

CONTINUOUS SAFE PRODUCTION



WHAT WE DID IN 2020

SUCCESSES SA gold operations

Unprecedented 13 million fatality free shifts achieved on 4 August 2020

SA PGM operations

PGM processing plants and concentrators achieved 16 million fatality free shifts

US PGM operations

Successful implementation of the centralised blasting system at East Boulder mine

Electronic auditing implemented as well as the introduction of TARP

CHALLENGES SA operations

Maintaining the operations during COVID-19 lockdown

US PGM operations

Reducing the injury frequency rate of all injuries

Benchmarks	Status	Page reference
Roll out of bowtie risk assessment methodology and critical control management	Completed	Refer to page 208
Hosting of safety and health summits	Completed for 2020	Refer to page 208
Working towards ISO 45001:2018 Occupational Health and Safety Management System certification for all SA operations	In progress	Refer to page 208
Migration of Marikana shafts and processing plants to ISO 45001:2018 Occupational health and safety system	Completed	Refer to page 208
Zero harm	In progress	Refer to page 206
A Group TRIFR benchmark of 4.0 per million hours worked has been set to be achieved by the end of the 2025	In progress	Refer to page 209

APPROACH

Safe production is a cornerstone of our ability to deliver on our business strategy (for further information refer to *Our strategy and strategic delivery* on page 19). We are committed to maintaining a working environment that is safe and fosters the health and well-being of our employees and contractors so that they may return home every day safe and unharmed. It is only by achieving this priority that we can live up to our purpose of improving lives through our mining activities.

Safety remains one of our material focus areas and we take a holistic, values-driven approach to safety. This means that commitment, accountability, respect and the effective enablement of and engagement with our employees – all of which are key aspects of our core CARES value proposition – underpin every safety aspect, initiative and operating procedure undertaken at every operation across the Group.

REPORTING

Our focus in 2020 was to enable the generation of automated safety-related reporting from one source of data which, in turn, will minimise human error and secure constant and reliable reporting. Emphasis was therefore placed on aligning group reporting practices, aligning Pivot and Syncromine system, and moving towards uniform group guidance and standards, through the reporting platform of the QlikView system.

“Achieving our objective of ‘zero harm’ is a journey and one that is still in progress.”



Safe production and health priority:

To improve the holistic well-being of our workforce through the pursuit of risk-based monitoring of safety and health factors as well as the Group's improvement in safety and health performance.

Zero harm strategic framework (page 206) and the *Managing our risks and opportunities within the external operating environment* on page 26.

Accountability, governance and assurance

GOVERNANCE

ACCOUNTABILITY

Our Safe production strategy is driven by the CEO and senior leadership with strong support from the Board. A bottom-up approach to safety is encouraged to empower our workforce and enable them to execute their tasks in a safe and productive manner.

Board

- Safety and Health Committee
- Audit Committee
- Risk Committee

Executive Committee

- Our Safe production strategy is driven by the CEO and senior leadership
- High potential incidents and all fatal incidents are reviewed by the Group High Potential Incident and Fatal Review Committee. Lessons and subsequent action serves as guidance and are shared throughout the Group

Operational

- At the SA operations the operational Senior Vice President supported by the Vice President at each site assumes the first line of responsibility, and is supported by the operational safety department
- At the SA operations, mine overseers are responsible for safety tracking and monitoring performance
- We use the platform of safety summits to engage with stakeholders on the issues of safety and health
- At the US PGM operations the joint health and safety committees meet monthly at each operation and at the metallurgical complex to address safety concerns

For more details see the *Corporate governance* section

RELEVANT LEGISLATION AND REGULATIONS

The Group adheres to the ICMM's principles on safety and health

South Africa

- Mine Health and Safety Act of 1996
- Occupational Health and Safety Act 85 of 1993

United States

- Federal Mine Safety and Health Act of 1977
- The Occupational Safety and Health Act of 1970
- Other United States' governmental divisions such as the Bureau of Alcohol, Tobacco, Firearms and Explosives, the Nuclear Regulatory Commission, and the Department of Homeland Security also regulate operations in the interests of public security

ASSURANCE

- Workplace inspections are continually conducted to assess the level of conformance to standards, procedures and other guidelines as well as the legal requirements in the workplace. The intervals are governed by the requirements of the various acts such as the Mines Health and Safety Act 29 of 1996 (MHSA), but additional inspections and follow up actions are also, conducted randomly
- Internal audit and the multidisciplinary PIVOT system monitor various parameters. In addition, several external agencies such as the DMRE safety inspectors, conducts unscheduled audits
- External and internal audits are conducted by the Group's internal audit department and include safety audits that measures compliance, correct reporting and recording methodologies of leading and lagging indicators
- ISO 45001:2018 Occupational health and safety system gap audits are also conducted to measure compliance for certification. Certification audits are conducted by external parties
- At the US PGM operations various internal safety audits are conducted as is emergency response testing and external assurance on compliance and indicators
- High potential incidents and fatal reviews are conducted and also serve as another layer of assessment

Key supporting policies and policy statements

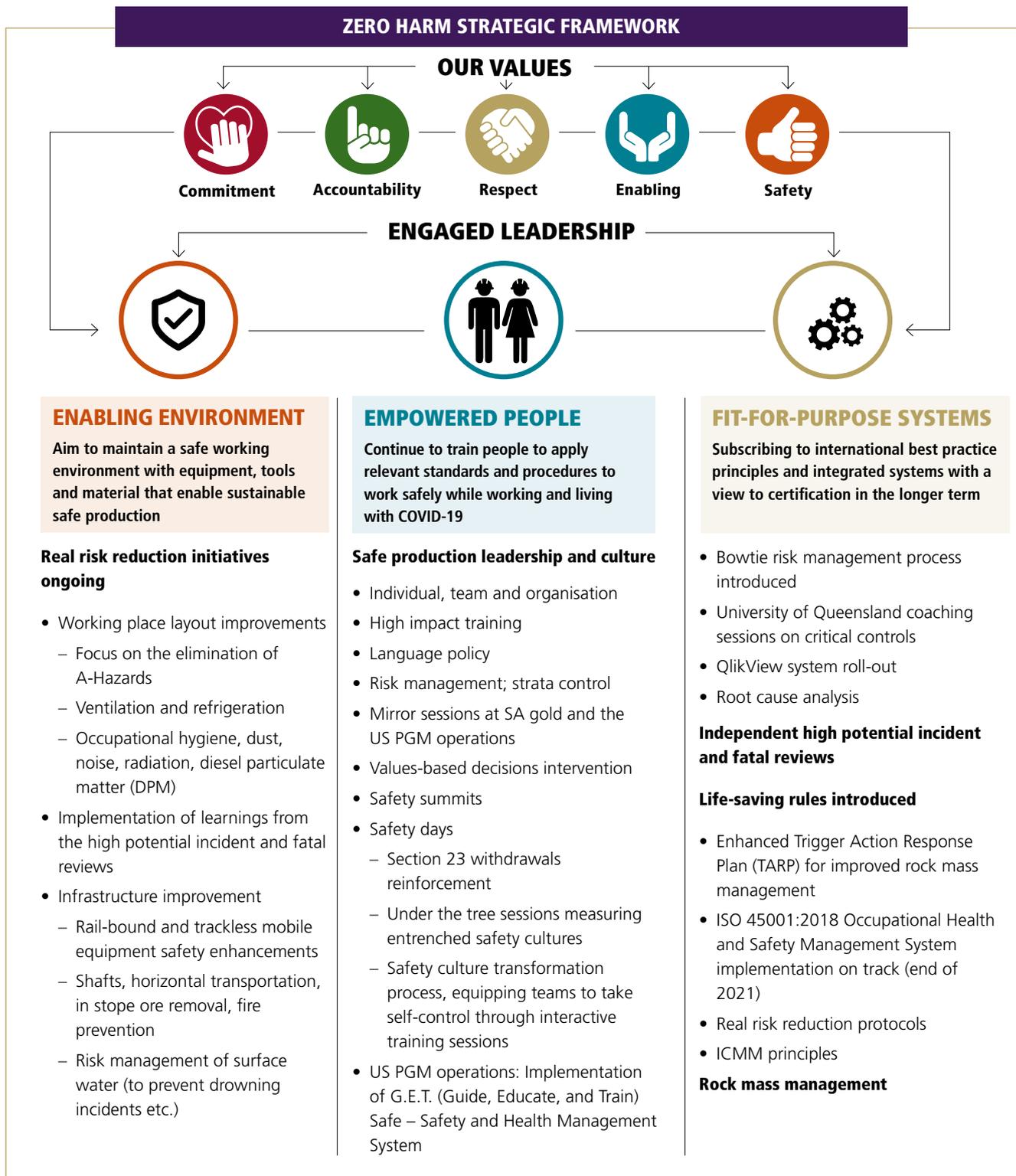
Health and safety policy statement

Real risk reduction fatal risk control protocols

CONTINUOUS SAFE PRODUCTION CONTINUED

ZERO HARM STRATEGIC FRAMEWORK

Achieving our objective of 'zero harm' is a journey and one that is still in progress. For the past few years, this journey has been a story of change, whereby we have actively endeavoured to transform the culture of the Group, to align values and to develop leadership in a manner that prioritises and cements safety as a cornerstone of the business. This transformative journey has been primarily underpinned and facilitated by our Zero Harm Strategic Framework (refer to schematic below) which was developed in 2018 and was the result of extensive collaboration with some key stakeholders, particularly organised labour and the Department of Mineral Resources and Energy (DMRE). This collaboration ensured buy-in from a regulator and employee stakeholder perspective.



ENABLING ENVIRONMENT

An enabling environment is one in which reducing risk exposure is achieved by maintaining a safe working environment and providing the workforce with equipment, tools and material that enables sustainable safe production. Real risk reduction initiatives result in making each working environment safer. These include the proactive assessment of risk when the life of mine planning and layout of each operation is conducted on a regular basis.

While a number of initiatives have been undertaken since the adoption of the Framework to facilitate a far more enabling environment at all our operations over the past two years, the primary focus in 2020 was the enhancement of rock mass management capabilities, the improvement of trackless and track bound equipment, ensuring safety of underground conveyors, underground fire prevention and undertaking high potential incident reviews.

In addition to the above, work continued on horizontal development and cleaning with the objective of equipping the locomotive with intelligent controller and the development end with fixed and portable beacons to detect and react automatically to specific functions and activities.

Vehicle to person proximity detection system (PDS) aims to reduce the likelihood of large equipment colliding with people. All the load, haul dump machines (LHDs) and utility vehicles at the SA trackless operations have been equipped with PDS systems.

As part of infrastructure improvement, focus is placed on the in-stope ore removal which include winches, rigging, grizzlies, signalling etc. Furthermore, the risk management of surface water is a focus to prevent drowning incidents. Preventative controls include fencing, signage, communication with communities, reducing the number of surface dams, etc.

Rock mass management

Rock mass failure which could result in a 'seismic' event and/or uncontrolled fall-of-ground incident, is one of the most

serious challenges to safe production. In 2020 it continued to be the leading cause of most of the fatalities in at the SA operations. Thus, rock mass management is paramount in Sibanye-Stillwater's quest towards achieving zero harm.

In an effort to improve overall 'seismic' predictability and forecasting models, in the first quarter of 2020 we engaged several leading academics within the field of seismicity to evaluate all available 'seismicity' data and material. This project was completed during 2020 despite delays during COVID-19, with three significant conclusions drawn from the report:

- It is impossible to predict seismic events
- Seismic management at Sibanye-Stillwater is on a par with the best in South Africa
- Monitoring equipment density on South African mines, including Sibanye-Stillwater's, is substantially lower than in the rest of the world

The increased density of seismic monitoring equipment will be a priority focus in 2021. While increasing the density will not directly affect the number or severity of seismic events, it will enhance event location and thereby the identification of hazardous geological features.

Tests are being conducted using ground penetrating radar underground with the objective to enhance the understanding of the rock mass beyond excavation. This will improve our knowledge and interpretation of geotechnical environment.

EMPOWERED PEOPLE

As a Group, we inherently understand that safety can only be achieved if all employees and contractors are correctly trained and empowered with the skills, knowledge and resources needed to execute work tasks in a safe and productive way. Moreover, we are cognisant that an empowered workforce is also one that is fully engaged. To this end, we prioritise the engagement of employees, taking care to listen to and understand their perspectives, challenges and successes, to determine how best we can assist in creating an enabling and empowering working environment in which they can perform their tasks at an optimum level. Contractors are not viewed

separately but are issued with a "licence to operate" at the SA operations once all checks on compliance, competencies and risk assessments have been completed and are in place. At the US PGM operations all contracted employees are trained and contractual agreements are in place.

Continuous training and communication regarding the contents of Sections 22 and 23 of the Mine Health and Safety Act are shared and confirm that employees and contractors are obliged to look after their own health and safety and that of others. This includes the right to withdraw and is continuously emphasized and encouraged in unsafe circumstances.

Similarly in the US, the "Miners Right" to not work in unsafe conditions is also emphasised. Training is also conducted above and beyond what is required by the Mine Safety and Health Administration (MSHA) at the mines and Occupational Safety and Health Administration (OSHA) at the metallurgical complex.

Organisational culture and growth strategy

As part of the Organisational culture and growth strategy, which is aimed at empowering the workforce to make values-based decisions and encourage the right behaviour, we have several initiatives intended to grow the emotional strength and support of our employees and contractors. These include but are not limited to 'Under the tree sessions' which is an open but safe forum for employees to share their feedback, frustrations and recommendations. The intelligence from these sharing sessions is then used to further tailor make the culture and values transformation process. As these proved successful at the SA gold operations prior to 2020, they were introduced to the SA PGM operations in the year under review.

In addition to the Organisational growth strategy, which seeks to transform the culture of the organisation to one that is based on our CARES value proposition and which is discussed in more details on page 186, of the *Empowering our workforce* section, a number of initiatives continued to be pursued in 2020 to further advance the empowerment of our workforce.

CONTINUOUS SAFE PRODUCTION CONTINUED

Incentive/bonus systems to encourage safe behaviour

To encourage employees to achieve production safely and to comply and adhere to standards, procedures and other preventative initiatives, the Group has in place an injury free days reward system that measures the performance of team and work sections. Employees are rewarded with prizes and positive team interactions at 30-day, 60-day, 90-day and 120-day intervals, which takes into account statistics of any injuries.

Other short-term incentives are introduced intermittently, such as the "I am safe" campaign whereby supervisors are given the opportunity to reward individuals for excellence in safety behavior.

At the SA gold operations, the safety officers have a checklist to enable the workplace to be declared safe before work can be undertaken. Bonuses of safety officers are linked to the quality of the safety audits and not to production.

Safety summits

One of the main ways in which we engage with our stakeholders, particularly in the sphere of safety and health, is through safety summits.

Unfortunately, owing to the COVID-19 pandemic, we were only able to hold two Safety summits during 2020, both of which were focused on the SA PGM operations. This was a continuation of the Safety summits focused on the SA gold operations, which began in 2018 (although both PGM and gold representation have been present at these summits). The participation of organised labour and the Department of Mineral Resources and Energy is evidence of the positive trajectory of our engagement process. Three themes were identified during the SA PGM summits:

- Enabling environment addressing amongst other policies, standards, and physical conditions
- Empowered people addressing amongst other stakeholder participation, technology and research
- Fit-for-purpose systems addressing amongst other planning, design and infrastructure

Work streams have been created to workshop each theme during 2021.

The global safe production advisory panel served its purpose and was terminated in 2020. Technical and leadership work continues with several academic institutions.

High impact training

In 2020 we further enhanced our high impact training programme. Learnings from high potential incidents and fatalities are shared with the rest of the Group and training manuals are updated to include learnings to encourage proactive management. These are managed through regular high potential incident reviews from which all learnings are communicated and processes updated in our objective of aspiring towards zero harm.

FIT-FOR-PURPOSE SYSTEMS

Subscribing to and implementing international best practice principles and integrated systems and adhering to leading global standards is vital to supporting and driving our safe production strategy.

Sibanye-Stillwater was admitted as a member of the International Council of Mining and Metals (ICMM) on 27 February 2020, which in effect adds another layer of governance to our systems and processes. This was a major milestone as we had been working towards meeting the ICMM's requirements since 2018.

Sibanye-Stillwater participates in several ICMM working groups to share and to learn about global best practice.

ISO Certification

ISO 45001:2018 Occupational health and safety management system, considerable progress was made with all SA operations to achieve certification. Marikana achieved ISO 45001:2018 for its operational shafts and Marikana processing and Shared Business Services achieved ISO 45001:2018 certification as part of the integrated SHEQ and SHE certificates respectively; this translates to approximately 50% certification of our SA PGM operations.

While the US PGM operations had been on track to achieve full ISO 45001:2018 certification for its Occupational health and safety system at the end of 2020, the impact of the COVID-19 pandemic inhibited progress in this regard. A roadmap has, however, been developed with the target of achieving certification by the end of 2021.

Risk management

As integrated risk management is an essential component of the Sibanye-Stillwater approach to safe production, considerable attention was given to further enhance management of risks. Our main risks are rock mass failure, trackless mobile machinery, rail-bound equipment, winches and rigging, shafts and fires.

Understanding risk and the management thereof within the Group is essential for the risk programme to function. Therefore, as part of the risk programme, a weekly risk "Power Hour" was initiated with operational management teams at the SA PGM operations. During these sessions, the risk management layered approach is presented and practical exercises are conducted.

To mitigate and control these risks we have increased the use of bowtie methodology. The top five risks identified are analysed and based on a causation model, providing a clear pictorial on how we manage the risk. Operations are required to conduct self-assessments on critical controls on a monthly basis to ensure controls are in place and are adequate to mitigate the risk. We are investigating electronic-based systems to assist in managing critical control assessments.

During 2020 a causation model with supporting procedures was developed to investigate and report on all high potential incidents. These have been finalised and will be rolled out across the Group in 2021.

Further to that, the Rock engineering department was brought on-board and a discipline specific checklist was designed and tailor made for their specific use. Ultimately, the information from these technical inspections, will form part of an overall risk exposure score to highlight areas of concern and where attention is needed.

TARP

The Trigger Action Response Plan (TARP) is a system and strategy used to identify, classify, and then treat hazards. It is focused on proactively detecting and dealing with a change in rock mass characteristics at the appropriate level. While it has been extensively used in the SA operations, in 2020 the system was effectively rolled out at the US PGM operations.

A key focus in 2020 was to familiarise and grow the knowledge of employees in their roles and level of responsibility when dealing with geological features and managing falls of ground.

Further developments are taking place to put the employee into virtual reality using technology to enhance ability and then to augment the experience. This also has the ability to enhance soft skills.

Technology

Syncromine has seen constant evolution and improvement with a deep dive that was conducted on the fall-of-ground risk identification. This entailed a revamp of the safety officer checklists to include detailed inspection points pertaining to the TARP methodology to facilitate improved risk analysis.

Syncromine information is utilised for pre-determined reports on pre-determined intervals that are auto-generated and distributed to interested parties, management included. These can be used as a snap shot of the current situation in the workplace and ensure preventative measures are devised.

G.E.T. Safe

The US PGM operations adhere to the G.E.T. (Guide, Educate, and Train) Safe – Safety and Health Management System, which provides the overall framework for continuous improvement in safety performance. The G.E.T Safe initiative comprises 20 modules that encompass every sphere of the business. In 2020, priority was given to completing four of the 20 modules. These included:

- Leadership development
- Change management
- Behaviour optimisation
- Fatality prevention/risk management

OTHER FOCUS AREAS

Focus on total recordable injury frequency rate (TRIFR)

In future, the Group will increase its focus on the total recordable injury frequency rate (TRIFR) in order to reduce low energy incidents without compromising efforts in the step change approach towards zero fatalities. We will continue to actively monitor and benchmark ourselves against other safety performance measures including leading indicators, lost time, serious and fatality injury frequency rates. A Group TRIFR benchmark of 4.0 per million hours worked has been set to be achieved by the end of the 2025 year.

Emergency planning

Emergencies are governed by procedures and protocols to address any eventuality that may arise, including but not limited to injuries, major or high potential scenarios such as underground fires, and floods. An emergency response is triggered through on-site control rooms that are manned 24/7 and which follow protocols to inform relevant emergency services, senior management and proto teams when necessary. Management has been trained in emergency control and in the event of a major incident, an emergency control room is set-up and manned by senior management from which the event is coordinated and tracked.

All employees are trained and inducted in emergency protocols and monthly emergency drills are conducted to ensure understanding and knowledge retention. All supervisors are trained in first aid and have full access to first aid equipment.

All underground workings are equipped with secondary escape routes and emergency refuge bays that are regularly inspected for safety and adequacy by management teams.

The US PGM operations’ emergency response plans were updated during the year and took into account the ISO 45001:2018: Occupational health and safety system requirements. The response plans extend to responsibilities, and communication protocols amongst others. All the US salaried personnel are trained

on the site specific emergency response plans as a course of business. On a monthly basis the US safety team interacts with the local emergency planning committees in both operating counties with the committees representing law enforcement, emergency services, local businesses and local citizens.

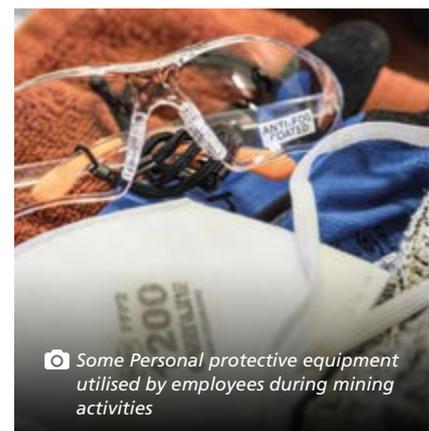
Impact of illegal mining on our SA operations

Illegal mining is a significant risk and hindrance to our efforts in facilitating and maintaining a safe working environment. We have, however, made great strides in the battle against illegal miners (or zama zamas as they are known locally).

The illegal miners are often heavily armed and, when trespassing on operating mines, have been known to set ambushes and booby traps for employees, security and rival groups of illegal miners. Risky illegal mining activities are life-threatening to the illegal miners themselves as well as to the security personnel when they encounter the illegal miners. To maintain a safe operating environment, Sibanye-Stillwater Protection Services provides protection services and specialised investigative services to the SA operations.

Although our gold operations are more impacted by illegal mining due to their long history and the extent of mined and unmined areas, illegal mining also occurs at our PGM operations where illegal miners access remote underground concessions, primarily to steal copper cable, through ‘holings’ (holes accessing the underground environment).

For more details see the *Combating Illegal mining fact sheet 2020*.



Some Personal protective equipment utilised by employees during mining activities

CONTINUOUS SAFE PRODUCTION CONTINUED

PERFORMANCE

Our safety performance in 2020 was inevitably influenced by the COVID-19 pandemic. Over and above the high safety and behaviour standards which we follow to ensure safe production every day, 2020 brought an additional layer of COVID-19 protocols to which each employee and contractor were and still are required to adhere.

Additional pressure was added with the lockdowns imposed in South Africa at the end of March 2020 resulting in forced closure of all underground mining operations, followed by the slow-ramp in production (with some employees not able to return from neighbouring countries) and the revised operating procedures all of which had a range of consequences on our operations and employees.

Despite these challenges, and by staying the course of maintaining our enhanced safety focus and initiatives, a number of milestones were achieved during the year including:

Fatality free shifts worked	SA PGM operations	Date achieved
More than 10 million shifts	SA PGM plants and concentrators (16 million shifts)	18 June 2020
5 million shifts	Westerns mine (K3 and 4B/1B shafts)	3 November 2020
	SA PGM operations	1 December 2020
	SA PGM operations	15 October 2020
3 million shifts	Kroondal and Rustenburg operations	3 December 2020
2 million shifts	Marikana mining	6 October 2020
	Kroondal and Rustenburg operations	22 November 2020
	Kwezi and K6 Shafts	15 December 2020
1 million shifts	Kroondal operations	22 September 2020
	Saffy shaft	20 October 2020

The US PGM operations achieved 3 million fatality free shifts (since October 2011) on the 2 February 2021.

Fatality free shifts worked	SA gold operations	Date achieved
More than 10 million shifts	SA gold operations (13 million shifts)	4 August 2020
5 million shifts	Kloof Upper and Cooke	11 July 2020
	Kloof Upper	25 March 2020
4 million shifts	Total Driefontein	6 October 2020
	Total Kloof	22 November 2020
3 million shifts	Kloof Lower	6 November 2020
	Total Beatrix	1 September 2020
2 million shifts	Beatrix North (3 shaft)	19 October 2020
	Beatrix BMU1 (North and South shafts)	16 July 2020
1 million shifts	Driefontein (Pitseng D2)	14 December 2020
	Beatrix South (2 Shaft)	4 December 2020
	SA gold operations	19 November 2020
	Driefontein (Ya Rona D4)	26 October 2020
	Driefontein (Masakhane D1 and Bambasanani D6)	28 July 2020
	Driefontein (Masakhane D1, Pitseng D2 and Ya Rona D4)	9 June 2020
	Driefontein (Pitseng D2 and Ya Rona D4)	27 May 2020
	Driefontein (Hlanganani D5)	29 January 2020

Notwithstanding all our efforts to prevent harm, we are deeply saddened to report the loss of nine (2019: 6) lives at our SA operations (four fatalities at the SA gold operations (2019: 0) and five fatalities at the SA PGM operations (2019: 6)). Our US PGM operations, however, have remained fatality free since 2011.

A factor that had an influence on the safety performance was the change in composition in most of the mining crews, a direct consequence of the impact of COVID-19 and the associated lockdown on our operations. As not all employees were able to return at the same time, with some not being able to cross borders and others having to isolate or quarantine at various stages in the year, we were compelled to adjust the composition of mining crews to accommodate these absences. This had an impact on team dynamics which indirectly had an impact on productivity and safety indicators.

This was similarly the case with frontline supervisors who were required to engage with new crews as production was ramped up.

To mitigate this, in the second half of 2020 new training initiatives were designed and rolled out for frontline supervisors to better equip them in engaging and leading these new crews. The Khumbul’ekhaya mining industry-wide safety initiative was also relaunched at our SA operations in an effort to remind employees to protect their colleagues, to comply with the standard operating procedures and to maintain vigilance in preventing accidents.

In addition to the alteration in crew composition, a not insignificant factor determining the overall safety performance has been the financial distress of many employees. Having not earned their full wage for many months,

some crews and supervisors have flouted some safety procedures or overlooked incidents with the intention of reaching their targets and receiving bonuses.

These factors largely account for the lost-time injury frequency rate (LTIFR) performance, which regressed to 5.56 (2019: 5.23).

In memoriam

The Board and management of Sibanye-Stillwater extend their deepest condolences to the families, friends and colleagues of our eight employees and one contractor who lost their lives in the line of duty during the year.

Date	Operation	Name	Employee/ contractor	Occupation	Incident
17 January 2020	Bambanani Shaft, Kroondal	Mr Joao Silindane	Employee	Rock drill operator	Rock mass failure
7 February 2020	Rowland Shaft, Marikana	Mr Khulile Nashwa	Employee	Winch operator	Locomotive derailment
20 March 2020	Thembelani Shaft, Rustenburg	Mr Emanoel Kaphe	Employee	Rock drill operator	Rock mass failure
24 March 2020	Siphumelele Shaft, Rustenburg	Mr Rossofino Manhavelle	Employee	Belt attendant	Slip and fall
8 August 2020	Kloof 1 Shaft	Mr Mfuneka Manikela	Contractor	Contractor	Inundation of broken rock
13 August 2020	Driefontein 5 Shaft	Mr Bonginkosi Hlope	Employee	Learner miner	Rock mass failure
2 October 2020	Beatrix 4 Shaft	Mr Ceb Gunguthwa	Employee	Miner	Rock mass failure
2 October 2020	Beatrix 4 Shaft	Mr Hlophang Temeki	Employee	Rock drill operator	Rock mass failure
6 December 2020	Rowland Shaft, Marikana	Mr Erens Mello	Employee	Winch operator	Scraping and rigging

CONTINUOUS SAFE PRODUCTION CONTINUED

Safety performance

	2020				2019				2018			
	US				US				US			
	Group	operations	SA operations		Group	operations	SA operations		Group	operations	SA operations	
	PGMs	PGMs	Gold		PGMs	⁴ PGMs	Gold		PGMs	PGMs	Gold	
Fatalities	9	0	5	4	6	0	6	0	24	0	3	21
Fatal injury frequency rate ¹	0.06	0.00	0.06	0.06	0.04	0.00	0.06	0.00	0.16	0	0.05	0.24
Number of lost-time injuries	840	34	441	365	876	41	475	360	881	35	268	578
Lost-time injury frequency rate (LTIFR) ¹	5.56	7.98	5.37	5.65	5.23	10.13	4.77	5.62	5.89	9.97	4.68	6.52
Total injury frequency rate	8.52	12.67	9.50	6.99	8.40	32.38	7.84	7.76	8.58	13.96	6.63	8.84
Number of serious injuries	458	27	200	231	508	35	248	225	553	25	126	404
Serious injury frequency rate (SIFR) ¹	3.03	6.34	2.44	3.57	3.03	8.65	2.49	3.52	3.70	7.12	2.20	4.53
Medically treated injury frequency rate (MTIFR) ^{1,2}	2.95	4.69	4.13	1.35	3.17	22.24	3.06	2.14	2.69	23.94	1.95	2.32
Total recordable injury frequency rate (TRIFR) ¹	6.69	12.67	6.30	6.81					Not previously reported			
Total recordable injuries	1,011	54	517	440					Not previously reported			
Number of Section 54/regulator work stoppages	68	2	29	43	126	6	35	85	263	na	44	219
Production shifts lost owing to Section 54/regulator stoppages	200	0	154	46	226	³ na	214	12	545	na	149	396
Total hours worked (millions)	151	4.3	82 .1	64.6	167.5	4.0	99.4	64	149.5	3.5	57.3	88.6

Note: Safety statistics include contractors

¹ Per million hours worked- total number of accidents x 1,000,000/hours worked

² Also referred to as treat-and-return injury frequency rate which includes certain minor injuries

³ The US PGM operations have not tracked this figure to date

⁴ Includes Marikana operation from June 2019

Our performance in perspective: SA peer comparison¹

Company	Serious injury frequency rate	Serious injury frequency rate ranking	Lost time injury frequency rate	Lost time injury frequency rate ranking	Fatal injury frequency rate	Fatal injury frequency rate ranking
PGM						
Sibanye-Stillwater SA PGM operations	2.44	2	5.37	2	0.061	3
Peer 1	1.41	1	2.02	1	0.016	2
Peer 2	4.04	3	5.42	3	0.012	1
Gold						
Sibanye-Stillwater gold operations	3.57	2	5.65	2	0.06	1
Peer 1	4.03	3	6.51	3	0.12	2
Peer 2	3.25	1	5.21	1	0.30	3

¹ Rates are per million hours worked. Peers include: Harmony Gold, AngloGold Ashanti, Anglo American Platinum and Impala Platinum

SA GOLD OPERATIONS

The gold operations remained steadfast in their commitment to safe production and progressing towards achieving zero harm. For the first half of the year, at least until August, the operations were able to maintain and capitalise on the significant progress that had been made from the previous year in improving the safety performance, particularly the fatal injury frequency rate. In July, the SA gold operations recorded 13 million fatality free shifts, equating to an almost two-year fatal-free period. This record was broken when a subsequent series of incidents tragically resulted in the loss of four lives.

These fatalities have highlighted the fact that fall-of-ground incidents remains our single greatest challenge and that rock mass management still requires much improvement. More than 40% of all safety-related incidents during the year stemmed from rock mass issues. However, the seismicity study, completed in 2020, is proving an excellent base from which we can devise and implement initiatives that will help mitigate this risk.

We are also building capacity in our rock engineering team and providing additional resources so that crews and the safety teams are in a better position to handle seismicity related issues.

Winches and rigging incidents as well as shaft-related incidents continued to be the two other risks posing the greatest challenge to safe production. Fire incidents, mainly as the result of illegal mining activities is on the rise and significant action has been taken to reduce these incidents.

In an effort to more effectively manage these risks, bowtie analyses were undertaken to determine critical control measures for each operation within the gold operation. These critical controls are in the process of being monitored through QlikView to assist in planning execution and to ensure that the right decisions are being taken during mining operations.

To further enhance our management of risks and cement our safe production strategy, we embarked on a review of high potential incidents. To aid this process, we appointed 15 additional safety officers in 2020, to oversee the implementation of critical learnings stemming from high potential incidents. These additional safety officers proved an invaluable asset during the critical time of restarting and ramping up operations as lockdown restrictions were eased in South Africa.

The combination of these initiatives resulted in substantial improvements in all our leading and lagging indicators.

SA PGM OPERATIONS

Regrettably, our safety performance continued to be hampered by a number of fatalities and serious injury incidents in 2020. Tragically, we recorded five fatalities in 2020, two of which were the result of rock mass failures, one the result of a locomotive derailment and the other regarded as a slip and fall accident. The fifth fatality was the result of a scraping and rigging incident. In-depth investigations and extensive engagements with management, stakeholders and specialists were undertaken in the wake of these incidents to identify root causes and devise preventative measures.

We subsequently implemented a number of risk reduction initiatives, which included:

- Real risk reduction (focused on leading indicators)
 - Risk rating classification
 - Risk response protocols
 - Safety officers bonus review
- Rock mass management
 - Technology – canopy jacks, blast on nets
 - Support standards review
 - Ledgering practices and controls adoption
- Priority bowtie risk assessments and critical controls

- Fall-of-ground risk deep dive and rock mass management
- Risk/Agency Management Models similar to rock mass (trackless mobile machinery, rail bound equipment, etc)
- TMM Deep dive (planned/preventative maintenance)
- Fire retardant belt installation
- Rail bound equipment – auto retardation and stopping, remote signalling and emergency stoppage
- Trackless mobile machinery equipment – oil fire prevention and level 9 auto retardation and stopping
- Underground fires – preventative controls and response preparedness

As two of the fatalities were related to fall-of-ground incidents, we renewed our focus on rock mass management initiatives across all operations. A system review was conducted to improve the functionality of the system through the inclusion of dissected observation points for safety officers. Further to this the Rock Engineering Department began using Syncromine with tailor-made checklists for their specific needs and technical requirements.

“A” hazard management is thoroughly embedded and these are tracked and reported on a continual basis. The implementation and close-out of required actions pertaining to “A” hazards are well managed and dealt with by the operations within two days on average. Open “A” hazards are constantly monitored and escalated to ensure that they are attended to timeously.

Catastrophic risk management continued at the processing and mining operations which includes the identification of critical controls, critical control requirements and control self-assessment protocols as well as monthly audits to identify such events. The focus on top management visibility in the form of visible felt leadership remains an important intervention at the processing operations.

CONTINUOUS SAFE PRODUCTION CONTINUED

US PGM OPERATIONS

While there has not been a fatality at any of the three US PGM operations since 2011, the total reportable injury frequency rate is an ongoing concern. To further enhance the focus on safe performance, the US PGM operations has dedicated a senior role within the region to safety and health. The current structure has also increased the number of employees working within this area to provide additional support for operations. The most common injuries are those caused when employees are struck by a moving object or injured by tools, equipment as well as slips, trips and falls.

The continued fall-of-ground incidents have resulted in an increase in the number of full-time rock mechanic engineers and training programmes. Stillwater has increased its number of full-time rock mechanic engineers from one to seven over the last two years and, in 2020, East Boulder employed a full-time engineer for the first time in ten years. The Rock mechanic engineers provided training to the general foreman, supervisors, geologists and miners. Since the bolstering of the resources a reduction of approximately 25% was achieved on fall of ground incidents.

One initiative that is proving to have a positive impact on the safety performance and was a continued area of focus in 2020 was the utilisation of telemetry in our mines. In the past year we continued to install New Tracks telemetry software at East Boulder, an initiative that is proving invaluable in tracking people in the mine. We also began installing it on some of the major equipment, which will help to provide more accurate equipment usage data and improve safety performance. At this stage New Tracks is not being installed in Stillwater as the mine does not have the network infrastructure to support the software.

Another initiative to help improve safety in the long-term is the introduction of a new process of air cooling slag in pots instead of it being granulated. In the past, there have been a number of high potential incidents associated with the granulation process and rapid steam releases which are more common when slag and matte are simultaneously introduced into the granulation system. This process also reduces the amount of time the crane is in the air, which limits overhead loads.

Modifications in concentrate handling also began in 2020. With major infrastructure developments at Stillwater and the metallurgical complex and a smaller degree of change at East Boulder, the concentrate will now be hauled in side dump trucks to Columbus, the metallurgical facility, and those same trucks will be used to haul slag back up to the mine site. This will not only greatly increase capacity for concentrate handling both at the mine site and at the metallurgical complex, but also eliminate the process of dumping the bins, a task which had some associated hazards. It will result in the reduction of hundreds of trips a year, which will substantially aid the Good Neighbor Agreement in terms of the traffic on the roads.

East Boulder achieved a safety milestone during the second quarter with the successful excavation of the 670-ramp system daylighting to surface via the Frog Pond adit. This provides an egress at the top of the mine, in addition to Tunnel 1 and 2. A building for shelter in case of inclement weather was also constructed.

US PGM operations: injuries by category

	2020	2019	2018
Struck by objects (tools, equipment and others)	14	9	12
Strains/soft tissue injuries	10	14	6
Slips/trips/falls	10	7	13
Caught in/between	8	7	4
Rockfall	3	7	4
Operating equipment	2	6	4
Operating jackleg	2	3	3
Eye injuries	0	1	2
Chemical burns/other	0	0	1

FUTURE FOCUS

SA GOLD OPERATIONS 1

- Focused effort to improve total recordable injury frequency rate (TRIFR) at each operation
- In line with the overall safe production strategy, our primary focus will remain on critical control management, the quality of workplace inspections by line and service departments and timely closeout of identified hazards in our workplaces
- Continual engagement of employees and worker representatives, as well as the promotion of a healthy and safe work culture through demonstrated leadership involvement, forms a key component of achieving ongoing safety improvements
- Further roll out of TARP as an aspect of rock mass management
- High potential reviews and incorporating the lessons learned
- ISO 45001:2018 Occupational health and safety system certification by 2021
- Continued focus on leading indicators and closing of 'A-Hazards'

SA PGM OPERATIONS 2

- Focused effort to improve TRIFR at each operation
- Implement and maintain real risk reduction strategies
- Focus on ISO 435001:2018 Occupational health and safety system certification for the total PGM segment
- Focus on the roll out of S3 risk management (as developed in conjunction with Queensland University) training to middle management
- Focus on training and implementation of the new investigation module (Loss causation module and iCAM combined)
- Continue to align safety documentation with the Protection of Personal Information Act (POPIA)
- Emphasis on the ABC of mining, rock mechanics training to team leaders, miners, supervisors and management staff across all mines
- Continued focus on the effective use of the TARP process
- Fully utilising system driven leading indicators to measure and manage poor performing crews
- Emphasis on behavioural based safety/culture change through 'Under the tree' sessions and culture transformation training interventions across all operations
- Continue with the Safety summit process started in 2020

US PGM OPERATIONS 3

- Focused effort to improve TRIFR at each operation
- The main focus in 2021 will be the full implementation of the G.E.T. Safe strategy and achieving ISO 45001:2018 Occupational health and safety system certification. Much work still needs to be done in this regard but we remain on track to fulfil these objectives
- Another focus will be the roll out of the rock mass management system to the East Boulder and Stillwater mines
- Ensuring safe behaviour will be a new target for the team in 2021. As we have identified that a large percentage of injuries have a behavioural component, we are cognisant that some employees may not be making the right choices in critical situations
- Lastly, a gap analysis of all systems and processes used on the three sites will be undertaken to identify areas of concern and to ensure that we achieve Group commonality on key safety indicators