



SUSTAINABILITY DATA TABLES 2019

We do it better

Safety

Operation	SHEQ certification	LTIFR					Awards/Achievements in F2019
		F2019	F2018	F2017	F2016	F2015	
Ferrous division							
Beeshoek Mine	ISO 9001, ISO 14001, ISO 45001, SANS 16001	0.06	0.07	0.15	0.07	0.07	Completed 4 million fatality-free shifts (last fatality in 2005). Awarded first prize for most-improved safety performance and second prize for safety performance in its class at the 2018 MineSAFE Conference. Recorded 17 000 fatality-free production shifts on 18 September 2018, an accomplishment that took 15 years and 6 months to achieve. Recognised in the top three best-performing surface mines at the annual Northern Cape Mine Managers' Association convention in November 2018.
Black Rock Mine	ISO 9001, ISO 14001, ISO 45001, SANS 16001	0.33	0.20	0.24	0.35	0.35	Achieved 7 million fatality-free shifts on 7 March 2019, an achievement that took ten years to complete. Recognised in the top three best-performing underground mines at the annual Northern Cape Mine Managers' Association convention in November 2018.
Cato Ridge Works	ISO 9001, ISO 14001, OHSAS 18001	–	–	0.19	0.17	0.38	Completed 2.4 million fatality free shifts and achieved two years and 11 months without a Lost-Time Injury (LTI). Completed 704 days without a Lost Time Injury at 30 June 2018.
Khumani Mine	Integrated certification of ISO 9001, ISO 14001 and ISO 45001. Also SANS 16001 certified	0.08	0.10	0.1	0.17	0.29	Completed 2.7 million fatality-free shift (last fatality in 2015). Achieved the lowest LTIFR in the mine's history. Achieved 3 000 fatality free production shifts in May 2019 and received a trophy from the DMRE in recognition of this achievement.
Machadodorp Works	ISO 9001. Historically ISO 14001 and OHSAS 18001 certified but did not undergo re-certification audits during F2019. Remains aligned with ISO 14001 and OHSAS 18001.	–	–	–	0.55	–	Completed 1.1 million fatality free shifts and achieved forty months without an LTI.
Platinum division							
Modikwa Mine	ISO 14001, OHSAS 18001	0.90	0.72	0.58	0.64	0.73	
Nkomati Mine	ISO 9001, ISO 14001, OHSAS 18001	0.07	0.30	0	0.09	0.23	Completed 7 million fatality-free shifts (last fatality in 2008).
Two Rivers Mine	OHSAS 18001, ISO 14001. Training Centre is ISO 9001 certified	0.47	0.39	0.31	0.41	0.24	Completed 5 million fatality-free shifts (last fatality in 2012).

SAFETY continued

SECTION 54 AND SECTION 55 NOTICES

	Section 54 Notices					Shifts/days lost				
	F2019	F2018	F2017	F2016	F2015	F2019	F2018	F2017	F2016	F2015
Ferrous division										
Beeshoek Mine	–	1	–	–	–	–	–	–	–	–
Khumani Mine	–	–	1	–	3	–	–	–	–	11
Black Rock Mine	1	1	–	1	–	–	3	–	–	–
Platinum division										
Nkomati Mine	–	5	5	4	2	–	15	13	14	5
Two Rivers Mine	6	13	3	7	1	4	24	12	17	6
Modikwa Mine	12	11	12	16	20	60	47	53	35	62
Total	19	31	21	28	26	64	89	78	66	84

	Section 55 Notices					Shifts/days lost				
	F2019	F2018	F2017	F2016	F2015	F2019	F2018	F2017	F2016	F2015
Ferrous division										
Beeshoek Mine	–	–	–	–	–	–	–	–	–	–
Khumani Mine	–	1	–	–	–	–	–	–	–	–
Black Rock Mine	1	–	–	–	–	–	–	–	–	–
Platinum division										
Nkomati Mine	–	–	1	1	1	–	–	–	–	–
Two Rivers Mine	–	3	–	1	–	–	–	–	–	–
Modikwa Mine	1	4	–	–	–	–	–	–	–	–
Total	2	8	1	2	1	–	–	–	–	–

	F2019	F2018	F2017	F2016	F2015
Number of employees per safety stats	11 316	12 266	11 531	13 109	13 807
Number of Contractors per safety stats	9 319	9 285	8 188	8 479	9 684
Total	20 634	21 551	19 719	21 588	23 491

SAFETY continued

**2019
Safety performance
by region**

	Employees			Contractors			Total		
	Fatalities	Lost time injuries	Recordable injuries	Fatalities	Lost time injuries	Recordable injuries	Fatalities	Lost time injuries	Recordable injuries
ARM Corporate	–	–	–	–	–	–	–	–	–
Beeshoek Mine	–	1	3	–	–	–	–	1	3
Blackrock Mine	–	9	24	–	5	17	–	14	41
Cato Ridge Works	–	–	1	–	–	–	–	–	1
Khumani Mine	–	2	8	–	–	9	–	2	17
Machadodorp Works	–	–	–	–	–	1	–	–	1
Modikwa Mine	1	52	93	–	4	6	1	56	99
Nkomati Mine	–	1	4	–	1	15	–	2	19
Two Rivers Mine	–	14	38	–	1	6	–	15	44
ARM total	1	79	171	–	11	54	1	90	225

By region

Gauteng (ARM Corporate)	–	–	–	–	–	–	–	–	–
KwaZulu-Natal (Cato Ridge Works)	–	–	1	–	–	–	–	–	1
Mpumalanga (Modikwa, Two Rivers and Nkomati Mines, and Machadodorp Works)	1	67	135	–	6	28	1	73	163
Northern Cape (Beeshoek, Black Rock and Khumani Mines)	–	12	35	–	5	26	–	17	61
ARM total	1	79	171	–	11	54	1	90	225

Employees			Contractors			Total		
Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate	Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate	Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate
–	–	–	–	–	–	–	–	–
–	0.11	0.33	–	–	–	–	0.06	0.19
–	0.41	1.08	–	0.25	0.86	–	0.33	0.98
–	–	0.27	–	–	–	–	–	0.17
–	0.12	0.48	–	–	0.95	–	0.08	0.65
–	–	–	–	–	1.01	–	–	0.60
0.022	1.14	2.04	–	0.24	0.35	0.016	0.90	1.58
–	0.12	0.48	–	0.05	0.76	–	0.07	0.68
–	0.60	1.62	–	0.12	0.74	–	0.47	1.39
0.008	0.61	1.31	–	0.13	0.64	0.005	0.42	1.05

–	–	–	–	–	–	–	–	–
–	0.23	0.69	–	0.13	0.70	–	0.19	0.69
0.013	0.87	1.75	–	0.13	0.60	0.008	0.60	1.32
0.008	0.61	1.31	–	0.13	0.64	0.005	0.42	1.05

Average total hours worked		
Employees	Contractors	Total
192 036	35 364	227 400
1 806 425	1 294 158	3 100 583
4 430 300	3 950 918	8 381 218
732 998	420 181	1 153 179
3 338 566	1 902 929	5 241 495
134 972	197 264	332 236
9 104 650	3 394 010	12 498 660
1 654 537	3 966 998	5 621 535
4 702 538	1 631 758	6 334 296
26 097 022	16 793 580	42 890 602

192 036	35 364	227 400
10 443 261	7 765 450	18 208 711
15 461 725	8 992 766	24 454 491
26 097 022	16 793 580	42 890 602

SAFETY continued

**2018
Safety performance
by region**

	Employees			Contractors			Total			Employees			Contractors			Total			Average total hours worked		
	Fatalities	Lost time injuries	Recordable injuries	Fatalities	Lost time injuries	Recordable injuries	Fatalities	Lost time injuries	Recordable injuries	Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate	Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate	Fatality frequency rate	Lost time injury frequency rate	Recordable injury frequency rate	Employees	Contractors	Total
ARM Corporate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192 036	35 364	227 400
Beeshoek Mine	-	1	3	-	-	1	-	1	4	-	0.11	0.33	-	-	0.17	-	0.07	0.27	1 831 659	1 166 455	2 998 114
Blackrock Mine	-	5	20	-	2	5	-	7	25	-	0.23	0.93	-	0.15	0.37	-	0.20	0.71	4 300 938	2 723 283	7 024 221
Cato Ridge Works	-	-	4	-	-	-	-	-	4	-	-	1.11	-	-	-	-	-	0.69	718 591	445 646	1 164 237
Khumani Mine	-	2	9	-	1	2	-	3	11	-	0.11	0.48	-	0.10	0.20	-	0.10	0.38	3 749 686	2 005 185	5 754 871
Lubambe Mine*	-	2	5	-	1	2	-	3	7	-	0.29	0.72	-	0.21	0.43	-	0.26	0.60	1 395 065	938 856	2 333 921
Machadodorp Works	-	-	2	-	-	-	-	-	2	-	-	2.87	-	-	-	-	-	1.19	139 354	196 757	336 111
Modikwa Mine	1	47	71	-	6	11	1	53	82	0.019	0.91	1.38	-	0.27	0.49	0.014	0.72	1.11	10 295 130	4 481 300	14 776 430
Nkomati Mine	-	3	11	-	6	18	-	9	29	-	0.35	1.28	-	0.28	0.84	-	0.30	0.97	1 713 508	4 293 289	6 006 797
Two Rivers Mine	-	12	26	-	3	5	-	15	31	-	0.50	1.08	-	0.21	0.35	-	0.39	0.81	4 819 044	2 823 377	7 642 421
ARM total	1	72	151	-	19	44	1	91	195	0.007	0.49	1.04	-	0.20	0.46	0.004	0.38	0.81	29 155 011	19 109 512	48 264 523
ARM Corporate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192 036	35 364	227 400
Ferrous division	-	8	38	-	3	8	-	11	46	-	0.15	0.71	-	0.09	0.24	-	0.13	0.53	10 740 228	6 537 326	17 277 554
Platinum division	1	62	108	-	15	34	1	77	142	0.012	0.74	1.28	-	0.26	0.59	0.007	0.54	1.00	16 827 682	11 597 966	28 425 648
Copper division	-	2	5	-	1	2	-	3	7	-	0.29	0.72	-	0.21	0.43	-	0.26	0.60	1 395 065	938 856	2 333 921
ARM total	1	72	151	-	19	44	1	91	195	0.007	0.49	1.04	-	0.20	0.46	0.004	0.38	0.81	29 155 011	19 109 512	48 264 523
By region																					
Gauteng (ARM Corporate)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192 036	35 364	227 400
KwaZulu-Natal (Cato Ridge Works)	-	-	4	-	-	-	-	-	4	-	-	1.11	-	-	-	-	-	0.69	718 591	445 646	1 164 237
Mpumalanga (Modikwa, Two Rivers and Nkomati Mines, and Machadodorp Works)	1	62	110	-	15	34	1	77	144	0.012	0.73	1.30	-	0.25	0.58	0.007	0.49	1.00	16 967 036	11 794 723	28 761 759
Northern Cape (Beeshoek, Black Rock and Khumani Mines)	-	8	32	-	3	8	-	11	40	-	0.16	0.65	-	0.10	0.27	-	0.14	0.51	9 882 283	5 894 923	15 777 206
Zambia (Lubambe Mine)	-	2	5	-	1	2	-	3	7	-	0.29	0.72	-	0.21	0.43	-	0.26	0.60	1 395 065	938 856	2 333 921
ARM total	1	72	151	-	19	44	1	91	195	0.007	0.49	1.04	-	0.20	0.46	0.004	0.38	0.81	29 155 011	19 109 512	48 264 523

* Lubambe Mine was sold in December 2017. Safety data is included up to the date of disposal.

Safety definitions

Employees

ARM considers contractors as employees from a health and safety point of view and statistics include contractor hours worked, as well as injuries sustained, in line with legislation and industry standards.

Lost Time Injuries (LTIs)

Any work-related injury that results in a worker being unable to perform their normal duty or similar work on the calendar day following the day of the injury is reported as a Lost Time Injury (LTI). If a suitably qualified medical professional advises that the injured person is unable to perform their normal duties or similar work on the next calendar day after the injury, regardless of the injured person's next rostered shift, a Lost Time Injury is deemed to have occurred.

Restricted Work Injuries (RWIs)

An RWI is defined as a work-related injury which results in the worker being able to work, but unable to perform one or more of their routine functions for a full working day, from the day after the injury occurred as certified by advice from a suitably qualified healthcare provider. Although RWIs are reported separately in some industry forums in which ARM participates, all RWIs are classified as LTIs and included in our reporting of LTIs.

Recordable Injuries (RIs)

A recordable injury case is a work-related injury of sufficient severity that it requires medical treatment beyond first aid or results in the worker's inability to perform their normal duty or similar work on the calendar day following the day of the injury. Medical treatment beyond first aid refers to treatment regardless of the professional status of the person providing the treatment. At a minimum, it includes wounds that need suturing, fractures, bruising that requires drainage of blood, second and third degree burns and cases where prescription drugs or non-prescription drugs at prescription dosage are prescribed to manage symptoms. Recordable injuries include non-LTI injuries that require medical treatment, Lost Time Injuries and fatalities.

Reportable accident (Mine Health and Safety Act)

For the mining operations to which the Mine Health and Safety Act applies; in terms of Chapter 23, reportable accidents refer to any accident that results in:

- a) the death of an employee;
- b) an injury to any employee, likely to be fatal;
- c) unconsciousness, incapacitation from heatstroke or heat exhaustion, oxygen deficiency, the inhalation of fumes or poisonous gas, or electric shock or electric burn accidents of or by any employee and which is not reportable in terms of paragraph (d);

d) an injury which either incapacitates the injured employee for performing that employee's normal or similar occupation for a period totaling 14 days or more, or which causes the injured employee to suffer the loss of a joint, or part of a joint, or sustain a permanent disability;

e) an injury, other than injuries referred to in paragraph (d), which incapacitates the injured employee from performing that employee's normal or similar occupation on the next calendar day.

Reportable accident (Occupational Health and Safety Act)

For the smelters to which the Occupational Health and Safety Act 85 of 1993 applies, reportable accidents are defined in Sections 24 and 25 of the Act, as follows:

Each incident occurring at work or arising out of or in connection with the activities of persons at work, or in connection with the use of plant or machinery, in which, or in consequence of which:

- a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or to continue with the activity for which he/she was employed or is usually employed;
- b) a major incident occurred; or
- c) the health or safety of any person was endangered and where:
 - i. a dangerous substance was spilled;
 - ii. the uncontrolled release of any substance under pressure took place;
 - iii. machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or
 - iv. machinery ran out of control.

Section 54 of the Mine Health and Safety Act

Provides for an Inspector of Mines, who has reason to believe that any occurrence, practice or condition at a mine endangers or may endanger the health or safety of any person at the mine, to give any instruction necessary to protect the health or safety of persons at the mine, including an instruction that operations at the mine or a part of the mine be halted.

Section 55 of the Mine Health and Safety Act

Allows for an Inspector of Mines, who has reason to believe that an employer has failed to comply with any provision of the Mine Health and Safety Act, to instruct that employer in writing to take any steps that the Inspector considers necessary to comply with the provision.

Occupational health and wellness

CHRONIC CONDITIONS

Medical condition	F2019			
	Newly diagnosed	Existing	Total of employees with condition	Percentage of total workforce affected
Hypertension	93	2 270	2 363	11.5%
Diabetes Type 1	1	36	37	0.2%
Diabetes Type 2	15	452	467	2.3%
Epilepsy	1	15	16	0.1%
Upper Respiratory Tract Infections (URTI) (including repeats)			12 194	59.1%

AUDIOMETRIC EXAMINATIONS

	F2019	F2018	F2017	F2016	F2015
Number of tests performed	36 572	33 812	38 723	29 715	42 627
Number of tests referred	168	210	137	93	144
Percentage of total (referred/performed)	0.46	0.62	0.35	0.31	0.34
Number of tests submitted for compensation	26	68	21	20	30
Percentage of total (comp. submit./performed)	0.07	0.20	0.05	0.07	0.07
Number of cases compensated	22	65	0	15	12
Percentage of total (compensated/referred)	13.10	30.95	0.00	16.13	8.33

NOISE-INDUCED HEARING LOSS

	F2019	
	Number of employees	Percentage of total workforce
Shifts in PLH (percentage loss of hearing)		
PLH >5% to <10%	547	2.7%
PLH >10%	292	1.4%

NOISE-INDUCED HEARING LOSS PER OPERATION

Operation	F2019		F2018		F2017		F2016		F2015	
	Referred	Submitted for compensation	Referred	Submitted for compensation	Referred	Submitted for compensation	Referred	Submitted for compensation	Referred	Submitted for compensation
Beeshoek Mine	5	1	8	0	14	–	23	3	51	13
Khumani Mine	18	4	1	1	6	1	3	1	17	1
Black Rock Mine	8	1	11	0	9	1	9	–	5	2
Cato Ridge Works	13	0	0	0	1	–	–	–	2	–
Machadodorp Works	0	0	0	1	4	–	–	–	–	–
Nkomati Mine	0	0	1	1	1	1	5	1	5	2
Two Rivers Mine	46	2	27	18	48	7	–	–	2	–
Modikwa Mine	78	18	162	47	54	11	51	15	58	12
Total	168	26	210	68	137	21	91	20	140	30

Environment

CARBON FOOTPRINT (tCO₂e): SCOPE 1 AND 2 ON AN ATTRIBUTABLE BASIS

	F2019	F2018	F2017	F2016	F2015
Beeshoek Mine	42 352	40 187	36 189	37 211	42 934
Khumani Mine	160 409	144 921	144 442	146 394	132 638
Black Rock Mine	77 265	70 228	68 167	61 773	72 419
Dwarsrivier Mine	–	–	–	32 221	28 891
Cato Ridge Works	337 490	325 819	352 623	335 633	420 536
Machadodorp Works	6 514	5 876	6 618	2 611	116 271
Nkomati Mine	224 904	203 050	197 968	213 557	202 826
Two Rivers Mine	131 271	120 109	124 948	126 467	114 399
Modikwa Mine	121 683	115 876	112 072	116 756	107 398
Lubambe Mine*	–	–	4 227	4 955	7 409
Corporate office	726	182	164	168	410
ARM total	1 102 614	1 026 249	1 047 418	1 077 746	1 246 131
Ferrous division	624 030	587 032	608 040	615 843	813 691
Platinum division	477 858	439 035	434 988	456 780	424 622
Copper division*	0	0	4 227	4 954	7 409
Corporate office	726	182	164	167	410
ARM total	1 102 614	1 026 249	1 047 418	1 077 744	1 246 132

ELECTRICITY (MWH) – 100% BASIS

	F2019	F2018	F2017	F2016	F2015
Beeshoek Mine	38 275	38 762	34 937	35 627	38 396
Khumani Mine	195 599	189 462	206 023	200 131	186 112
Black Rock Mine	126 944	125 792	121 656	108 039	105 739
Dwarsrivier Mine	–	–	–	58 122	56 218
Cato Ridge Works	453 658	463 924	500 701	473 292	608 273
Machadodorp Works	11 430	11 432	12 097	12 171	169 480
Nkomati Mine	354 285	342 372	329 210	350 847	353 249
Two Rivers Mine	211 514	209 593	215 371	213 076	209 616
Modikwa Mine	266 238	274 746	260 016	265 561	261 567
Lubambe Mine*	–	–	104 316	103 776	113 801
Corporate office	685	187	164	160	Not material
ARM total	1 658 629	1 656 271	1 784 491	1 820 802	2 102 451
Ferrous division	825 906	829 371	875 415	887 382	1 164 218
Platinum division	832 037	826 710	804 597	829 484	824 432
Copper division*	–	–	104 316	103 776	113 801
Corporate office	685	187	164	160	Not material
ARM total	1 658 629	1 656 268	1 784 491	1 820 802	2 102 451

* Lubambe Mine was sold in December 2017.

ENVIRONMENT continued

DIESEL CONSUMPTION (000 LITRES) – 100% BASIS

	F2019	F2018	F2017	F2016	F2015
Beeshoek Mine	15 497	14 993	13 457	13 584	17 562
Khumani Mine	38 763	37 410	30 556	32 575	32 474
Black Rock Mine	6 203	5 937	4 919	5 153	5 271
Dwarsrivier Mine	0	0	0	1 950	1 763
Cato Ridge Works	329	594	454	404	530
Machadodorp Works	327	229	450	596	787
Nkomati Mine	26 327	26 295	25 212	24 436	26 311
Two Rivers Mine	4 816	4 382	4 283	4 180	3 876
Modikwa Mine	3 792	4 394	4 534	4 744	4 688
Lubambe Mine	0	0	3 628	4 347	6 550
Corporate office	0	0	1	2	Not material
ARM total	96 055	94 234	87 494	91 974	99 812
Ferrous division	61 118	59 163	49 837	54 264	58 387
Platinum division	34 936	35 071	34 029	33 361	34 875
Copper division	0	0	3 628	4 347	6 550
Corporate office	–	–	1	2	Not material
ARM total	96 055	94 234	87 494	91 974	99 812

WATER WITHDRAWN (m³) – 100% BASIS

	F2019	F2018	F2017	F2016	F2015
Beeshoek Mine	5 355 264	4 110 562	4 552 211	5 023 349	5 237 869
Khumani Mine	4 485 190	4 433 545	3 999 709	4 634 128	3 647 534
Black Rock Mine	1 701 745	1 400 366	1 008 977	1 129 808	877 478
Dwarsrivier Mine	–	–	–	449 792	639 268
Cato Ridge Works	293 499	239 013	222 329	242 051	322 400
Machadodorp Works	53 847	20 119	28 675	34 599	105 799
Nkomati Mine	4 309 259	3 623 162	1 248 453	3 108 637	3 577 751
Two Rivers Mine	1 893 053	2 944 391	1 655 673	2 443 191	1 407 380
Modikwa Mine	3 681 583	1 525 394	1 256 660	1 147 115	1 342 261
Lubambe Mine	0	0	323 306	853 630	1 176 366
ARM total	21 773 440	18 296 551	14 295 993	19 066 300	18 334 106
Ferrous division	11 889 545	10 203 604	9 811 901	11 513 727	10 830 348
Platinum division	9 883 895	8 092 947	4 160 786	6 698 943	6 327 392
Copper division	0	0	323 306	853 630	1 176 366
ARM total	21 773 440	18 296 551	14 295 993	19 066 300	18 334 106

Workforce breakdown

as at 30 June 2019

BREAKDOWN BY GENDER AND CONTRACT TYPE

Breakdown by operation	Permanent employees			Temporary employees			Full-time employees (Perm + Temp)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Beeshoek Mine (Northern Cape)	568	130	698	60	33	93	628	163	791
Khumani Mine (Northern Cape)	1 479	317	1 796	83	63	146	1 562	380	1 942
Black Rock Mine (Northern Cape)	1 933	344	2 277	87	54	141	2 020	398	2 418
Cato Ridge Works (KwaZulu Natal)	270	68	338	–	3	3	270	71	341
Machadodorp Works (Mpumalanga)	49	12	61	5	–	5	54	12	66
Modikwa Mine (Mpumalanga)	3 581	510	4 091	9	6	15	3 590	516	4 106
Two Rivers Mine (Mpumalanga)	1 787	508	2 295	24	17	41	1 811	525	2 336
Nkomati Mine (Mpumalanga)	391	102	493	48	25	73	439	127	566
ARM Head Office (Gauteng)	129	70	199	3	3	6	132	73	205
Total employees	10 187	2 061	12 248	319	204	523	10 506	2 265	12 771

Breakdown by operation	Contractors			Total workforce		
	Male	Female	Total	Male	Female	Total
Beeshoek Mine (Northern Cape)	577	77	654	1 205	240	1 445
Khumani Mine (Northern Cape)	1 609	276	1 885	3 171	656	3 827
Black Rock Mine (Northern Cape)	2 741	369	3 110	4 761	767	5 528
Cato Ridge Works (KwaZulu Natal)	174	37	211	444	108	552
Machadodorp Works (Mpumalanga)	74	13	87	128	25	153
Modikwa Mine (Mpumalanga)	316	17	333	3 906	533	4 439
Two Rivers Mine (Mpumalanga)	797	128	925	2 608	653	3 261
Nkomati Mine (Mpumalanga)	790	638	1 428	1 229	765	1 994
ARM Head Office (Gauteng)	5	8	13	137	81	218
Total employees	7 083	1 563	8 646	17 589	3 828	21 417

Breakdown by region	Permanent employees			Temporary employees			Full-time employees (Perm + Temp)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Northern Cape	3 980	791	4 771	230	150	380	4 210	941	5 151
KwaZulu Natal	270	68	338	–	3	3	270	71	341
Mpumalanga	5 808	1 132	6 940	86	48	134	5 894	1 180	7 074
Gauteng	129	70	199	3	3	6	132	73	205
Total employees	10 187	2 061	12 248	319	204	523	10 506	2 265	12 771

Breakdown by region	Contractors			Total workforce		
	Male	Female	Total	Male	Female	Total
Northern Cape	4 927	722	5 649	9 137	1 663	10 800
KwaZulu Natal	174	37	211	444	108	552
Mpumalanga	1 977	796	2 773	7 871	1 976	9 847
Gauteng	5	8	13	137	81	218
Total employees	7 083	1 563	8 646	17 589	3 828	21 417

WORKFORCE BREAKDOWN continued

Breakdown by age group	Male	Female	Total
< 30 years old	865	333	1 198
30 - 50 years old	7 946	1 813	9 759
> 50 years old	1 695	119	1 814
Total full time employees	10 506	2 265	12 771

New hires (full-time employees)	Number of new hires			Rate of new hires (%)		
	Male	Female	Total	Male	Female	Total
Breakdown by age group						
< 30 years old	154	109	263	17.8%	32.7%	22.0%
30 - 50 years old	343	181	524	4.3%	10.0%	5.4%
> 50 years old	23	4	27	1.4%	3.4%	1.5%
Total new hires	520	294	814	4.9%	13.0%	6.4%
Breakdown by region						
Northern Cape	304	188	492	7.2%	20.0%	9.6%
KwaZulu Natal	–	3	3	0.0%	4.2%	0.9%
Mpumalanga	203	98	301	3.4%	8.3%	4.3%
Gauteng	13	5	18	9.8%	6.8%	8.8%
Total new hires	520	294	814	4.9%	13.0%	6.4%

Employee turnover (full-time employees)	Turnover numbers			Turnover Rate		
	Male	Female	Total	Male	Female	Total
Breakdown by age group						
< 30 years old	68	41	109	7.9%	12.3%	9.1%
30 – 50 years old	354	75	429	4.5%	4.1%	4.4%
> 50 years old	179	14	193	10.6%	11.8%	10.6%
Total employee turnover	601	130	731	5.7%	5.7%	5.7%
Breakdown by region						
Northern Cape	203	71	274	4.8%	7.5%	5.3%
KwaZulu Natal	3	1	4	1.1%	1.4%	1.2%
Mpumalanga	387	48	435	6.6%	4.1%	6.1%
Gauteng	8	10	18	6.1%	13.7%	8.8%
Total employee turnover	601	130	731	5.7%	5.7%	5.7%

Absenteeism (full-time employees)	Absentee shifts			Absentee rate (per hours scheduled) (%)		
	Male	Female	Total	Male	Female	Total
Absenteeism	92 232	14 079	106 311	5.2%	3.7%	4.9%
Breakdown by region						
Northern Cape			35 974			3.9%
KwaZulu Natal			1 710			3.1%
Mpumalanga			68 344			5.8%
Gauteng			283			2.9%
Total absenteeism			106 311			4.9%

WORKFORCE BREAKDOWN continued

Training hours by category and gender (full time employees)	Total training hours			Average training hours		
	Male	Female	Total	Male	Female	Total
Top Management	8	16	24	0.6	5.3	1.5
Senior Management	12 981	2 199	15 180	175.4	137.4	168.7
Professionally qualified and experienced specialists and mid-management	20 072	28 081	48 152	65.0	283.6	118.0
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	92 240	24 185	116 425	36.4	45.2	37.9
Semi-skilled and discretionary decision making personnel	230 617	35 308	265 925	37.7	36.6	37.5
Unskilled and defined decision making personnel	177 292	67 005	244 298	122.1	104.2	116.6
ARM Total	533 210	156 793	690 003	50.8	69.3	54.1

Workforce by age and organisational level	<30 years	30 – 50 years	>50 years	Total
Organisational level				
Top Management	0	5	11	16
Senior Management	0	54	36	90
Professionally qualified and experienced specialists and mid-management	7	293	108	408
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	254	2 338	479	3 071
Semi-skilled and discretionary decision making personnel	493	5 559	1 031	7 083
Unskilled and defined decision making personnel	378	1 512	205	2 095
Total permanent full time employees	1 132	9 761	1 870	12 763
Temporary employees	–	7	1	8
Total full time employees	1 132	9 768	1 871	12 771

SAFETY continued

Workforce by race and gender Organisational level	Males						Females						Group Total
	African	Coloured	Indian	White	Foreign	Total	African	Coloured	Indian	White	Foreign	Total	
Top Management	4	1	1	7	0	13	3	0	0	0	0	3	16
Senior Management	24	4	4	40	2	74	5	2	2	6	1	16	90
Professionally qualified and experienced specialists and mid-management	136	25	9	138	1	309	57	15	4	23	0	99	408
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	1 502	315	27	692	0	2 536	371	58	6	99	1	535	3 071
Semi-skilled and discretionary decision making personnel	5 751	279	3	84	0	6 117	804	78	2	82	0	966	7 083
Unskilled and defined decision making personnel	1 412	35	0	5	0	1 452	628	14	0	1	0	643	2 095
Total permanent male employees	8 829	659	44	966	3	10 501	1 868	167	14	211	2	2 262	12 763
Temporary employees	3	0	0	2		5	2	1	0	0	0	3	8
Total male employees	8 832	659	44	968	3	10 506	1 870	168	14	211	2	2 265	12 771

Biodiversity management

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Platinum division					
Nkomati Mine					
<p>There was no additional land disturbed during F2019.</p> <p>A total of 449 hectares have been disturbed to date.</p> <p>88 hectares of the disturbed footprint will be part of the pit lake.</p> <p>A total of 35 hectares have been rehabilitated to date.</p> <p>No communities were resettled in FY2019.</p>	<p>No. The mine is located among commercial forestry operations.</p>	<p>Yes.</p>	<p>No Red Data species.</p>	<p>In terms of the BAP, priority actions completed and in progress, include:</p> <p>A continuous programme for the removal of alien invasive plants; and</p> <p>Concurrent rehabilitation of disturbed land, which no longer falls within the mining plan (waste rock dumps and tailings storage facilities).</p>	<p>Integration into local municipal policy and plans, as well as relevant Spatial Development Plans; integration into existing Group policy and management systems, including the Biodiversity and Land Management Plan, Closure Plan and Environmental Management Plan; identification and liaison with stakeholders and neighbouring properties especially with respect to weed/invader and erosion control action plans; post closure land use; and available budget and manpower for implementation, management and maintenance. In terms of water management, a geo-hydrological model and update of the surface water management plan and water balance are in place and are being updated regularly.</p>

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Platinum division continued					
Two Rivers Platinum Mine					
<p>No additional land was disturbed during F2019, while 5.85 hectares of the tailings storage facility (TSF) was rehabilitated and vegetated.</p> <p>A total of 10.5 hectares have been rehabilitated to date.</p> <p>The current estimate of land disturbed and not yet rehabilitated is approximately 250 hectares.</p> <p>No communities were resettled in F2019.</p>	<p>Yes. The mine is located within the Sekhukhune Land Centre for Plant Endemism, which is an area of high biodiversity.</p>	<p>Yes.</p>	<p>Priority Red Data plants: Gladiolus sp.nov, Resnova sp.aff.megaphylla, Zantedeschia pentlandi while protected fauna are cicada (Pycna Sylvania), Dromica honesta.</p> <p>Other conservations: Important invertebrates confirmed during field work are scorpion species such as <i>Hadogenes ploytrichobothrius (flat rock scorpion)</i>, <i>Opisthophthalmus gladifrons</i>, <i>Parabuthus transvaalicus</i>, <i>Uroplectes triangulifer</i> and <i>Pseudolychas</i>. A newly described protected mite species called <i>Zambedaniasp. (hetrostigmae)</i> associated with a certain spider species (inhabiting under round shaped stones that are fairly deeply buried up to 1/3 or 1/2 of their depth) called <i>Harpactrella flavipilosa</i>. Ant species confirmed and potentially undescribed, collected during the invertebrate survey, include undescribed <i>Tetramonium</i>, undescribed Camponotus, undescribed <i>Anilmyrma</i>, possibly undescribed <i>Meranoplus</i>, and possibly undescribed <i>Aenictus</i>. The property is dominated by thick leafed plants, most of which occur in the Sekhukhune Land Centre for Plant Endemism.</p>	<p>The Two Rivers Mine BAP has been expanded to cover an additional 650 hectares of the farm De Grooteboom, which is the approved site for the new TSF.</p> <p>Plans are in place to consider expanding the BAP further to include the farms Kalkfontein, Buffelshoek and portions of Tweefontein – upon the incorporation of the Kalkfontein RE Block mining right into the Two Rivers Mine mining right and/or execution thereof.</p>	<p>The BAP is still a pivotal environmental management instrument for the mine and will remain as such. The benefits of having this as an environmental management Instrument will increase upon inclusion of the three outstanding farms – Kalkfontein, Buffelshoek and portions of Tweefontein.</p>

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Platinum division continued					
Two Rivers Platinum Mine continued					
			<p>A new species, <i>Boloponera</i> ant species, a genus previously known only from a single specimen from the Central African Republic, was discovered just outside the new TSF site (De Grootboom).</p> <p>Woodland dominant within the property are:</p> <ul style="list-style-type: none"> » <i>Lydenburgia-Euclea</i> Open Woodland – within which the protected <i>Lydenburgia assinoides</i> plant specimens are dominant; » <i>Sclerocarya – Bolusanthus</i> Open Woodland within which <i>Sclerocarya birrea subsop, caffra</i> (Marula tree) is dominant; » <i>Combretum erythphyllum Riverine</i> Woodland within which <i>Combretum</i> specimens are dominant; and » <i>Phragmites – Imperata</i> Marsh wherein <i>Phragmites</i> species are dominant. 		

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Platinum division continued					
Modikwa Mine					
<p>0.24 hectares were disturbed during F2019.</p> <p>A total of 558.8 hectares have been disturbed to date.</p> <p>No communities were resettled in F2019.</p>	No.	Yes.	<p>An assessment of protected trees was conducted as part of an Environmental Impact Assessment related to a community road and the following specific tree species were identified and marked for protection along the road.</p> <ul style="list-style-type: none"> » <i>Slerocarya birrea</i>. Caffra (Marula); » <i>Combretum imberbe</i> (Leadwood) » <i>Catha edulis</i> (Bushman's tea); » <i>Lydenburgia cassinoides</i> = <i>Catha transvaalensis</i> (Sekhukhune Bushman's tea); » <i>Searsia batophylla</i> (Red berry); and » <i>Searsia sekhukhuniensis</i> (Sekhukhune-karee). 	<p>The BAP was revised and an alien invasive species eradication survey was conducted during F2017.</p> <p>Subsequently, an alien invasive species eradication plan was implemented.</p>	<p>Eradication of alien invasive plants project was completed and re-growth is being monitored. The implementation of the BAP continues.</p>

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Ferrous division					
Cato Ridge Works					
<p>No additional land was disturbed during F2019 A total of 108 hectares have been disturbed and not yet rehabilitated.</p> <p>No communities were resettled in F2019.</p>	<p>Protected Ngonigoni grasslands, to the south and south-east of the operations.</p>	<p>Yes.</p>	<p>Protected Ngonigoni grasslands.</p> <p>The biodiversity study indicated that none of the Red Data species which could potentially occur in the region, actually occur on site.</p>	<p>Completed.</p> <p>A biodiversity impact study confirmed that no significant impact to the Ngonigoni grasslands would be caused due to historic and current disturbance by activities such as cattle grazing. A memorandum of agreement was signed between Cato Ridge Works, the Wildlands Trust and the e-Thekwini Municipality whereby Cato Ridge Works will financially sponsor the Wildlands Trust to conserve grasslands in the Inanda Dam area.</p>	<p>Implementation of the BAP continues.</p>
Machadodorp Works					
<p>No additional land was disturbed during F2019. A detailed contaminated land assessment was done in F2015 and the total disturbed land is 122 hectares. Approximately 4 hectares have been rehabilitated.</p> <p>No communities were resettled in F2019.</p>	<p>Yes. The smelter is within the proposed Lydenburg Centre of Endemism.</p>	<p>Yes.</p>	<p>None.</p>	<p>The BAP was completed in 2019. Invader species are monitored and controlled as required.</p>	<p>Implementation of the BAP continues.</p>

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Ferrous division continued					
Black Rock Mine					
<p>61.1 hectares were disturbed during F2019. A total of 804.5 hectares have been disturbed to date.</p> <p>A total area of 12.46 hectares has been rehabilitated to date.</p> <p>No communities were resettled in F2019.</p>	No.	Yes.	<p><i>Acacia erioloba</i> (Camel thorn), <i>Acacia haeratoxylon</i> (Grey Camel thorn), <i>Boscia albitrunca</i> (Shepherd tree), <i>Ammocaris coranica</i> (Karoo lily) and <i>Harpagophytum procumbens</i> (Devils claw). The only threatened mammal species found are bats.</p>	Completed and being implemented.	<p>Implementation of the BAP is in progress (including the management of alien and invasive vegetation). Monitoring is done on a continual basis.</p> <p>Continue eradication of invasive species. Protection of indigenous plants by ensuring that disturbance authorisations are obtained prior to disturbing trees or flora.</p>
Beeshoek Mine					
<p>3.41 hectares were disturbed during F2019. A total of 1 998.4 hectares have been disturbed to date.</p> <p>0.41 hectares were rehabilitated during F2019 and a total of 40.41 hectares have been rehabilitated to date.</p> <p>No communities were resettled in F2019.</p>	No.	<ul style="list-style-type: none"> » BAP being updated. » Biomonitoring protocol completed and being implemented. » Species monitoring and data collection plan developed. 	<ul style="list-style-type: none"> » Cape Gecko » Common Rough Gecko » <i>Acacia erioloba</i>, <i>Boscia albitrunca</i> » <i>Aloe hereoensis</i>, <i>aloe grandidentata</i>. 	<p>Awareness program developed.</p> <p>Biodiversity goals and objectives developed.</p> <p>Regulatory requirements and biodiversity framework identified.</p> <p>Dry and wet biomonitoring process ongoing.</p>	<p>The following focus areas continued in 2019:</p> <ul style="list-style-type: none"> » Environmental impact monitoring continues; » Biodiversity subject matter included in annual and visitor induction programme; » Awareness posters; » Integrating biodiversity into rehabilitation and land-use planning; » Stakeholder engagement and cooperation; and » Improving land management practices (such as grazing or fire management).

BIODIVERSITY MANAGEMENT continued

Operation	Is the operation in close proximity to area of high biodiversity or protected area?	Biodiversity study completed	Details of Red Data or protected species	Status of Biodiversity Action Plan (BAP)	Strategies for addressing impact
ARM Ferrous division continued					
Khumani Mine					
<p>1 794 hectares were disturbed in F2019, bringing the total land disturbed to 5 664.3 hectares.</p> <p>A total of 18.1 hectares have been rehabilitated to date.</p> <p>No communities were resettled in F2019.</p>	No.	Yes.	<p>The biodiversity survey conducted during 2017 identified the followings protected species expected to occur/ occur within the surface rights.</p> <ul style="list-style-type: none"> » <i>Aloe grandidentata</i> (Bontaalywn) » <i>Aloe claviflora</i>, (Kraalaalwyn) » <i>Aloe hereroensis</i> (Sandaalwyn) » <i>Ammocharis coranica</i> (Berglelie) » <i>Babiana hypogaea</i> (Bobbejaanuitjie) » <i>Boophane disticha</i> (Sore eye flower) » <i>Crinum bulbispermum</i> (Orange river lily) » <i>Fockea angustifolia</i> (Kombru) » <i>Harpagophytum procumens</i> (Devil's claw) » <i>Hoodia gordonii</i> (Ghaap) » <i>Huerniopsis decipiens</i> (Aasblom) » <i>Lithops aucampiae</i> spp. <i>aucampiae</i> (Stone plant) » <i>Mestoklema arboriforme</i> (Donkievygie) » <i>Nerine laticoma</i> (Vlei Lily) » <i>Orbeopsis lutea</i> (Geelaasblom) » <i>Vachelia erioloba</i> (Camel thorn) » <i>Vachelia haematoxylon</i> (Grey camel Thorn) » <i>Boscia albitrunca</i> (Shepherd tree) » <i>Stapelia olivacea</i> (Swartaasblom) 	Completed.	<p>Impact managed in terms of commitments in terms of the EMP. Plants are removed before mining.</p> <p>The mine has established a biodiversity offset area in collaboration with the Department of Environmental Affairs and the Department of Nature Conservation in the Northern Cape. The area will be registered as a conservancy.</p>