthen the role of process safety practitioners
- To build process safety competencies in South Africa, both within member companies as well as third-party consulting and auditing bodies
- To address industry concerns regarding the CMP, AGD and KPIs
- To encourage inherently safer design, operation, and maintenance of chemical facilities
- To monitor and seek international best practices for process safety and introduce them to South Africa
- To support CAIA's advocacy initiatives in relation to process safety policies, legislation, and codes of practice

GAUTENG PROCESS SAFETY FORUM



Chairperson

NGAKA MOGALE

Sasol South Africa Limited



Vice Chairperson

BONISIWE MALEKE

AECI Mining Explosives, a division of AECI Mining Ltd

Summary of Accomplishments and Current Activities:

- Process safety near miss definition finalised by members
- Discussions on cyber attacks impacting on process safety: *What is the likelihood my plant will be compromised*
- Members provided input to the process safety course frameworks to be offered by universities
- Presentation on *Small Errors Lead to Big Consequences*
- Presentation on *Thermal Instability and Decomposition*
- A discussion on the impact of the COVID-19 pandemic and the use of sanitisers close to a burning/heated object, such as heaters and stoves
- Sharing of CCPS Monograph: *"Insights for managing process safety during and following COVID-19 pandemic and other similar crisis"*
- Sharing of IChemE document: *"Managing process safety during COVID-19 pandemic"*
- Shared learnings and best practice in:
 - Process safety moments
 - Process safety-related legislation
 - Emergency response drills
 - Process safety incidents and near misses
 - Process safety management system implementation
 - KPIs

KWAZULU-NATAL PROCESS SAFETY FORUM



Chairperson

NEIL FRANKLIN

AECI Ltd



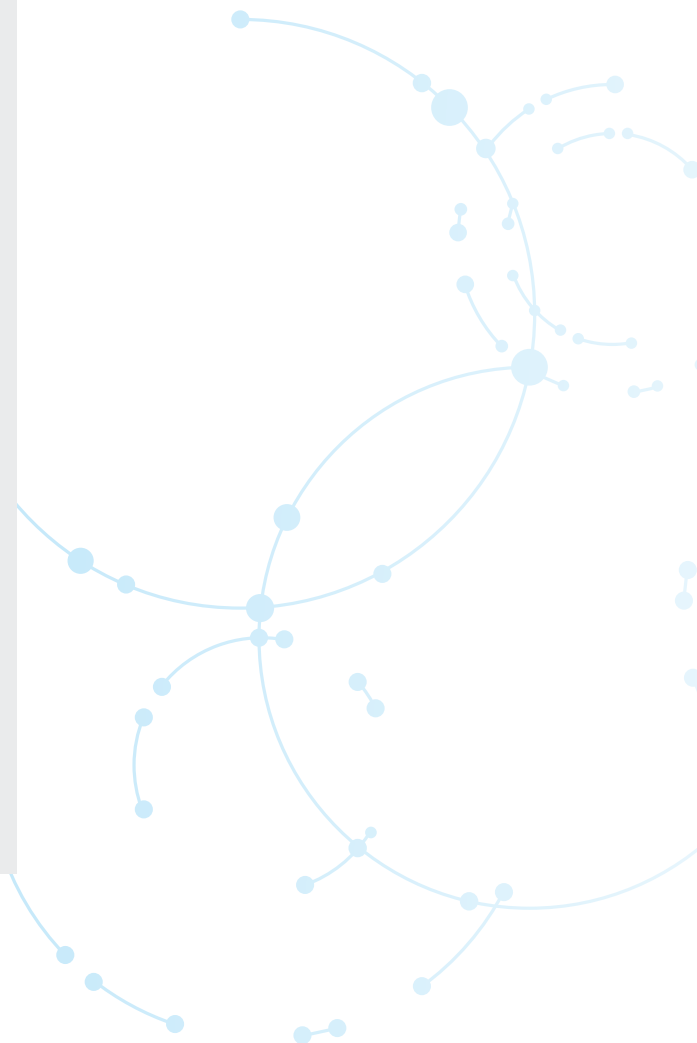
Vice Chairperson

RYAN FRANCIS

AECI Mining Chemicals, a
division of AECI Mining Ltd

Summary of Accomplishments and Current Activities:

- Membership continued to grow
- Participation is high in KZN with meetings being conducted virtually
- Representation from Durban University of Technology obtained
- Presentation on *Business Continuity Planning* in the event of interruptions
- Presentation on *New Technologies including drone inspections and their Integration into Process Safety*
- Discussion on how companies can plan to combat the increase in the number of COVID-19 infections
- Explanations on the differences between deep cleaning and sanitising
- Shared guidelines from the National Institute for Occupational Health on decontamination after there has been a COVID-19 positive case at the workplace
- Provided input to the Durban University of Technology course outline on process safety
- Shared learnings and best practice in:
 - The incident investigation process
 - Hot work permits
 - Gas-testing purchasing and calibration certificates
 - Smart watch safety
 - Incidents
 - KPIs on process safety metrics
 - Explosion protection
 - Pre-start up reviews
 - Near misses
 - Process safety auditing
 - Process safety elements
 - Process safety-related legislation



Chemical Logistics Management Forum

Main Objectives:

- To promote and develop a safety culture for the activities related to the logistics management of chemicals
- To facilitate an exchange of information between members on the activities related to logistics management of chemicals and industry best practice
- To create an opportunity to establish dialogue between relevant stakeholders in the chemical industry
- To participate in initiatives or provide guidance on initiatives concerning the SHE impact of activities related to logistics management of chemicals
- To identify concerns and create mechanisms to find solutions regarding the activities related to logistics management of chemicals
- To raise environmental strategic, policy, legislative and implementation matters for discussion, and for the attention of the CAIA Advocacy Committee, for which work groups may be established
- To discuss, through the CAIA Advocacy work groups, draft and/or finalised voluntary and/or legislated standards from a technical perspective, if necessary



Chairperson

MICHAEL JORDAAN

Sasol South Africa Ltd



Vice Chairperson

RIETTE LINDEQUE

Manline Energy (Pty) Ltd

Summary of Accomplishments and Current Activities:

- A submission by the Road Freight Association was sent to the DEL to have the transportation of fuels declared as an essential service during the COVID-19 pandemic, based on the argument that the existing essential services cannot operate without fuel.
- The Administrative Adjudication of Road Traffic Offences (AARTO) demerit system is officially delayed due to lack of funds to create capacity – the proposed Regulations published in 2019 have not been put forward to the National Economic Development and Labour Council (NEDLAC).
- The renewal of vehicle licensing or driver's licences was extended to 90 days from 1 June 2020. The Automobile Association proposed to Government that the extension be until 1 January 2021.
- The matter of protests over the employment of foreign drivers was taken to court and the court's decision was in favour of preventing the protests.
- A representative from Rapid Spill Response cc delivered a presentation on the *Road Incident Management System (RIMS)*.
- Sharing information on:
 - The N3 Toll Concession (N3TC) reports on incident statistics
 - Cross-border issues
 - Chemical handling and distribution related legislation
 - South African National Standards (SANS), especially those related to dangerous goods
 - Developments on the regulations pertaining to high cube containers
 - Chemical handling and distribution incidents
 - KPIs
 - Route risk assessments
 - Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
 - SQAS-AFRICA auditor activities and developments with the SQAS-AFRICA Management System.
- Members of the forum shared best practices from presentations on:
 - *Transport Route Risk Assessments*
 - *Safety Culture Maturity Assessments*
 - *Introduction to Sasol's Operation Clean Sweep*
- The Spill Response module was adopted and incorporated into the new SQAS-AFRICA questionnaire

Safety Health and Environment Forum

Main Objectives:

- To promote the sharing of information and best practices
- To support CAIA's advocacy initiatives in relation to SHE policies, legislation, and industry best practice (and other requirements)
- To ensure that members participate in discussions on SHE topics in a theme-based format; including, but not limited to:
 - Environment
 - Occupational health
 - Occupational hygiene
 - Occupational safety
 - Awareness & promotional programmes



Chairperson

**RAMESH
DHOORGAPERSADH**

BME, a Division of Omnia Group (Pty) Ltd



Vice Chairperson

SEAN DOEL

WSP Environment (Pty) Ltd

Summary of Accomplishments and Current Activities:

- Dealing with COVID-19-related waste
- COVID-19 Personal Protective Equipment (PPE) guidelines
- Implementing COVID-19 DEL requirements
- Presentation on *SHE Due Diligence in the Industrial Sector – Sharing of learnings and practice*
- Presentation on *Ergonomics Regulations – Sharing of learnings and practice*
- Presentation on *Explosion at the Midland Resource Recovery (MRR) Facility – Sharing of learnings and practice*
- Presentation on *Land contamination and land remediation – sharing of learnings and practice*
- Sharing best practice in:
 - SHE-related incidents
 - SHE-related legislation
 - Incident investigation

Responsible Care® Management System Auditors' Meeting

Main Objectives:

- To continually improve the RCMS by:
 - Reviewing relevant documentation
 - Discussing emerging information and processes that affect the RCMS
 - Ensuring auditors are up to date regarding RCMS knowledge



Chairperson

AMON NYAMHINGURA

CAIA

Summary of Accomplishments and Current Activities:

- Reviewed CMP, AGD and other RCMS documents
- Assisted with audit guidance during the COVID-19 pandemic

The SQAS-AFRICA Auditors' Meeting

Main Objectives:

- To continually improve the SQAS-AFRICA Management System by:
 - reviewing relevant documentation;
 - discussing emerging information and processes that affect the RCMS; and
 - ensuring auditors are up to date regarding RCMS knowledge.



Chairperson

AMON NYAMHINGURA

CAIA

Summary of Accomplishments and Current Activities:

- Reviewed SQAS-AFRICA questionnaires and other SQAS-AFRICA Management System documents
- Assisted with audit guidance during the COVID-19 pandemic

Advocacy Committee

Main Objectives:

- To provide a co-operative environment where views can be shared and strategies developed, to i) enhance the chemical and allied industries' advocacy initiatives when responding to the development and amendment of legislation and/or policies by Government; and ii) identify members' implementation challenges
- To obtain constructive input to encourage the effective strategic review of policy and legislation so that there is an emphasis on the impact of legislation and policy, mitigate the pressures caused by increased regulation such as on the cost of doing business, and facilitate continual improvement by Responsible Care® signatories
- To consider any policies and legislation at any Sphere of Government, and/or Organ of State



Chairperson

GLEN MALHERBE

CAIA



Vice Chairperson

MLU GANTO

CAIA

Summary of Accomplishments and Current Activities:

- Two types of meetings are held: weekly meetings to keep members abreast of developments in the advocacy areas, and strategic quarterly meetings to identify and review relevant matters proactively.
- Quarterly meetings provide an update on CAIA's advocacy initiatives, as well as policy and legislative developments since the previous quarterly meeting. The CAIA Advocacy Update is generally provided before the meeting for review and consideration.
- CAIA responds to members' questions and allows members to raise matters impacting their businesses and/or operations.
- Weekly meetings allow the prioritisation of emerging matters in response to the weekly Advocacy Alert and Trade Bulletin, and other communiques CAIA may distribute on an ad-hoc basis.
- Information is received from CAIA, and CAIA receives critical operational-level information to advocate the views of members.
- Several work groups of the Advocacy Committee have been established to deal with specific matters, to which all CAIA members are invited to participate.

Chemical Inventories Work Group



Chairperson

GLEN MALHERBE

CAIA

Main Objectives:

- To review draft and final chemical inventories that are developed by Government, especially those of the DEFF, from a chemicals management perspective
- To identify policy and legislative risks, as well as where information needs to be updated to accurately reflect the domestic situation
- To submit supplementary information to be included in inventories
- To ensure that there is engagement with Government on the development of chemical inventories for rational, risk-based, informed decision-making

Summary of Accomplishments and Current Activities:

- The following outcomes have been achieved, following engagements on the inventories listed below:
 - Minamata Convention on Mercury – Inventory and draft National Implementation Plan/National Action Plan: a second submission was provided to the DEFF.
 - Hazardous Industrial Domestic Chemicals and Emerging Contaminants: CAIA's inputs are being considered by the work group for a further submission to be made.
 - Lead and Cadmium Work Group members are considering the potential impact of legislation being implemented to regulate these substances.
 - Stockholm Convention on Persistent Organic Pollutants (POPs): CAIA updated members on the current legislative framework to regulate and ban POPs. Additional input received will be engaged on with the DEFF.
 - Highly Hazardous Pesticides: CAIA's inputs are being considered by the work group for a further submission to be made.
 - Endocrine Disrupting Chemicals (EDCs): CAIA is preparing a submission in response to DEFF's EDC report.
 - Polychlorinated Naphthalenes, Short-Chain Chlorinated Paraffins and Polychlorinated Biphenyls: The DEFF is to consult further on the development of the draft Inventory.
- A general concern of work group members was identified to be the poor quality of direct engagements with the private sector (and lack thereof in some cases), as well as the quality and content of the inventories themselves.

Globally Harmonised System of Classification and Labelling of Chemicals Extended Work Group



Chairperson

GLEN MALHERBE

CAIA

Main Objectives:

- To drive the implementation of the GHS in South Africa, given the challenges identified with progress by the South African Bureau of Standards (SABS) and Government in this regard
- To realise increased product stewardship standards that will improve SHE outcomes, as well as align to the requirements of export partners
- To develop a proposal on the implementation of the GHS in South Africa, for the SABS, DEL and other Government entities' consideration

Summary of Accomplishments and Current Activities:

- CAIA extended its work group by including non-CAIA members to facilitate consensus on key principles of the system's alignment across Government and industry.
- Following extensive consultations, CAIA as facilitator of the Extended Work Group (EWG), submitted the finalised proposal that deals with key issues of implementation, including the need for alignment with the European Union (EU) approach to implementation.

Climate Change Work Group



Chairperson

GLEN MALHERBE

CAIA

Main Objectives:

- To provide a dedicated platform for CAIA members to contribute to policy and legislation development in the climate change space
- To obtain members' critical insights regarding the challenges that exist to mitigate direct and indirect GHG emissions
- To identify opportunities in the green economy to realise increased sustainability
- To provide opportunity for members to engage with policy makers and researchers in the quest to find rational mechanisms to reduce GHG emissions
- To discuss and formulate industry positions on climate change-related matters for engagement with Government
- To discuss the wide variety of policy in the climate change space
- To enhance capacity within member companies to internalise the strategic importance of climate change, to proactively prepare for the potential varied impacts of climate change and related policy and legislation, on the company and its operations

Summary of Accomplishments and Current Activities:

- Meetings take place weekly, due to the pace of developments in the policy and legislative area.
- The following topics have been discussed during the first eight meetings of the work group: Just Transition, Carbon Tax, Climate Change Bill, Integrated Mitigation System, CAIA approach to Carbon Budgets and Mitigation Plan Regulations, climate change mitigation and adaptation, SANS for GHG emissions reporting and related administration, Emissions Reporting Regulations and amendments, National GHG Emissions Inventories, the importance of coal to the petrochemical sector, carbon offsetting, and the importance of gas.
- Members' inputs, concerns, challenges, and opportunities are taken forward in various platforms, such as the BUSA Just Transition Work Group, the National Business Initiative Pathways Project, the DEFF, as well as at NEDLAC where the Climate Change Bill continues to be negotiated.

Rationalisation of Environmental Legislation Work Group

Main Objectives:

- To proactively, and strategically, contribute to the DEFF project to rationalise environmental legislation that will result in the development of the fifth National Environmental Management Laws Amendment Bill
- To identify priority areas for members in the environmental legislation space, to ease the cost of doing business, and to rationalise environmental compliance requirements
- To review the National Environmental Management Act and its specific environmental management acts, as well as subordinate and environment-related legislation
- To develop a position for consideration by, and engagement with, Government



Chairperson

GLEN MALHERBE

CAIA

Summary of Accomplishments and Current Activities:

- Members developed a high-level position paper on principled areas where environmental legislation requires amendment, as well as a comprehensive, detailed submission for the DEFF's consideration
- CAIA also advocated for the DEFF's rationalisation project to be publicised, and for a proactive consultation process to be prepared and submission of comments.

Chemicals in Products Work Group

Main Objectives:

- To ultimately develop a position on Chemicals in Products (CiP) for the domestic chemical and allied industries, given that CAIA is a member of the ICCA that along with several multinational companies, appear to be open to increasing disclosure regarding the constituents of products
- To engage with other industrial stakeholders, national Government, international chemical bodies and at strategic platforms (such as the International Conference on Chemicals Management that incorporates negotiations on the SAICM) that have identified CiP as an emerging policy matter



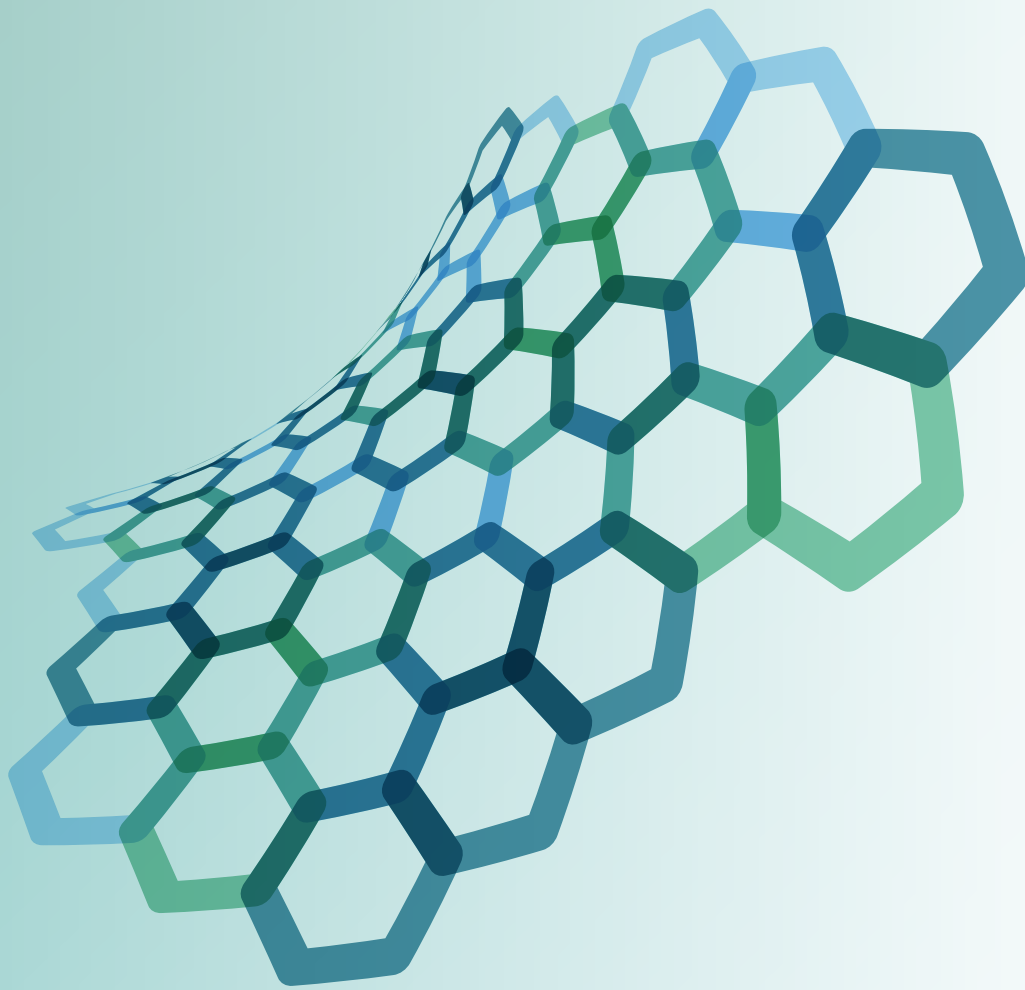
Chairperson

GLEN MALHERBE

CAIA

Summary of Accomplishments and Current Activities:

- Introductory meetings have been held to obtain an indication of companies' positions on the matter
- Views have been obtained on Confidential Business Information and how the principle of CiP may be closely linked to the GHS and product stewardship objectives
- Issues have been identified that will be raised with external industry stakeholders, for a collaborative approach to the development of policy and industry positioning.



Workshops

CAIA supports education and workshops, to facilitate capacity building within organisations that are participating in, and those that have recently committed to, the Responsible Care® Initiative. Non-CAIA members are often permitted to participate at CAIA events, albeit at a higher cost than members. This member benefit encourages non-members to commit to the Responsible Care® Initiative.

Transportation of Dangerous Goods Seminar

The Responsible Care® Transportation of Dangerous Goods Seminar took place on 15 October 2019 in Johannesburg. The focus of the event was on the transportation of dangerous goods as well as trade in Africa. CAIA's objective was to bring together experts to present on a wide range of topics to foster learning and provoke conversations that matter, in the area of dangerous goods handling, storage, and transportation.

The transportation of Dangerous Goods Seminar is a one-day annual event and one of a few available in South Africa, where participants can meet with regulators of the transportation sector. The presenters are selected with the objective of ensuring that the seminar reaches as wide an audience as possible. Topics discussed at the event are listed in the following diagram.



Safe Transportation of Dangerous Goods in South Africa

Subtopics

- Legislative and Policy Frameworks
- Municipal Fire Services Bylaws
- Importance of Partnerships
- Role of Provincial Disaster Management Centres

Presenter

Moses Khangale
Lloyd Phetlhu

Organisation

National Disaster Management Centre

African Continental Free Trade Agreement (AfCFTA)

Subtopics

- Global Trade Shifts
- Growth of Regional Trade Agreements
- African Development Challenges
- Fragmentation – A Challenge for Business
- Regional Economic Communities
- Intra-African Trade
- African Continental Free Trade Agreement
- Mitigation of Risks

Presenter

Catherine Grant Makokera

Organisation

Tutwa Consulting

Transportation of Dangerous Goods Compliance

Subtopics

- Strategic Plan of the Department of Transport 2015 – 2020
- Roads Policy
- Road Transportation
- Directorate Compliance
- Structure and Legislative Mandate
- Dangerous Goods Inspectorate
- Powers and Duties
- Traffic Officers
- Operator, Driver, Vehicle Compliance
- Road-side Inspections

Presenter

Laetitia Botma

Organisation

Department of Transport (DoT)

New Customs Legislation

Subtopics

- Customs/South African Revenue Service (SARS) New Mandate
- Customs Role in the International Supply Chain
- Customs Role in Respect of Dangerous Goods
- Current Customs Process
- The New Customs Acts – Background
- Impact of New Legislation on Customs Stakeholders
- New Customs Act Programme (NCAP) Introduction – Key Shifts
- New Customs Legislation Update
- Customs Project Road Map
- Registration, Legislation and Accreditation (RLA) Background
- RLA Benefits
- Customs Declaration Processing
- Reporting of Conveyances and Goods
- Customs Turnaround Strategy

Presenter

Patricia Jones

Organisation

SARS



Transportation of Dangerous Goods National Road Traffic Act 93 of 1996 and its Regulations

Subtopics

- Definitions
- Dangerous Goods Inspectorate
- Appointment by the Minister
- Powers and Duties
- Traffic Officers
- Presumptions
- Powers of the Member of the Executive Council (MEC)
- Operator, Driver, Vehicle Fitness
- New Set of Regulation Amendments

Presenter

Laetitia Botma

Organisation

DoT

Section 30 and 30A of the National Environmental Management Act, 1998 (Act 107 of 1998)

Subtopics

- Control of Incidents
- Emergency Situations

Presenter

Phila Dlamini

Organisation

DEFF

Operator Compliance Accreditation Tool

Subtopics

- The Mandate of the Cross-Border Road Transport Agency (C-BRTA)
- SADC Context
- Challenges in Cross-Border Environment
- Introducing Operator Compliance Accreditation Scheme (OCAS)
- Objectives of OCAS
- Major Components of OCAS
- How OCAS is Going to Work
- Envisaged Benefits
- Policy Alignment
- Link to Other Initiatives
- Progress to Date

Presenter

Etiyel Chibira

Organisation

C-BRTA

South African Ports: Overview, Strategy on Efficiency and Products

Subtopics

- Transnet Overview
- The South African Ports and Commodities Handled
- Functions and Services of Transnet National Ports Authority (TNPA)
- Port Performance Model
- Port Value Chain Model
- Benefits to All Port Players

Presenter

Nandi Oliphant

Organisation

TNPA

The workshop was a success with constructive dialogue among participants. Fifty-one delegates attended the event.

Roundtable on Security Initiatives for African Chemical Associations

The Roundtable on Security Initiatives for African Chemical Associations took place in Naivasha, Kenya. The two-day event (2 – 3 December 2019) included representatives from Kenya, Nigeria, and Ghana. The delegations from all three countries consisted of representatives from industry, academia, and related organisations. Associations from Tanzania and Somalia were invited but were unable to attend the event.

The Civilian Research and Development Foundation (CRDF) Global organised the event. CRDF Global is an independent non-profit organisation founded in 1995 in response to threats of large-scale proliferation of weapons technology. The organisation is now a leading provider of flexible logistical support, programme design and management, and strategic capacity building programmes in the areas of: higher education, Chemical,

Biological, Radiological, Nuclear, and high yield Explosives (CBRNE) security and non-proliferation, border security, cybersecurity, global health, technology entrepreneurship, and international professional exchanges. Most of its chemical security work is funded by the United States of America's State Department's Chemical Security Programme but the funding for this workshop was provided by the United Kingdom Foreign and Commonwealth Office that has an interest in improving chemical safety and security in Africa.

The ICCA was represented by Daniel Roczniak from the American Chemistry Council, Deidré Penfold and Amon Nyamhingura of CAIA, Tahir Qadir from the Pakistan Chemical Manufacturers Association and Claire Andeso of Dow. Although the event was on chemical security, dialogue on the implementation of Responsible Care® took centre stage. Representatives from each African country present at the event had an opportunity to provide a report on the status of chemicals management in their country. On the second day of the event, participants broke into groups to discuss strategies for enhancing (in the case of Kenya) or developing (Ghana and Nigeria) Responsible Care® programmes. Participants from

Nigeria and Ghana showed great interest in implementing Responsible Care® in their countries. The Kenya Association of Manufacturers (KAM), in collaboration with Dow, Tata Chemicals, and the Kenya Chemical Society, were willing to take further steps towards implementing the Responsible Care® Initiative in Kenya.

During the group discussions on the second day of the event, Deidré Penfold, Claire Andeso, and Amon Nyamhingura worked with the Kenyan delegation to further develop a plan to expand participation and reach out to key companies within the KAM membership. Tahir Qadir worked with the Nigerian delegation on their plans to initiate Responsible Care® and outreach programmes to key constituents in industry and civil society, and identify a potential host organisation for Responsible Care®. Dan Roczniak worked with the Ghanaian delegation to outline a way forward with the implementation of Responsible Care®. The Association of Ghana Industries which has a chemical sector group, seems to be well resourced and has a secretariat staff of more than 40 in Accra and its regional offices. Overall, the workshop was a success. The countries that were present are now likely to make significant strides towards fully implementing Responsible Care®.



Audits

One key to making Responsible Care® effective is transparency. Every three years, a third-party CAIA-certified auditor/audit team audits each CAIA member's facility/site to ensure that the Responsible Care® ethic and management systems are in place. Audit reports are sent to CAIA for processing and certification.

During the period from 1 October 2019 to 30 September 2020, the following number of audits took place. The list of approved SQAS-AFRICA companies and RCMS third party-verified signatories can be viewed on the CAIA website.

TYPE OF THIRD-PARTY AUDIT	NUMBER OF AUDITS COMPLETED
SQAS-AFRICA – User Group Companies	126
SQAS-AFRICA – Responsible Care® Signatories	31
RCMS – Responsible Care® Signatories	10

All RCMS audited companies are presented with a certificate as proof that they have committed to participate in Responsible Care® and are implementing the elements. SQAS-AFRICA audited companies are awarded certificates upon successful completion of the audit. These certificates are also proof that the companies are compliant and can be shared with relevant stakeholders. Regular audits help ensure that standards are met for excellence in SHE and security performance.

Audits are a catalyst for
CONTINUED IMPROVEMENT

Signing Ceremonies

In August 2020, the following companies reaffirmed their support for the Responsible Care® Initiative by virtually re-signing the Responsible Care® Declaration. Signatories are required to re-sign the commitment to Responsible Care® every three years.

The traditional in-person signing ceremonies were discontinued in 2020 due to the COVID-19 lockdown restrictions. It has since been decided by management that conducting virtual ceremonies will continue, even when normal operations resume. CAIA is leveraging on available virtual meeting tools such as Microsoft Teams and Zoom, to make the ceremonies as seamless and effortless as they would be in person.

AVCRES TRANSPORT CC

19 August 2020



ORION ENGINEERED CARBONS (PTY) LTD

13 August 2020



PELCHEM SOC LIMITED

17 August 2020



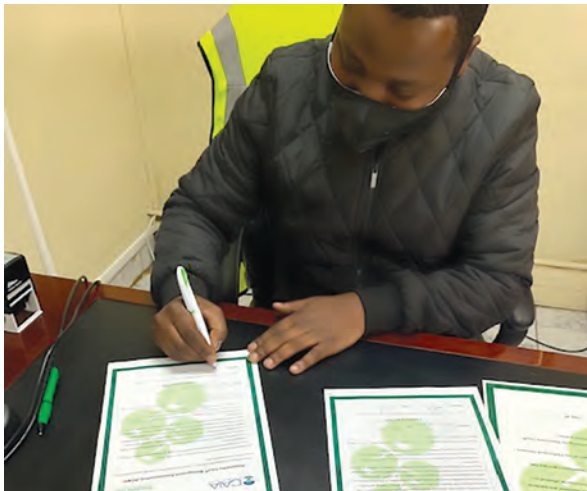
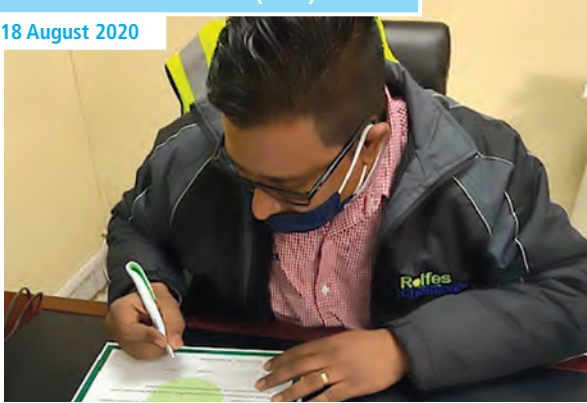
METSEP SA (PTY) LTD

11 August 2020



ROLFES CHEMICALS (PTY) LTD

18 August 2020



TANKER SERVICES FOOD AND CHEMICALS, A DIVISION OF IMPERIAL LOGISTICS ADVANCE (PTY) LTD

18 August 2020



WESTMEAD LOCAL AND CROSSBORDER (PTY) LTD

12 August 2020



WARDENS CARTAGE CC

11 August 2020



Focus on Members – Projects



In 2017 the AECI Chief Executive had a vision for a standardised approach to Safety, Health, Environment and Quality (SHEQ) management across the AECI Group. Although the AECI Group was already achieving good results across this spectrum, there was a need to standardise a single strategy that would drive best practices towards world-class performance.

The initiative, called Zero Harm, was launched in May 2017 after the appointment of the AECI Group's new SHE Manager, Neil Franklin. He facilitated the development of a single vision and strategy with a team of specialists. The team aligned on a single set of milestones and 12 strategic focus areas, for implementation over five years. A new vision was agreed: "We aspire to operate, sustainably, without harm to people, the environment and the communities in which we operate". The strategy takes direction from the AECI's Group's commitment to Responsible Care® and a single SHEQ policy. Each of the 12 strategic focus areas is managed by an internal syndicate team. In 2017 and 2018, focus was placed on Leadership Alignment and Employee Engagement. In 2018 the strategy was endorsed by the AECI Group leadership at all levels, including the AECI Executive Committee, the Social and Ethics Committee and the full Board.

The team developed a single approach (manual) for SHEQ, made available as a handbook and e-book to any person

via www.aeciworld.com. The material has been translated into multiple languages for internal use.

The strategy is anchored in four fundamentals, namely, Accountable Leaders, Engaged Employees, A Risk-Based Approach, and Continuous Improvement. An element which makes the AECI approach somewhat different from others is the inclusion of descriptors for world-class practices, for all elements of SHEQ and a maturity self. This enables leaders to concentrate on what needs to be worked on.

When setting milestones, focus was placed on eliminating eight specific types of high severity incidents including, among others, fatalities, life altering injuries, major and serious process safety incidents, and environmental incidents. In 2018, eight such incidents occurred. The number reduced to four in 2019 and as at mid-October 2020, none had been recorded in the current year. Although the AECI Group's leadership has been instrumental through its commitment, all employees have participated in some way and the engagement levels have been high.

To execute, manage and evaluate the effectiveness of the strategy required the establishment of a Group SHEQ Committee, comprising representatives from all AECI Group businesses. Strategy review meetings are held annually to evaluate progress in relation to goals and also to recognise excellence.

The Zero Harm strategy is designed to deliver long-term sustainable results for AECI Group through the implementation of best practices and embedding a culture far "beyond compliance". While results in recent years show this is possible, a key part of the strategy is to create a belief system that zero is achievable in an inherently hazardous industry.

The days of "accepting" that chemical companies will operate with some degree of harm must come to an end. Stakeholders, including investors, potential employees, customers, members of the public and others are keenly observing the SHEQ performance, practices, and future aspirations of organisations.

AECI will soon publish its Sustainable Development Strategy Framework. Zero Harm will be included in this strategy, further enhancing the commitment to Responsible Care®. In addition, it will include much stronger public commitment to growth and innovation in relation to relevant UN SDGs and deliver on AECI Group's revised purpose of being One AECI, for a better world.





AECI Mining Chemicals, a division of AECI Mining Ltd herein referred to as AECI Mining Chemicals, subscribes to the safety values of Zero Harm. AECI Mining Chemicals recognises that handling granular Maleic Anhydride (MA) is a risk factor and has the potential of negatively impacting the health of their operational staff. The activity that the plant operator must undergo to add granular MA into the process, triggers a few ergonomic risk factors. The plant operator is forced to crush the MA in the bags using a mallet and each 25 kg bag must then be lifted and added to the MA melting pot. When ergonomic risk factors are not mitigated or removed, research indicates that those exposed to the risk often begin developing Musculoskeletal Disorder (MSD). Furthermore, MA is hazardous due to it being corrosive and having numerous negative effects when in contact with the human body. In a culture of Zero Harm, a safer solution to this challenge needed to be investigated.

The company analysed the inherently safe design principles and determined that attenuation would be the most suitable approach to reduce the risk of handling MA. From literature, AECI Mining Chemicals has determined that MA can also be stored in liquid as opposed to granular form, without any detrimental effects towards the chemical properties of the substance. AECI Mining Chemicals then investigated a potential bulk storage facility for MA, which could

be incorporated into the current manufacturing plant footprint and eliminate the potential risks. The next phase was following the criteria of the process hazard analysis steps from 1 to 3, which included: hazard study 1, understanding the legal and process requirements; hazard study 2, identifying the hazards of the proposed design; and hazard study 3, conducting a hazard and operability analysis.

Approval from senior management was given to commence the project. The approved final design was the installation of a 20m³ fixed storage tank for the liquid MA. Process piping and pump selection was done based on the properties of MA and collaboration with subject matter experts to ensure a fit-for-purpose design. The primary objective of the design was to control and minimise the chemical exposure through maintaining the hazard within a closed system. The construction process was completed under the conditions of an Environmental Impact Assessment (EIA), and the unit was commissioned in April 2019. Process hazard analysis steps 4 – 6 were then

conducted, which included hazard study 4 and 5 – the pre-commissioning and pre-start up safety review, and hazard study 6 – early operational checks, to ensure the facility is run within normal operating conditions while the value and benefits are being realised.

The improvements that can be attributed to the initiative include:

- Minimisation of operator exposure to MA – previous 90 minutes daily exposure to granular MA is reduced to 10 minutes once in two weeks when offloading liquid MA from road tanker into the bulk storage facility.
- Improved processing time – three-hour reduction by eliminating the processing of granular MA (includes: handling, transporting, hoisting bags, crushing, and melting of granular MA).
- Consistent quality of overall intermediate product due to the transition from granular MA to liquid MA. There has been a quantified improvement in key specifications of the intermediate product.





Improchem (Pty) Ltd T/A AECl Water (AECl Water) identified a need for sustainable water and food security solutions in the Hammanskraal area, north of Pretoria. The supply of safe drinking water is key to improving personal hygiene as well as food security. Hammanskraal has been plagued by various water quality issues for a long time.

AECl Water identified several schools, a clinic, and the broader community in Hammanskraal during this initiative. The initiative included boreholes, water treatment plants as well as agricultural products and skills training to enable people to improve their water and food security. The supply of safe drinking water was key to this initiative.

Two schools in the Hammanskraal area were identified. In collaboration with AECl Ltd, Wildlife and Environment Society of South Africa (WESSA) and Gift of the Givers, boreholes were drilled and AECl Water installed containerised water treatment plants.

A water treatment plant at Phalesane Primary School was designed to handle both the supply of borehole water, as well as the supply of municipal water. Iron in the water is reduced and suspended solids and oxidised iron are removed. The fluoride concentration is reduced to less than 1.5 ppm with partial treatment through a RO unit. A partial bypass stream ensures most of the ions are retained in the product water whilst meeting SANS 241. Finally, the water is disinfected using sodium hypochlorite. Disinfection kills all harmful bacteria and viruses, making the water safe for drinking.

A second filtration plant at Kekana Primary School was designed to treat borehole water. The plant is based on

a feed flow rate of 1.3 to 2.4 m³/h. The following contaminants are treated:

- **Total organic carbon** – treated by adsorption onto granular activated carbon media.
- **Fluoride** – concentration is reduced by passing the filtered water through a column that selectively removes fluorides from the feed water.
- **Harmful microorganisms** – water is disinfected using sodium hypochlorite.

The initiative has improved the communities' water and food security. The plant at Phalesane Primary School supplies the school with 40 000 litres of safe drinking water every day. This allows for improvement in general hygiene of the students, prevention of illnesses due to water borne contaminants/impurities as well as addressing the basic need of access to clean drinking water. The water used in the vegetable gardens also improves the access to good wholesome food.

The second initiative also allows for the supply of drinking water to the wider community in collaboration with two service providers of the City of Tshwane, who distribute water from a filling station. Daily, 20 000 litres of safe drinking water are distributed throughout the community.

The initial investment of around R3 000 000 was made in November 2019 to provide safe drinking water to the schools and clinics in the area.

During the lockdown period, AECl Water included the construction of a new tanker loading facility as well as electricity by means of a three-phase generator on site. Additional piping, pumps and water testing equipment was allocated to the project to ensure safe drinking water delivery to tankers and tanker discharge point. Approximately R300 000 was invested during the pandemic to benefit an additional 800 households (5 000 people) directly.

In addition, AECl Water provided an extensive team that was involved in the technical investigation, plant design, as well as assembly and commissioning of the water treatment plants. AECl Water also appointed an operator on site, which led to local community job security and safety of the plants.

The City of Tshwane was represented by Administrator Mpho Nawa. The intervention in Hammanskraal forms part of AECl Water's broader response to water security. The company is currently working with the Gauteng DBE and has installed several filtration skids to various water scarce areas. The initiative was recently introduced to the Provincial Education MEC Mr Panyaza Lesufi. Another similar initiative took place in Limpopo. AECl Water has refocused its business and offerings to uplift the lives and standards of local communities and the economy. Total man-hours for the project during the COVID-19 lockdown period tallied to over 1 500. Over 17 500 km were covered, transporting staff and equipment during the crisis. No incidents were reported.



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YEAR AWARD**

**HAMMANSKRAAL
WATER
PROJECT**

good chemistry





The Pentaerythritol (PETN) plant was licensed to discharge 22 000 L of effluent daily into the storm water system. In line with the AECI Group's SDGs to reduce effluent generated year on year by 10%, the PE-18 Effluent Plant was commissioned to treat effluent generated by the PETN Plant.

The plant is equipped with 12 filters that are aimed at removing all PETN from the effluent. Thereafter, the turbidity probes within the plant ensure that any remaining solids are trapped. As a safety measure, if the filters get blocked, the plant will automatically stop. Once all particles are removed, the effluent is then recycled back into a storage tank for use in the plant as floor cleaning water. Previously, the company would have used Rand Water/municipal water.

This project results in reducing water usage and the impact to the environment. A total of R1 496 364 was spent on PE-18 Effluent Plant.



Cooling towers at the No. 9 and No. 11 nitric acid plants are the biggest consumers of water from Rand Water at the Modderfontein site. The Rand Water tariff is approximately R48 per cubic metre of water. The site also has an existing piping network of Purified Sewage Effluent (PSE), costing R5 per cubic metre.

This infrastructure is being upgraded at a cost of R1.2 million, to enable PSE to feed into the two cooling towers, allowing replacement of 40% water from Rand Water with PSE of approximately 14 000 cubic metres per month when both plants are online. This will result in water cost savings of R6 million per annum. Commissioning is expected to take place at the end of 2020.

Water from Rand Water will be replaced by a combination of PSE permeate from the water treatment plant and increased ratios of raw PSE (up to 70% of No. 9 and No. 11 cooling tower make-up). Both permeate and PSE have a lower cost base than water from Rand Water and thus will drive up the savings on water costs.



Backwash water from the No. 11 nitric acid cooling tower was discharged at the sewers, which increased discharge costs. A new effluent recycling plant was installed, including a buffer tank, recycle pump, and control system. The system cost R500 000 in total and recycles approximately 90 cubic metres per day of effluent for treatment and reuse, with a 70% recovery rate. Both raw water usage and effluent discharge are reduced, resulting in savings.

A new water treatment plant is under construction at the Nitrates section of the site. The target is to replace 100% of water from Rand Water as make-up at the No. 9 and No. 11 nitric acid plants. Although the water treatment plant generates waste from its treatment operation, the net effect will be a decrease in effluent to the sewers and therefore a reduction in discharge costs.





In February 2018, Base Chemicals, a division of Sasol South Africa Limited (Sasol), inaugurated its R13.6 billion Fischer-Tropsch Wax Expansion Project (FTWEP) at the Sasolburg Operations site. With the completion of the FTWEP project, Sasol is one of the leading producers of medium and hard waxes globally. Given the inadequacy of the primary warehouse in Sasolburg, a short- to medium-term solution was put in place to outsource storage and warehouse operations for new production and distribution into the market. As the project ramped up volumes, the short-term logistics solution proved to be inefficient and led to an increase in costs throughout the logistics network. Therefore, to manage the distribution of the expanded wax production to Sasol's international customer base, the organisation required a long-term, cost-effective, and technologically advanced warehousing solution closely located to the Sasolburg site. The Sasol team explored various options and concluded that the most viable long-term solution for Sasol was to outsource the ownership of the facility and enter into a long-term lease agreement for the warehouse with a third-party logistics service provider.

Sasol partnered with Izandla Property Fund to provide a turnkey property solution, through a 17 020 m² technologically advanced centralised warehousing facility, located at the Sasol ChemCity Eco-Industrial Park in Sasolburg, Free State. This allowed Sasol to seamlessly store and dispatch product locally, as well as pack containers to meet global export customer commitments. Eighty percent of the total project spend was channelled to 51% black-owned

service providers, including the main building contractor, the professional team and local small to medium-sized enterprises (SMEs). Construction began in July 2018 and was completed within budget and ahead of schedule by April 2019, with zero safety incidents. Thereafter, systems integration began with Goldfields as the operator. On 16 May 2019, Izandla Property Fund and Sasol officially opened the new logistics warehouse and offices for the Wax Division of Sasol Chemicals at a ribbon-cutting event. The new wax facility can accommodate 45 696 pallet positions and the turret truck lift height is up to 17 metres.

IMPROVING THE CUSTOMER EXPERIENCE

As Sasol increases its international footprint, this facility will be a key contributor to the organisation's digitalisation strategy which will significantly improve how customers engage and interact with Sasol. With the organisation operating from this modern warehousing environment, it can eliminate two pain points that customers shared with Sasol, including the provision of improved visibility of orders and a more reliable delivery process.

REDUCING SAFETY RISKS – AIMING FOR ZERO HARM

The new facility is rail enabled and will greatly assist in reducing road transportation safety risks as the organisation moves towards transporting more products via rail. Sasol has transitioned from moving 25% of wax by rail in the 2019 financial year, to more than 85% in the 2020 financial year. This will positively contribute to Sasol achieving its safety goal of Zero Harm in the efficient movement and transportation of products from production to customer premises. This includes improved safety as the organisation is greatly reducing the touch points when handling and moving product from production to customer premises (from 8 to 4 touch points).

Financial investment on Sasol's part take the form of a 15-year lease agreement which will represent a fair return for the investment on the part of the landlord. Through the shift from road to rail, savings exceeding R30 million per annum are achieved in logistics costs, compared with the short-term solution. Future savings are envisaged in the form of optimising storage requirements at the port. This project was made possible through collaboration of a multidisciplinary, cross-functional team. This included Sasol expertise in supply chain management, commerce, plant operations, digitalisation, and marketing and sales management, along with the wealth of expertise brought through the partnership with Izandla Property Fund. From the placing of a Request for Quotation, the project took an efficient 14 months until facility hand over.





BASF Agricultural Specialities (Pty) Ltd (BASF) identified a need to reduce site water consumption, effluent volumes generated and associated costs to dispose of hazardous effluent (process water). The site is remote and must rely on abstraction and purification of borehole water for consumption and production requirements. It does not have municipal sewage or effluent disposal, and this is all placed in tanks off site by a third-party vendor, which is costly. A volume reduction in hazardous effluent would lead to a cost reduction for safe treatment and disposal.

A Lean Six Sigma Project was initiated to address the problem and the following solutions were proposed and implemented:

1 Sterilisation, washing of equipment, cleaning and disinfection of process areas

Due to the nature of the production process and the need to have a sterile environment, hazardous solutions are used for cleaning and sterilisation. The residue of these solutions safely ends up in the effluent collection tank but adversely affects hazardous liquid volumes. By reducing the volumes used for sterilisation, the overall loading in the tank has been reduced as well as cost of disposal.

2 Autoclave water recycling

A dedicated collection system has been installed to collect and recycle process condensate from autoclaves. This resulted in both a decrease in site water usage (as the water is recycled many times) and a decrease in hazardous effluent volumes, resulting in a cost saving. The system is connected to the Distributed Control System (DCS) digital monitoring system and levels in the Intermediate Bulk Containers (IBCs) are monitored and automatically managed by the DCS.

3 Wastewater Treatment Plant

Modifications to the plant will allow for the on-site treatment of hazardous effluent for safe disposal. This will reduce hazardous liquid disposal and off-site treatment, as it will result in a bio-sludge that can be disposed of as hazardous waste. It is envisaged that the recovered clean water from the wastewater treatment plant will be used for ablution facilities. Due to COVID-19, this project is deferred to the fourth quarter of 2020.

4 Digital water meters and centralised monitoring and control

These will be replaced by digital meters connected to the DCS, providing real time and accurate usage across all process areas. These were also due to be installed in the second quarter of 2020, but due to COVID-19, they will only be installed during the third quarter of 2020.

The following improvements can be attributed to the initiative:

1. Annual saving in water usage of 200 m³
2. Annual cost saving in hazardous waste disposal of R450 000
3. Anticipated additional phase II savings will be R250 000 per annum
4. Positive impact on employee behaviour and awareness of using water
5. The introduction of Lean Six Sigma (Define, Measure, Analyse, Improve, Control – DMAIC) methodology in problem solving within the organisation has had a significant positive impact on problem solving and continuous improvement initiatives.

Financial investment was not significant (R97 000 plus R500 000 in 2021) but significant investment in time and human resources was made for this project. More than 100 hours of combined team and department involvement were invested, and this had significant positive benefits and impact on team efficiency and collaboration.





The objectives of the BME, a Division of Omnia Group (Pty) Ltd (BME)'s initiative was to enable users to rapidly calculate and check blast designs accurately, based on industry-guided framework and standards, as well as to replace the traditional paper booklets carried and referenced by users in the field. In addition, the Blasting Guide App reduces calculation errors and different methods used by various users to arrive at the correct output.

The BME Blasting Guide App is free to download on the Google Play Store and includes a blast design calculator, quick calculators as well as prediction calculators. Additional features include surface blast design rules of thumb, environmental guidelines, and a table of common rock properties. In order to be globally relevant, the

app uses both metric and imperial unit measurements. A BME contact directory per country is also included in the app to enable ease of reference to the correct contact people per territory.

The BME Blasting Guide App's attributes include:

- Verification of blast design outputs and enabling improved blast planning decisions
- Ease of use – enabling the blasting engineer's job to be done effectively, contributing to improved productivity
- A blast design calculator which utilises user inputs including burden, spacing, stemming height, sub-drill, hole diameter, bench height and explosive type to determine explosive loads, powder factors and other outputs. As an example, it could be used to investigate potential blast patterns for a greenfield site, where numerous scenarios can be quickly generated, and calculations checked

- The rule of thumb table summarises surface blast design guidelines and can be referenced by users as they access the blast design calculators.

BME invested a significant amount on the app development and launch including:

- Marketing efforts and time to engage with the relevant media channels. This was necessary to inform audiences and the wider community about the availability of this ground-breaking app.
- Engaging with internal BME subject matter experts who have more than 30 years' experience in this area.
- Collaborating with VIGA Interactive to create the unique user experience (UX) and design, as well as Sympl Technology Solutions for the development work.





The alignment to global safety procedures led Brenntag South Africa (Pty) Ltd (Brenntag) to relook at their hazardous chemical handling, storage, and overall knowledge on how to handle these products in the safest possible way.

The initiative entailed the review and updating of current procedures, training the formally appointed designated hazchem handlers and carrying out new hazchem handling risk assessment. The hazchem handlers are clearly identified through the wearing of red reflector vests.

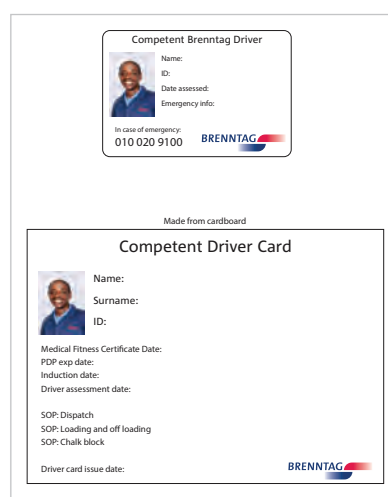
The initiative has led to a fully compliant hazchem storage, handling, and transportation section of the business. Staff have gained knowledge and better understanding. Approximately R50 000 was spent on training, new PPE and building an extended storage cage. Time was dedicated to plan, train employees, build, perform risk assessment and studying relevant legislation to make sure Brenntag was compliant.

The use of only dedicated and trained hazchem handlers ensure staff without the required knowledge do not handle hazardous products and ensure safe storage, handling, and transportation of the same products. This initiative limits the possibility of harm to people and the environment.



The number of drivers getting involved in accidents led to the investigation of drivers' skills and competencies. Brenntag's Driver Competency initiative involved establishing driver competency through intense training, practical driving tests, understanding of relevant procedures and finally a written test. After successful completion of this process, a Brenntag Compliant Driver Card is issued to the driver, valid for 12 months. The drivers have taken pride in gaining the Brenntag Compliant Driver status.

The Driver Competency initiative has contributed immensely towards having safer drivers on the road, as well as at the company's and customer sites. R5 000 was allocated for printing cards and 20 hours per person were allocated for training and testing.



Due to the need for nutritious food, a recycling project on site was initiated, and the money generated was used to buy soil and vegetable seeds. The vegetables were free for all staff to take home as long as they spent 15 minutes per week maintaining the garden.

The initiative encouraged the recycling of waste, and staff now have access to vegetables at no cost. There was no financial investment from the company. The only investment is time by participating employees. The initiative has encouraged team building among staff.





The World Day for Safety and Health at Work held every year led to this initiative. Brenntag realised that only one day cannot target all groups within the organisation and decided to dedicate one week each year to focus on health and safety at the workplace.

Last year, the company dedicated the 10 – 14 June week for this initiative, with each day focusing on a different safety-related activity. The programme below is a summary of the activities that took place.

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Safe driving – DVD staff	Brenntag puzzle to build	Safety charades	Safety slogan	Forklift demonstration
Talk on nutrition – Each driver got a pre-packed nutritious lunch	First aid demonstration	Hazard identification		Fire extinguishing demonstration
Safety quiz	Ergonomics information – Active Pause			Mr. Safety Awareness
				Mrs. Safety Awareness

The following improvements can be attributed to the initiative

- Improvement in hazard identification
- Overall positive improvement in the company’s safety culture
- Better understanding of safety procedures by staff
- High alertness towards safety
- Stress relief for all participants.

Management provided R27 000 to procure the required items. Other investments included employees’ time to prepare and participate for each day’s activities, and time to plan from the Business Development Manager – Food and Nutrition, as well as other senior managers.

Apart from the improvements attributed to this project, the safety week provided a platform for positive team building. The fire and first aid demonstrations gave appointed staff opportunities to showcase their skills and competence.



Brenntag South Africa (Pty) Ltd

Emergency Response Preparedness

BRENTNAG

Dow Southern Africa (Pty) Limited

Clean My City

Dow

This initiative, undertaken at Crest Chemicals (Pty) Limited before acquisition by Brenntag, was led by the need to ensure that the site is prepared for the unforeseen or unplanned emergency situations that may result as part of the operations.

The initiative was to test the organisation's emergency preparedness and response as detailed in the emergency plan. The test involved internal emergency responders, in collaboration with external emergency services – the Fire Department, Metro Police, Ambulance and Drizit Environmental.

The Emergency Response Preparedness drill contributed towards general employee awareness relating to emergency preparedness and response, more especially on the Major Hazard Installation site. It also provided an opportunity for the emergency responders involved to put into practice the training they have received in the different functions as part of Brenntag's emergency planning and preparedness.

In preparation for this initiative the site invested in training of employees on the specific functions, and the procurement and maintenance of emergency response equipment. Approximately 15 hours went into planning, which included coordinating with internal resources and external stakeholders. The organisation also committed time out of daily operations to ensure the successful execution of the drill and feedback session with the different stakeholders. Through this initiative, the organisation ensures that it can minimise the impact of unplanned events to the health and safety of its employees and the public, as well as minimise damage to the environment.

Dow Southern Africa (Pty) Limited (Dow) saw an opportunity to assist in addressing the high levels of unemployment that are prevalent amongst the youth, coupled with underserved KZN communities, through advancing circular economy solutions that drive local economic development and divert waste from landfills using strategic partnerships. Dow's ambition is to become the most innovative, customer-centric, inclusive, and sustainable materials science company in the world. Dow collaborated with WILDTRUST and contributed an initial grant worth \$220 000 in cash for the purpose of:

- Raising awareness on the effectiveness and economic benefits of recycling by supporting existing and start-up recycling companies to continue to operate with the purpose of diverting plastic waste away from the environment
- Stimulating a culture of 'waste-preneurship' in local communities
- Creating formal employment opportunities for the unemployed youth of South Africa

The initiative has made significant strides in meeting key strategic targets of the global UN SDGs that are aligned to Dow's 2025 goals. These include but are not limited to:

- Collection of 881 tonnes of waste over a period of twelve months, which would otherwise have ended up in the environment or landfill – 180 tonnes of this being plastic waste
- Enabling of two end-uses: eco-bricks and waste-derived fuel from plastic, to drive the value of plastic waste
- Triggering of an additional enterprise development programme that builds on the existing foundation of the project
- Supporting a total of 537 waste-preneurs (75.5% female)
- Enabling 145 youth work-placements
- Establishing and/or upgrading eight recycling villages

Owing to the success of the project, WILDTRUST received matched funding from other partners to expand their programmes for greater impact. This project sets the framework for how innovative recycling centres/villages can be used to drive South Africa's transformation, build capacity in communities, drive circularity and establish a replicable model that can be scaled up across the country.





As a Responsible Care® signatory, Dow has an economic-, environmental-, and a social-corporate responsibility to ensure that hazardous waste is managed in a manner that has zero impact on people's health and the environment. For Dow to lead the blueprint in ensuring zero impact, it is imperative that waste is sustainably managed – both from an environmental and business perspective. This is achieved through the integration of public policy solutions to facilitate the transition to a sustainable society and applying business decision processes that truly encompass the meaning of valuing nature. This approach is in alignment with Dow's 2030 sustainability goals which were derived from the UN SDGs.

About 19 tonnes of monomer waste is generated annually from cleaning of lines after vessel discharge into a third-party tank terminal. Typically, hazardous waste is disposed to hazardous waste landfills or via the more sustainable alternative – incineration. However, these tread along similar paths of increased carbon footprint and a deviation through these approaches is a dire need for a reduced carbon footprint for Dow and the environment.

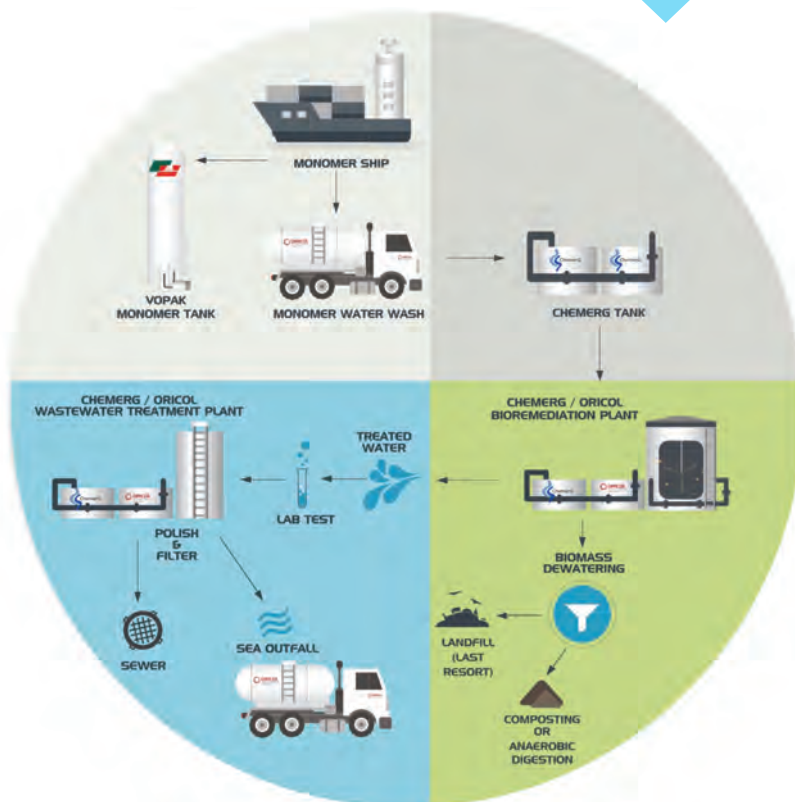
Dow embarked on a journey with ChemerG (a joint venture with Oricol Environmental Services SA (Pty) Ltd, hereafter Oricol, to identify an alternative disposal method for the hazardous waste. Various processes were explored until ChemerG proposed the futuristic concept of a process driven by bioremediation over more conventional technology. The bioremediation technique utilises a culture of microorganisms to breakdown waste monomers

through an energy efficient manner. This natural system is supported through a combination of inputs to sustain the process with minimal environmental impact resulting in an almost complete degradation of waste – minimal to zero solid waste. The wastewater is then treated through a rigorous wastewater treatment plant that includes flocculation. The final treated water is then tested before being blended with treated wastewater streams from other processes in the plant before it is discharged to either sea-outfall or municipal sewer with ChemerG being a proprietor of a valid sea-outfall permit and Oricol of a valid municipal sewer discharge permit.

This cleverly engineered process by ChemerG does not only meet Dow's standards for sustainability, but also ensures business process convenience and simplicity. ChemerG had to undergo demanding testing of the final effluent before being awarded with the above-mentioned permits. To facilitate this process, Dow had invested capital to establish the laboratory testing facilities amounting to about R40 000.

Through this sustainable enterprise, Dow has not only reduced their environmental and carbon footprint through the diversion of 23.26 tonnes of hazardous waste from landfills but also saved R280 000 in waste disposal costs.

Industrial service solutions





Without practical experience, the youth have little chance of securing a job. EnviroServ Waste Management (Pty) Ltd (EnviroServ) realised that education, together with experience, is the key to employment and alleviating poverty. The company took a strategic decision to provide the much-needed practical skills the youth require to secure employment. A Centre for Learning was created to provide learnerships and practical hands-on skills to unemployed youth who reside in the areas surrounding the EnviroServ landfill sites nationally.

A recruitment drive was undertaken in collaboration with Ward Councillors, Ward Committee members, Local Schools, Union Officials, and other community leaders from the respective communities. More than 700 applications were received nationally for the 2018-2019 intake and after a thorough recruitment and selection process, 51 people, including seven differently abled people, between the ages of 18 and 35 years were recruited. The people were selected nationally from Gauteng (Etswatwa, Holfontein, Welgedatch, Joe Slovo), Cape Town (Du noon and Wolwerivier), KwaZulu-Natal (Kwandengezi, Dassenhoek and Shongweni), and Port Elizabeth (Motherwell and Wells Estate). The successful learners were placed on a Business Administration Level 3 Learnership Programme.

The learnership entailed three months of theoretical training and nine months of practical training. Learners were provided with all the stationery requirements and a monthly stipend for travelling expenses. EnviroServ believes in holistic development and thus part of the training included skills in curriculum vitae writing, preparing for an interview, social cohesion, and

digital literacy. Upon completion of their theoretical training, the learners were placed in the different departments within EnviroServ and assigned a coach/mentor. The learners were rotated every four months to give them exposure in the different departments. Due to the limited space at the organisation's regional offices, EnviroServ built strategic partnerships with local schools in the communities. Learners in some instances, were placed at schools and libraries within their communities to obtain their practical experience and reduced the travelling expenses.

The all-inclusive cost per learner was approximately R50 000 which was self-funded by EnviroServ as part of the company's contribution to skills development. This included all the training material, stationery, and bags. The cost excluded the recruitment and selection process that included application, assessments, interviews, and vetting (criminal records, matric certificates, and identification). Learners who were stationed at EnviroServ's offices were provided with PPE and underwent specialist accredited training (basic

fire, handling hazardous substances, etc.) before being placed. The total cost to EnviroServ is 51 x R50 000 = R2 550 000 per year from 2015.

After the 12-month programme, an average of a 96% success rate was achieved on completion of the programme from 2015 to date. When vacancies arise at EnviroServ, these learners are given first preference to apply for the positions. They go through the full recruitment and selection process and the successful learners are appointed. To date, 79 learners have either been permanently employed or offered fixed term contracts by EnviroServ nationally.

This initiative introduced learners to the unwritten rules in the workplace and how to interact with the different generations, races, and cultures to be better prepared for the world of work. They gained the necessary skills, knowledge, practical experience, and qualifications necessary to become employable, giving them the confidence, belief and above all, faith that they, as unemployed youth, have hope for the future.





The National Environmental Management: Air Quality Act, 39 of 2004 (NEM:AQA), requires organisations to take a proactive approach in minimising their impact on the environment and environmental footprint. The Atmospheric Emissions Licence (AEL) calls for the organisations to review and continually decrease their emission sources, to minimise their environmental footprint.

Improchem (Pty) Ltd (Improchem), is a holder of an AEL issued in terms of Section 42 of the NEM:AQA that requires organisations to take reasonable measures to prevent pollution and ecological degradation. Improchem's initiative entailed the replacement of an atmospheric vessel system that incorporated two scrubbers, with a pressure vessel that did not require a scrubbing system, thereby reducing the total number of scrubbers onsite from three to one. The company also reduced the number of bulk storage tanks of hydrochloric acid from two to one, combining the risk and reducing the maximum storage capacity by 47%, from 60 m³ to 32 m³.

Having two separate storage tanks increases the vulnerability and doubles the risk of catastrophic tank and tank auxiliary failure, and emissions from a process safety perspective.

Improvements that can be attributed as a result of the initiative are:

- Eliminating the potential for atmospheric emissions in this specific process
- Reducing the risk from a critical process safety equipment perspective, by combining two bulk storage tanks into one manageable risk

- Eliminating the need by the company to report on two additional scrubbers, and thereby improved asset integrity
- Minimising the risk by reducing the maximum storage capacity for hydrochloric acid
- Improving the technology at the site. The installation of new equipment has allowed the company to have up to date monitoring systems and controls, i.e. high-level trips, and high-level alarms on hydrochloric acid and vapour return systems

- Providing the ZERO emission milestone during the offloading process and decreased frequency of offloading by 50%, which ultimately decreased the risk

The upgrade in hydrochloric acid bulk storage required an investment of R365 000. The installation of the pressure vessel has allowed flexibility to manufacture a wider range of products. The installation of a new pressure vessel required an investment of R6 million.





The Emergency Preparedness Plan at Orion Engineered Carbons (Pty) Ltd (Orion) did not fully cover the rescue of employees trapped in confined spaces and working at heights. When working at heights or confined spaces, special arrangements are made with the medical and fire teams, as well as emergency responders, to be on site or on standby in case of any emergency. An initiative was undertaken to ensure that local emergency teams are available during rescue operations at Orion.

Improvements that can be attributed to the initiative are:

- Better preparedness for emergency situations
- Improved response times, ensuring that we care for our people and more importantly, lives are saved
- improved employee morale

A monthly service retainer fee is paid to the service providers to ensure quick and dedicated response during site emergencies. Time was invested by Orion's EHS Department to organise the emergency drill and train all employees on the site's emergency procedure.

Orion has a long-term relationship with the service providers who support bi-annual emergency drill protocols on site.



Orion provides funding for the Zwartkops Conservancy towards the Masifundisane programme. The programme aims to educate school children from the Motherwell community about environmental challenges facing the Zwartkops Estuary. The school children who visit the riverbank, do so, mostly on empty stomachs.

An initiative was identified to feed the children. The employees of the company were approached, and they agreed to sponsor sandwiches for about 70 school children every Wednesday. This amounted to 31 days and 2 170 sandwiches.

The initiative gave Orion the opportunity to involve employees in community projects. The joy of giving, by feeding hungry children, encourages the culture of giving among employees and the company alike. It is a great opportunity to show social commitment, while engaging employees in a constructive and enjoyable way. Whilst the company has funded R100 000, the employees fund the bread, toppings and wrapping. The costs are deducted from employees' monthly salaries.

Employees are invited to attend the lessons and distribute the sandwiches. Orion believes that it is important for employees to experience this firsthand.





Orion started an initiative to raise awareness and education on HIV and AIDS of the workforce and to contribute towards employee well-being.

The initiative targeted 20 employees, including contractors, to test for HIV and receive counselling at the on-site medical centre. The initiative surpassed the targeted 20 employees, as 93 employees were tested and received counselling.

The on-site medical centre has one occupational nurse. During this initiative, two additional nurses were recruited at a cost of a full day for the event. Testing kits were purchased and refreshments as well as gifts provided to all the participants.

The SHE team organised the event, while the provision of brochures and advertising material was outsourced. Employees appreciated the awareness gained and training provided. Orion committed to make this initiative an annual event.

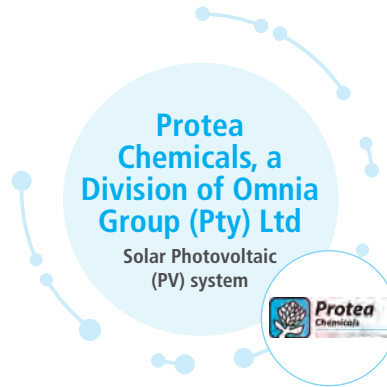


The need to develop a hub leader to provide an effective support system for educators in the Motherwell area was identified.

Communities in the Motherwell area experience high unemployment, coupled with high levels of poverty and food insecurity. The accumulated knowledge and experience of the Dumani Primary School team has become a valuable resource, not only for the school and its own community of families, but also for the broader community and nearby schools. Thus, the knowledge accumulated by Dumani Primary School – through its years of practical experience in managing the food garden, and other projects – made it a natural choice as hub leader.

The purpose of the project was to develop a Motherwell cluster with Dumani Primary as the hub leader. This was undertaken by equipping and empowering educators to be adequately prepared to deliver content that is environmentally related in the classroom. A workshop, which was facilitated by WESSA, provided a platform for educators to be able to reflect on their own practice, collaborate with other educators and make their voices heard through constructive dialogue. The innovative, uplifting, skill-sharing and empowering opportunities have allowed teachers to describe challenges and share resourceful ideas, geared towards accelerating sustainable improvement in teaching and learning in schools.





The Motherwell cluster has been able to form an effective support system for educators in the area. Supported by WESSA Eco-Schools team, the Motherwell Cluster is steadily strengthening and enhancing learning through the establishment of Professional Learning Communities. The participants have found ways to balance teaching and projects through appropriate integration of aspects of each project into the curriculum. Educators in Motherwell have established a professional support structure and are using this platform for professional and personal development, thereby making a positive change in the community.

The Orion Eco-Schools Motherwell project has been supported by funding received from Orion, that is impacting development in 10 schools. The initiative has been ongoing for the last five years, with funding renewed annually. Five-year funding totals approximately R850 000.

Orion staff have accompanied WESSA coordinators for special events at schools and attended the awards ceremonies where schools receive their Eco Awards. To date, the projects that have been identified have all been selected to address the most pressing environmental challenges in Motherwell – the focus of each expressly being on resolving critical community needs such as water shortages, waste management and food security. Educators are becoming empowered to lead and innovate in the classroom. The Orion Eco-Schools Project also supports the National School Nutrition Programmes' (NSNP) guidelines, to enable the development of sustainable food gardens. This has aided the vulnerable learners who benefit from the harvest, increase their nutrition status, and develop skills on how to grow their own food. Through project-based learning activities, learners are developing skills to solve real-world problems that impact their communities by connecting academic situations in the real world.

In line with its sustainability strategy – informed by the UN SDGs – Omnia Group (Pty) Ltd continues to accelerate and entrench its commitment to responsible citizenship. Aligned to this strategy and further influenced by the rapid increase in electricity costs, Protea Chemicals, a Division of Omnia Group (Pty) Ltd (Protea Chemicals) was nominated to lead the implementation of an affordable, clean energy solution. This led Protea Chemicals to invest in a Solar PV system at their main hub in Wadeville.

The project included the installation of a 55 kWp (kilowatt power) solar PV system, consisting of 169 X 330 Wp polycrystalline solar panels. The system installed has an annual power generation capacity of 93 300 kWh which is equivalent to a year's worth of electricity supply for approximately nine households.

The improvements related to this installation include:

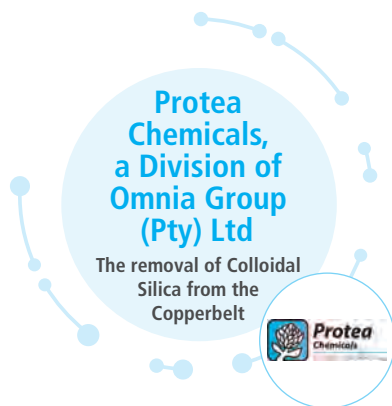
- Carbon footprint reductions – reduction of CO₂ emissions of 58 tonnes per annum

- Saving on electricity costs
- Reduction in kVA maximum demand charges
- Power factor correction savings
- A 28% company tax savings in the first year of depreciation

The last three benefits have a long-term impact on the business. Over the three months since commissioning in July 2020, the average electricity production has been 211 kWh per day with a CO₂ reduction of 148 kg per day. To date, a total of 15.172 MWh of electricity has been generated, equating to a reduction of 10.6 tonnes of CO₂ emissions.

The project had a capital investment of R524 000 that included all equipment and installation costs. Internal resources were allocated to the concept and implementing phases of the project. The design of the solar PV system was undertaken internally by an electrical engineer who is part of Omnia Group's Technical Department. The implementation was carried out by Omnia Group Technical and Protea Chemicals Projects departments.





Colloidal silica has been a problem in the production of copper in the Copperbelt for many decades, which causes significant inefficiencies in production and leads to instability and downtime which very few operations can afford.

The need to allow operations to run with more stability to improve production was identified to give long-term sustainability to these operations. Protea Mining Chemicals, in conjunction with technology partners, developed a solution to remove colloidal silica from the circuit in a safe and sustainable manner. This has previously not been achieved in the Copperbelt. The solution involves the use of Dehscofix SC12; a proprietary coagulant that specifically targets colloidal silica.

The main benefit is enhanced sustainability and efficiency of copper

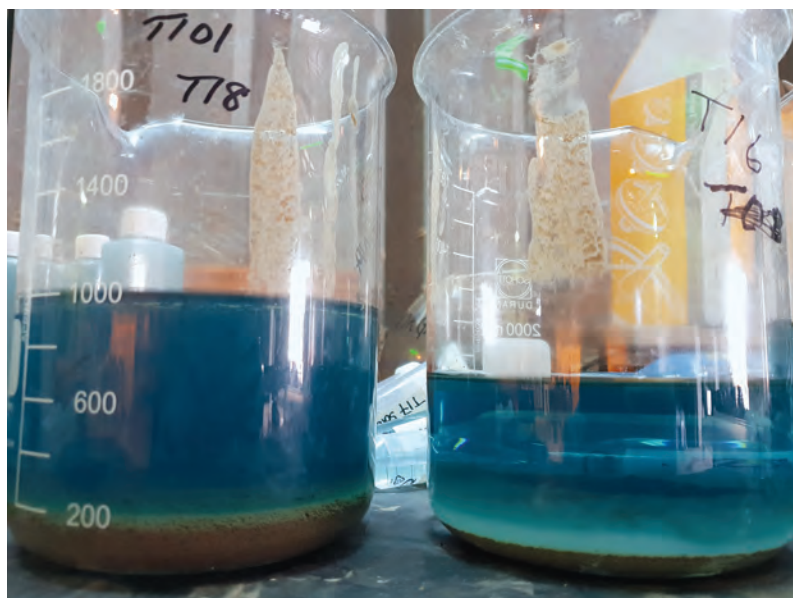
mines. This is achieved through several positive aspects resulting from the successful use of the product. These include significantly improving copper production tonnage as a result of allowing increased throughputs in the process. The copper quality produced also improved significantly, allowing a saleable final product where previously off-spec product was produced. The solution also assists in reducing loss, consumption, and contamination of expensive and hazardous organic extractants. This also allows mines to easily process previously difficult to treat ore.

Significant investment in research and development was made to develop a workable solution where previously others had failed. Investments were made into personnel to undertake the required development work and test the product on site, in addition to the cost of manufacturing the

product and associated logistics costs. A significant amount of time was invested in researching and developing the solution and application of the product. Additionally, many trips to the DRC to conduct test work and trials were made.

Over the long-term, the project has made the company's customers more sustainable, with the ability to reduce production costs and allow the life of mines to be extended. This solution allows customers to compete against other lower cost international operations and remain profitable at lower copper prices.

For Protea Mining Chemicals, this initiative has allowed the company to solve critical problems for customers and cement business in the industry. It has also allowed the organisation to provide employment to many.






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Over 5 000 vehicles are washed at the Reef Tankers (Pty) Ltd (Reef Tankers) dedicated wash bay facility each year. Multiple shifts are run to ensure the fleet is clean and presentable. The vehicle washing activity places increased demands on water supply to ensure the company maintains the brand image of the business. The water consumed on the facility is not environmentally sustainable. With the water crisis in mind, the management team required a water saving initiative that minimises the demand on municipal water supply, to maintain Reef Tanker's washing activities.

The management team implemented a water recycling unit that allows the organisation to reuse the water within the wash bay. To ensure water recycling was effective, an additional 3 000 litres of oil separation capacity was installed. A pump system installed in the oil separation tank extracts cleaner water and transfers

it to a recycling unit where multiple filtration systems clean the water before discharge to a tank that supplies the wash bay high pressure units. As a result, a 30% reduction of water consumption per month has been achieved. This water saving will contribute towards the company's positive environmental impact and minimise municipal water consumption. The company's vehicle wash bay facility is now officially off the grid which will contribute to alleviating the current water crisis within South Africa.

Installation of the additional separation capacity and the recycling unit cost R389 000. Extension of the oil separation capacity required construction man hours as well as management's involvement in the implementation of the recycling unit. By looking at a projected five-year savings based on historic performance, the company will save a total of 12 000 kilolitres of water.





Post-consumer materials are resources of economic value which should be recovered, re-used and recycled to enable a circular economy, while addressing the SDGs. In 2017, Johanna Leshabane, set up the Bophelo Recycling project in her community of Ermelo in Mpumalanga. Motivated by her desire to clean up the environment, while offering her community members with much needed jobs, and an outlet from poverty, drugs and crime, Johanna Leshabane employed local community members to collect recyclable materials from the community. Johanna Leshabane recognised that in order to grow her business, she had to formalise the recycling project and set up a recycling depot fully equipped with the required equipment and infrastructure which will enable her to make a bigger impact.

In 2018, the South African Polyethylene Terephthalate recycling company (PETCO) initially sponsored Bophelo Recycling with some basic needs which included a platform scale, PPE for the reclaimers, and training on how to run a recycling business. However, it was the joint sponsorship between the local polymer producer, Safripol (Pty) Ltd and PETCO in June 2019, that was instrumental in realising Johanna Leshabane's vision for the Bophelo Recycling project. The Safripol-PETCO joint sponsorship comprised infrastructure worth R500 000 which included a secure double-carport roof shelter for the facility; a branded shipping container to store collected recyclables; a branded four-metre trailer to transport the collected bales to recycling facilities; a branded baling machine to enable collected waste to be baled and save cost on transport; a three-phase electricity meter; electricity cables; an extending fence; a business signage board; and five branded trollies. The Safripol-PETCO

joint sponsorship also included media exposure to Johanna Leshabane's business to an additional monetary value of R272 255. This created awareness in the community and surrounding areas about the Bophelo recycling initiative, as well as the value of post-consumer waste and recycling, and the negative impacts of littering and pollution.

Through the joint sponsorship, Bophelo Recycling (Pty) Ltd is today a fully-fledged buy-back centre for recyclables such as plastics (including PET plastic bottles, HDPE, LDPE and PP), cardboard, white paper, mixed-colour paper, cans (aluminium and steel) and glass, from informal settlements, house-holds, and schools, as well as the community in and around Ermelo. Since the joint investment, the centre has increased its PET recycling volumes from 4 tonnes in 2018 to 9.5 tonnes in 2019, representing more than a doubling in output volumes. Since 2018, 16 tonnes of post-consumer PET bottles, which otherwise would have remained in the environment as waste, was recovered to prevent plastic pollution and to support a secondary end-use market. Furthermore, Bophelo Recycling (Pty) Ltd has made a significant

contribution to job creation in Ermelo, whereby it now employs 11 permanent employees and 20 part-time waste collectors, who assist with sorting and buying of recyclable material.

This initiative supports several of the UN SDGs and aims to enhance the circular economy, whereby post-consumer plastic waste is recovered from the environment to protect natural ecosystems and the marine environment from the harmful impacts of plastic pollution. The recovered materials are kept in a closed circular economy and are used downstream to develop new products, thereby replacing virgin polymer, and preserving natural resources. Furthermore, this initiative supports women-owned businesses and employs women as well as previously disadvantaged individuals to address the gender and race disparity. This contributes towards addressing poverty and transformation in the country.

It is anticipated that once the Bophelo Recycling project demonstrates long-term sustainability, the model could be duplicated in other similar communities in need of job stimulation.





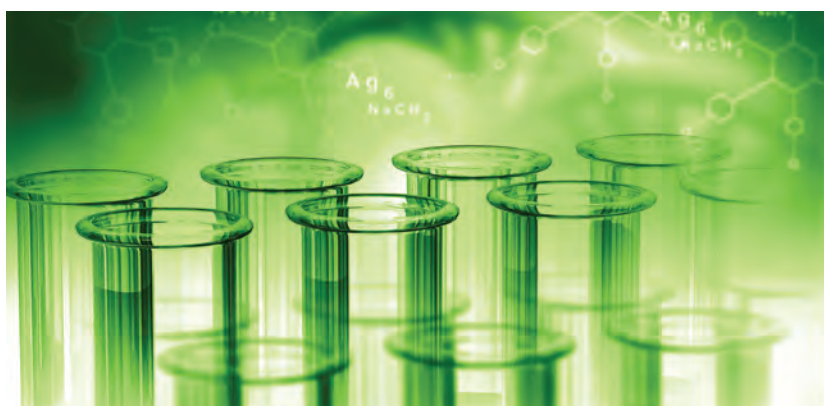
The AECI Group has launched a sustainability framework that includes a "green chemistry" initiative as a Key Focus Area (KFA). In November 2019, a green chemistry initiative was investigated at the AECI Mining Chemicals, Sasolburg operation, for optimising the recycling of effluent and subsequent reduction of potable water usage. The Sasolburg operation makes use of treated municipal water in its processes that is discharged in large volumes as effluent, at a cost to the business. An opportunity was identified whereby effluent may potentially be reused in various processes if the quality can be improved prior to reuse. By improving effluent qualities, with the specific focus on reducing the COD, the AECI business unit will not only mitigate the risk of non-compliance to prescribed effluent discharge parameters but also save costs on purchased municipal water as well as reducing effluent discharge costs.

The initiative involves dosing effluent streams, under controlled conditions, with naturally occurring bacteria. The bacteria utilise the nutrients and dissolved organic load in the effluent for its growth. During proliferation, it breaks down organic biodegradable chemicals, hazardous wastes, and pathogens. Long chain compounds

are broken down to short chain compounds and simple molecules that are then consumed by the bacteria and converted to carbon dioxide and water, thus drastically reducing the COD and Biological Oxygen Demand (BOD) levels in the effluent. A naturally occurring biological agent is a preferred treatment option as opposed to a chemical treatment solution. The biological agent is purchased in small plastic sachets whereas chemicals would require hazchem storage facilities.

Laboratory trials have been completed with very favourable results i.e. 45% reduction of COD. No financial investment by AECI Mining Chemicals have been required to date. The pilot plant project will have a consistent effluent throughput that will solidify the business case if the results are favourable. The estimated cost contribution from AECI Mining Chemicals for the pilot plant is projected at approximately R79 000 for electrical connection points. Trial 3 was delayed by the COVID-19 pandemic and will start on 26 October 2020 (all equipment has been delivered to the site for installation).

Leadership buy-in has been key to this project as various human resources expert input was required for the trials. Trial 3 will be undertaken in two high risk-zoned areas and therefore required various technical and safety review meetings to ensure that an unwanted event is mitigated with the necessary critical controls.



Focus on Members – Responsible Care® Awards

The 2019 awards winners and runners-up were announced at the combined 81st Annual General Meeting, 2019 Responsible Care® Report Launch and Responsible Care® Award Ceremony held on 12 November 2019 at the Country Club, Johannesburg. CAIA recognised each of the winners and runners-up for excellence and leadership in SHE and security performance.

Eligibility

All companies/facilities/sites that are implementing and maintaining the Responsible Care® Initiative along the value chain in South Africa are eligible for the awards. The different awards have specific conditions that need to be met for consideration. These conditions are subject to annual review.

Responsible Care® Award

The CAIA Responsible Care® Award was first launched in 2003 to recognise the achievements of companies beyond basic compliance with the Responsible Care® Initiative. The award recognises outstanding year-on-year improved performance. In 2019, candidates were selected by greatest average net improvement over several key areas. This award is open to all Responsible Care® signatories (excluding LSPs) that have finalised two consecutive years' KPI data. All other CAIA requirements, where applicable, must be up to date, such as membership payments and third-party audits. Signatories are excluded from consideration if an in-house fatality was reported in the most recent data under consideration.

Responsible Care® LSP Award

In 2011, CAIA introduced the Responsible Care® LSP Award to recognise top performers from the road transportation sector. The conditions are identical to the Responsible Care® Award. This award is open to all LSP Responsible Care® signatories that have finalised two consecutive years' KPI data.

Responsible Care® Sustained High Performance Award

This award acknowledges the positive contribution that continual commitment to the Responsible Care® Initiative can have on sustaining high SHE performance. It honours signatories that have sustained high performance over the last three years.

Responsible Care® Initiative of the Year Award

This award is presented in different categories that are open to all Responsible Care® signatories, for initiatives undertaken in 2019 that were not related to implementing legal requirements. Multiple applications by one company are acceptable. The Responsible Care® Initiative of the Year Award's purpose is to:

- Highlight the importance of SHE and CSR initiatives;
- Recognise Responsible Care® signatories in two categories (company projects and CSR projects) for their commitment and investment; and
- Facilitate the publication of achievements resulting from these initiatives.

The 2019 Awards

RESPONSIBLE CARE® AWARD

WINNER



Chemsystems, a
business of
AECI Chemicals –
Umbogintwini

RUNNER UP



BME, a Division of
Omnia Group
(Pty) Ltd

RUNNER UP



Interwaste (Pty)
Ltd, a division of
Interwaste Holdings
Limited

RESPONSIBLE CARE® LSP AWARD

WINNER



Manline Energy
(Pty) Ltd –
Chemicals Inland

RUNNER UP



Manline Energy
(Pty) Ltd –
Pietermaritzburg

RESPONSIBLE CARE® INITIATIVE OF THE YEAR AWARD

Company Project – **Category A:**

WINNER



NCP Chlorchem
(Pty) Ltd, a
subsidiary of Bud
Chemicals and
Minerals

Project Title:

Management Commitment to Responsible Care®

WINNER



Sasol
South Africa Ltd

Project Title:

Developing Safer Emulsion Products

RUNNER UP



NCP Chlorchem
(Pty) Ltd, a
subsidiary of Bud
Chemicals and
Minerals

Project Title:

Implementation of LSS Tool – SMED

CSR – **Category A:**

WINNER



Interwaste
(Pty) Ltd,
a division of
Interwaste Holdings
Limited

Project Title:

TEACH

RUNNER UP



AECL Limited

Project Title:

Community Education and Development Trust
Wize Wayz Water Care

RUNNER UP



BME, a division
of Omnia Group
(Pty) Ltd

Project Title:

Mobile Science Laboratory

RESPONSIBLE CARE® SUSTAINED HIGH PERFORMANCE AWARD

CSR – Category B:

WINNER



Air Products
(Pty) Ltd

Project Title:

Witness Happiness

RUNNER UP



Labchem
(Pty) Ltd

Project Title:

Environmental Calendar

Category A:

WINNER



Air Products South
Africa (Pty) Ltd –
Pinetown

WINNER



Impala Platinum
Limited – Springs



Who Leads Us

CAIA Board



André Harding



Deidré Penfold



Dean Thompson



Mark Dytor



Gabor Mehn



Jeff Lipshitz



Seelan Gobalsamy



Nico Van Niekerk



Cicelia Van Rooi



Thabiet Booley

CAIA Team



Deidré Penfold



Louwna De Villiers



Amon Nyamhingura



Mlu Ganto



Glen Malherbe



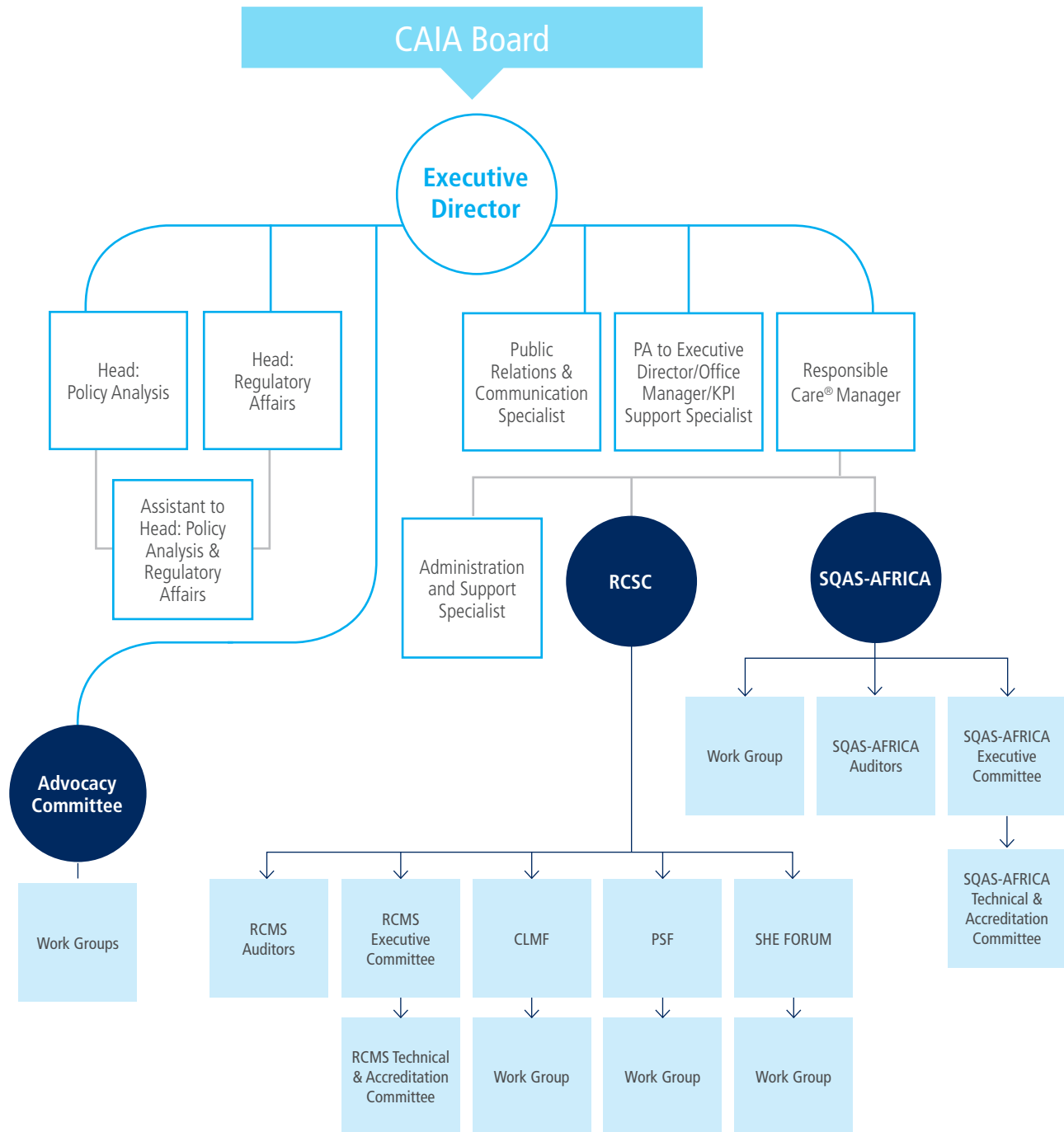
Marna Enslin



Nomthie Masuku

Great things in business are never done by one person. **They are done by a team of people.**

Organisational Structure



Responsible Care®

Signatories AS AT 30 SEPTEMBER 2020

Affiliate Members

- Anchor Pail & Drum Reconditioners (Pty) Ltd
- Ekhurleni Drums and Containers cc

Associate Members

- Africa Bunkering & Shipping cc
- Anmesh Investments cc
- A-Thermal Retort Technologies (Pty) Ltd
- Avcrest Transport cc
- Averda South Africa (Pty) Ltd
- Cargo Carriers (Pty) Limited
- Dasa Support Services cc t/a Dasa Logistics
- Dawns Trucking cc
- Desert Rain Logistic Services (Pty) Ltd
- Diraro Logistics cc
- Dolphin Coast Landfill Management
- Drizit Environmental (Pty) Ltd
- DS Transport Services cc
- ENSA Environmental SA (Pty) Ltd
- EnviroServ Waste Management (Pty) Ltd
- Enviro-Tech SA (Pty) Ltd
- FBN Transport cc
- Freightworx cc
- G & H Transport & Repairs (Pty) Ltd
- GanTrans (Pty) Ltd
- Hazclean Environmental cc
- Hazquip (Pty) Ltd
- Heneways Freight Services (Pty) Ltd
- Hi5 Storage & Logistics (Pty) Ltd
- Imperial Logistics Dedicated Contracts a Business Unit of ILSA Group (Pty) Ltd
 - » Alrode
 - » Belfast
 - » Garfield
 - » Jacobs
- Tanker Services Food and Chemicals, A Division of Imperial Logistics Advance (Pty) Ltd
 - » Germiston
 - » Jacobs
 - » Stikland
 - » Vanderbijlpark
- Impro Logistics (Pty) Ltd
- Infinite Fleet Transport (Pty) Ltd
- Intertek Testing Services SA (Pty) Ltd
- Interwaste (Pty) Ltd, a division of Interwaste Holdings Limited
 - » Eastern Cape
 - » Gauteng
 - » KZN
 - » Mpumalanga
 - » Northern Cape
 - » Western Cape
- Khanat cc t/a Natlon-ASMA-Southgate
- Leschaco (Pty) Ltd
- Local Bulk Haulage, A Division of Leopard Line Haul (Pty) Ltd
- Lucerne Transport (Pty) Ltd
- Makwande Supply & Distribution (Pty) Ltd
- Manline Energy (Pty) Ltd
 - » Chemicals Inland
 - » Pietermaritzburg
 - » Sasolburg
 - » Botswana
- Momentum Logistics (Pty) Ltd
- Mr A Trans cc
- M.S.C.P. Transport (Pty) Ltd
- NTP Logistics (Pty) Ltd
- NuVest Recovery Solutions (Pty) Ltd
- OneLogix United Bulk (Pty) Ltd
- PA Stemmet Vervoer cc
- Protank (Pty) Ltd
- Rapid Onamandla (Pty) Ltd
- Rapid Spill Response cc
- RB & Son Transport Gauteng cc
- RB Associated Logistics (Pty) Ltd
- Reef Tankers (Pty) Ltd
- Road Bulk Services (Pty) Ltd
- Runga Trans cc
- S. Bothma and Son Transport (Pty) Ltd
- SA Landside Logistics (Pty) Ltd
- Safcor Freight (Pty) Ltd t/a Bidvest International Logistics
- SGS South Africa (Pty) Ltd
- Shipping and General Transport (Pty) Ltd
- Simtrans cc
- Spill Tech (Gauteng) (Pty) Ltd
- Spill Tech (Pty) Ltd
- Stallion Transport (Pty) Ltd
- Unitrans Supply Chain Solutions (Pty) Ltd
- Vasa Financing Corporation (Pty) Ltd trading as Stellar Transport
- VETO Trading cc t/a Water Recovery Services
- Wardens Cartage cc
- Westmead Local and Cross Border (Pty) Ltd
- Xinergistix Management Services (Pty) Ltd

Full Members

- AECI Ltd
 - AECI Industrial Chemicals, a division of AECI Ltd
 - AECI Mining Chemicals, a division of AECI Mining Ltd
 - AECI Mining Explosives, a division of AECI Mining Ltd
 - AECI Plant Health, a division of AECI Ltd
 - AECI Speciality Chemicals, a division of AECI Ltd
 - Chemfit Fine Chemicals (Pty) Ltd T/A AECI Animal Health
 - ImproChem (Pty) Ltd T/A AECI Water
- Arch Wood Protection (SA) Pty Ltd
- BASF Agricultural Specialities (Pty) Ltd
- BASF Holdings South Africa (Pty) Ltd
- Bayer (Pty) Ltd
- Brenntag South Africa (Pty) Ltd
- Brother CISA (Pty) Ltd
- Buckman Laboratories (Pty) Ltd
- Bud Chemicals and Minerals (Pty) Ltd
- Chemzone cc
- Clariant Southern Africa (Pty) Ltd
- Clariant Plastics and Coating Southern Africa (Pty) Ltd
- Clariant Sasol Catalysts (Pty) Ltd
- Clariter ZA (Pty) Ltd
- Crest Chemicals (Pty) Ltd
- Darchem (Pty) Ltd
- Dow Southern Africa (Pty) Limited
 - New Germany Site
- Evonik Peroxide Africa (Pty) Ltd
- Fine Chemicals Corporation (Pty) Ltd
- Gold Reef Speciality Chemicals (Pty) Ltd
- Greif South Africa (Pty) Ltd
- Impala Platinum Limited – Springs
- Industrial Distillers & Refiners cc
- Kevali Chemical Group (Pty) Ltd
- Labchem (Pty) Ltd
- Lanxess (Pty) Ltd – Merebank
- Metsep SA (Pty) Limited
- Omnia Group (Pty) Ltd
 - BME, a Division of Omnia Group (Pty) Ltd
 - Omnia Fertilizer, a Division of Omnia Group (Pty) Ltd
 - Protea Chemicals, a Division of Omnia Group (Pty) Ltd
- Orion Engineered Carbons (Pty) Ltd
- Orthochem (Pty) Ltd
- Paperkem (Pty) Ltd
- Pelchem SOC Ltd
- Richbay Chemicals (Pty) Ltd
- Rolfes Chemicals (Pty) Ltd
- Safcor Freight (Pty) Ltd t/a
 - Bidvest International Logistics – Warehousing
 - » Cape Town
 - » Denver
 - » Durban
 - » East London
 - » Port Elizabeth
 - » Pretoria
 - Island View Storage (Pty) Limited trading as Bidvest Tank Terminals
- Safic (Pty) Ltd
- Safripol (Pty) Ltd
 - Durban
 - Sasolburg
- Sasol South Africa Limited
- Solvay Polymers and Chemicals South Africa (Pty) Ltd
- Sun Ace South Africa (Pty) Ltd
- Syngenta South Africa (Pty) Ltd
- Vopak Terminal Durban (Pty) Ltd

Acronyms and Abbreviations

AEL	Atmospheric Emissions Licence
AGD	Audit Guidance Document
BUSA	Business Unity South Africa
C-BRTA	Cross-Border Road Transport Agency
ChP	Chemicals in Products
CMP	Codes of Management Practice
COD	Chemical Oxygen Demand
CRDF	Civilian Research and Development Foundation
CSI	Corporate Social Investment
CSR	Corporate Social Responsibility
DBE	Department of Basic Education
DCS	Distributed Control System
DEFF	Department of Environment, Forestry and Fisheries
DEL	Department of Employment and Labour
DoT	Department of Transport
DRC	Democratic Republic of Congo
FTWEP	Fischer-Tropsch Wax Expansion Project
GHG	Greenhouse Gas
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
ICCA	International Council of Chemical Associations
KAM	Kenya Association of Manufacturers
KPIs	Key Performance Indicators
LSPs	Logistics Service Providers
MA	Maleic Anhydride
MESs	Minimum Emissions Standards
MPSs	Management Practice Standards
NDP	National Development Plan
NEDLAC	National Economic Development and Labour Council
NEM:AQA	National Environmental Management: Air Quality Act
NGO	Non-governmental Organisation
OCAS	Operator Compliance Accreditation Scheme
OPCW	Organization for the Prohibition of Chemical Weapons
PDCA	Plan-Do-Check-Act
PETCO	Polyethylene Terephthalate Recycling Company
PETN	Pentaerythritol
POPs	Persistent Organic Pollutants
PPE	Personal Protective Equipment
PSE	Purified Sewage Effluent
RCLG	Responsible Care® Leadership Group
RCMR	Responsible Care® Management Representative
RCMS	Responsible Care® Management System

RCSC	Responsible Care® Standing Committee
RLA	Registration, Legislation and Accreditation
RO	Reverse Osmosis
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemicals Management
SANS	South African National Standard
SARS	South African Revenue Service
SDGs	United Nations Sustainable Development Goals
SHE	Safety, Health and Environmental
SHEQ	Safety, Health, Environment and Quality
SMMEs	Small, Medium and Micro Enterprises
SQAS-AFRICA	Safety Quality Assessment for Sustainability – AFRICA
STEM	Science, Technology, Engineering and Mathematics
TNPA	Transnet National Ports Authority
UN	United Nations
VNR	Voluntary National Review
WESSA	Wildlife and Environment Society of South Africa
YES	Youth Employment Services



Notes

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CAIA CONTACT DETAILS

CHEMICAL AND ALLIED INDUSTRIES' ASSOCIATION

T +27 (0) 11 327 6547 F +27 (0) 11 327 6348 E caiainfo@caia.co.za
Rosebank Office Park, Ground Floor, Block B, 181 Jan Smuts Avenue, Rosebank



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