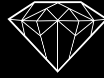
Empowering OUR PEOPLE

Diamond sorting at Harry Oppenheimer House, Kimberley



ENSURING THE HEALTH, *safety and wellbeing* OF OUR EMPLOYEES IS A SHARED COMMITMENT *throughout the Family* OF COMPANIES.

WE STRIVE TO ENSURE THAT EVERYONE WHO COMES TO WORK acquires skills and resources to contribute positively to their communities. By employing and developing local talent at all levels of the business, engaging proactively with priority concerns of our producer countries such as HIV/Aids, and meeting or exceeding all relevant global labour standards, we aim to create a working culture where all employees take a shared responsibility for the delivery of our business goals.

Employees

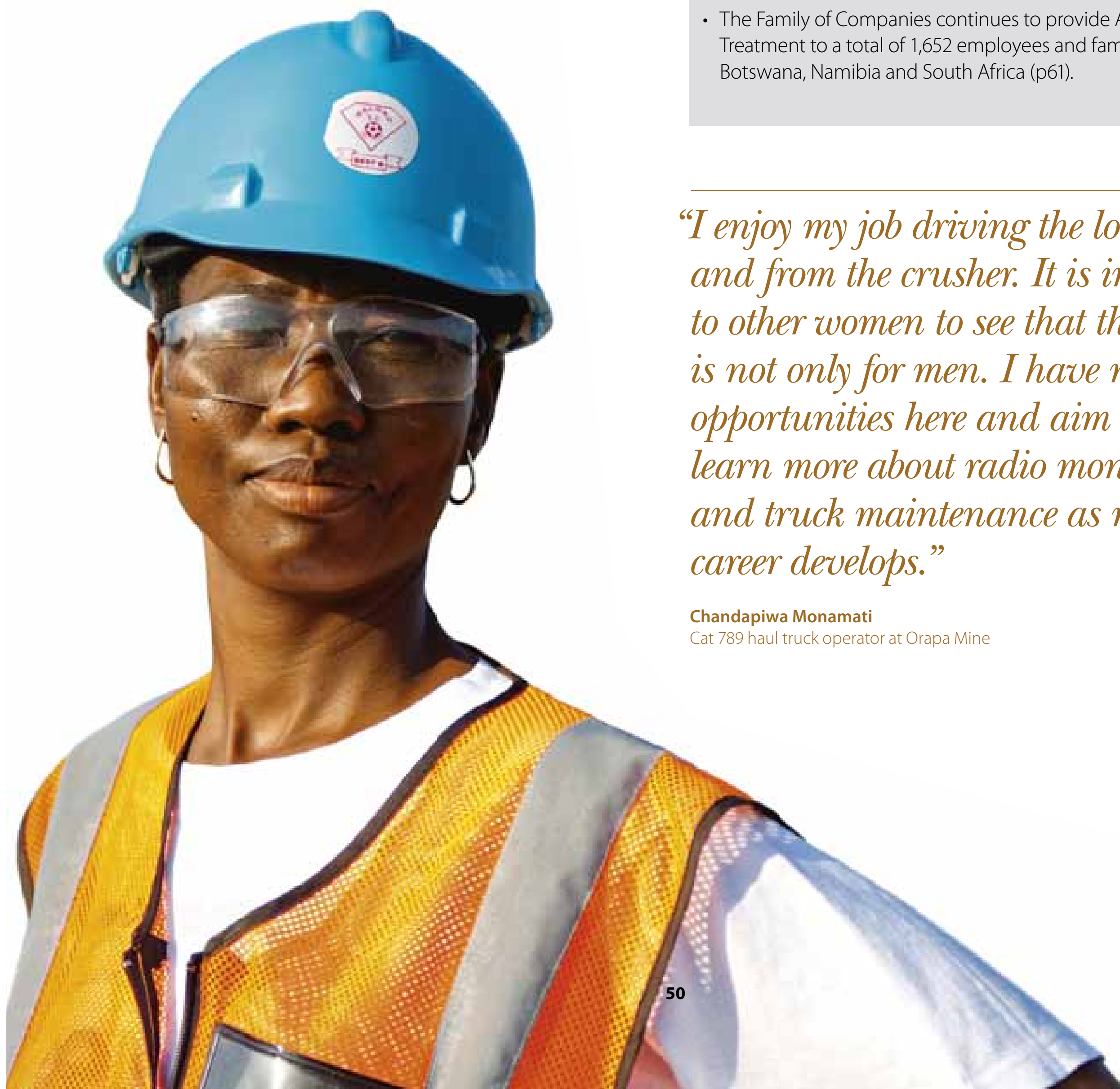
Our business model is built on creating a working culture where all our employees share responsibility for the delivery of our business goals.

This includes ensuring the health, safety and wellbeing of our employees through effective safety management systems, respecting their right to associate freely and bargain collectively, and meeting or exceeding all relevant global labour standards.

Through our employment activities we also contribute to national development goals by building local capacity in employing, retaining and developing local talent at all levels of the business, and engaging proactively with priority concerns such as HIV/Aids, Black Economic Empowerment (BEE), and gender equity. This reflects our long term commitment to the countries in which we operate. Local employment helps build a wider skill base, and our proactive engagement on priority concerns, whilst the right thing to do, encourages our employees to make a more substantial emotional investment in the business.

HIGHLIGHTS

- The size of the workforce increased by 1.88% in 2010. This reflects a commitment by the Family of Companies to maintain approximately the headcount from 2009, when the workforce reduced in size by 23% (p52).
- Having operated for two consecutive years without a fatality, a contractor was fatally injured at Orapa mine in December. The Lost Time Injury Frequency Rate (LTIFR) increased to 0.24 per 200,000 hours from 0.21 in 2009 (p55).
- The Health discipline focused on the appropriate consolidation and integration of different components of health services and surveillance across the Family of Companies, to extend the cost efficiencies achieved by DBCM in 2009 (p56).
- The Family of Companies continues to provide Anti-Retroviral Treatment to a total of 1,652 employees and family members in Botswana, Namibia and South Africa (p61).



"I enjoy my job driving the loads to and from the crusher. It is inspiring to other women to see that this job is not only for men. I have many opportunities here and aim to learn more about radio monitoring and truck maintenance as my career develops."

Chandapiwa Monamati
Cat 789 haul truck operator at Orapa Mine

Employees risks

In this chapter we report on Employees risks identified as most relevant to the De Beers Family of Companies and our stakeholders. We identify and categorise our sustainability risks through ongoing engagement with stakeholders and our internal management processes (see p11-17).

3.1 ***Managing changes to the size of the workforce****
Risk: The downturn and recovery over 2009 and 2010 had a profound impact on employees in terms of staffing levels, use of contractors and remuneration. We remain committed to responsibly and effectively managing the size of our workforce to mitigate a range of risks in terms of employee recruitment, retention, motivation and skills.

3.2 ***Attracting and retaining talent****
Risk: Our ability to remain agile and responsive to changing market conditions is dependent on our ability to attract and retain talented professionals in an increasingly competitive global employment market. Retaining and supporting the development of all our employees is core to delivering on our goals as a business, and those of our producer partner countries.

3.3 ***Maintenance of health, safety and occupational hygiene standards****
Risk: The health and safety of our employees and contractors remains one of our top priorities. The effective management of health and safety hazards protects our people from harm, and ensures our business complies with regulatory and legal standards.

3.4 ***HIV and Aids management****
Risk: The majority of our employees live in countries classified as hyper-endemic for HIV. Their exposure to HIV and Aids represents a real threat to their health, their families, the continuity of our business and the long term development of Africa.

3.5 *Diversity and inclusion*
Risk: We are committed, and in some jurisdictions required, to ensure our workforce is reflective of the diverse societies in which we operate. Our continued support of government efforts in southern Africa for the provision of opportunities to previously disadvantaged groups strengthens our workforce and the communities in which we operate.

3.6 *Compliance with international labour standards*
Risk: Ensuring a safe, respectful and fair workplace is a priority across all business units. We aim to meet or exceed all relevant global labour standards in addition to respecting the right of employees to associate freely and bargain collectively. Compliance serves as a foundation for employee engagement, and to protect diamond equity.

KEY: ◕ Long term ◑ Medium term ◔ Short term

* Our management approach to the risks that are asterisked and marked in bold are reported on in this Report, and summarised in its counterpart Summary Review.

Managing changes to the size of the workforce

Risk: The downturn and recovery over 2009 and 2010 had a profound impact on employees in terms of staffing levels, use of contractors and remuneration. We remain committed to responsibly and effectively managing the size of our workforce to mitigate a range of risks in terms of employee recruitment, retention, motivation and skills.

Maintaining a leaner workforce

2010 was a year of consolidation across the business as we adapted to a leaner workforce. The downturn in the rough diamond market of 2008 and 2009 transformed the structure of our business (see Fig. 15), with a 23% reduction in the size of our workforce in 2009, primarily through retrenchment. The restructuring process continued into 2010 at DBCM and Debswana. At Debswana this was due to a longer consultation process, and time-bound agreements with employees and unions. At DBCM it reflected operational efficiency requirements at Finsch Mine and preparation for the closure of Namaqualand Mines.

The Family of Companies (with the exception of E6 and DBDJ) employed a total of 13,447 people in 2010, (2009: 13,198) almost 12,000 (around 90%) of whom were based in Africa (see Fig. 16). The business has committed to maintaining roughly this level of headcount relative to the needs of the business and overall our workforce grew by less than 2% (1.88%) in 2010.

By the end of the year non-permanent employees made up a larger proportion of the workforce (see Fig. 15), in part due to the large number of contractors employed for the Cut-8 project in Botswana.

There are perennial risks around the need for our business to responsibly and effectively manage changes to the size of the workforce in response to market volatility and exceptional circumstances, as seen in 2008 and 2009. Staffing levels also fluctuate during the lifecycle of our mining operations and with the needs of our business enterprises. This requires us to engage proactively with our employees, unions, government partners, contractors and communities to collectively maximise the benefits and minimise the negative impacts of these changes.

Engaging with employees

In 2010, we focused on maintaining open channels of communication within the organisation, with the development of an internal networking platform called 'Pipeline'. Through Pipeline, people are able to share information with colleagues across business units, functions, areas of interests and countries. We also undertook an employee engagement survey (see p54), which we plan to repeat in 2012.

A key component of our business model is to create a working culture where all employees take a shared responsibility for the delivery of our business goals. In 2010 our people demonstrated outstanding commitment and perseverance, as a result delivering exceptional financial results for the business which was recognised accordingly.

Engaging with unions

Engagement with unions in 2010 was essential in order to explain the broader economic and commercial challenges facing the Family of Companies. Union membership within the traditional unionised job categories in our mining operations remained high in 2010, at 96% in Debswana, 89% at Namdeb, and 90% at DBCM (see Fig. 17).

Union negotiations took place in Botswana, Namibia and South Africa. In addition to agreements on wages and employment conditions, we focused on building company-union relationships post-recession.

Fig. 15

Workforce composition (permanent and non-permanent), 2008-2010

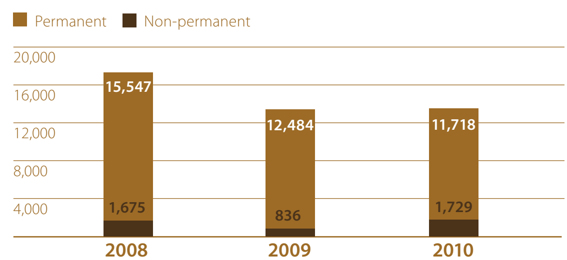
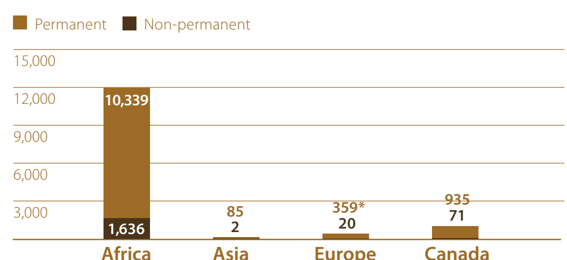


Fig. 16

Total workforce at year-end by region, 2010

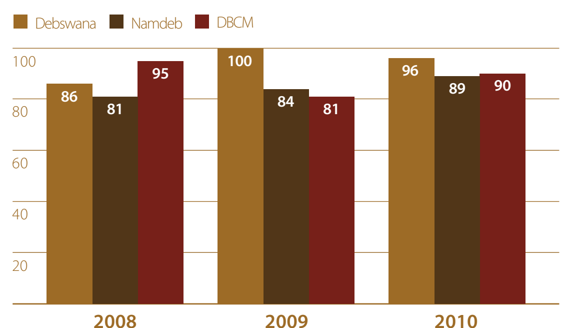


Data note 7: Figures 15 and 16 include employees from our joint ventures. They do not include contractors or employees at E6 or DBDJ.

Data note 8: A number of employees at our operations in Europe* declined to offer ethnic definitions of themselves, meaning their data has been presented separately from our standard templates. This means we are unable to accurately categorise such employees into permanent and non-permanent categories. As the large majority are likely to be permanent employees, we have categorised them as such.

Fig. 17

Union membership of skilled and semi-skilled workers at major operations, 2010 (%)



Botswana

Negotiations with the unions were particularly challenging at Debswana in 2010 given the implementation of an operational review, which resulted in some job losses. Launched in 2008, the operational review is focused on the strategic restructuring of Debswana. The annual wage increase negotiations were also settled amicably. Debswana's focus going forward will be on building relations post-restructuring.

At DTCB, strike action by the Botswana Diamond Sorters & Valuators' Union (BDSVU) lasted for two weeks following a wage dispute. Resolution was achieved through a process of arbitration in November 2010. The DTC network mitigated the impact of the lost man hours during the strike, and continued to meet Sightholder demand throughout the period in question.

South Africa

DBCM's engagement with the National Union of Mineworkers (NUM) took place at both national and operational (i.e. regional) levels and annual wage negotiations with the NUM were concluded amicably. The industrial climate across DBCM remained positive despite high levels of industrial action across South African industries.

Namibia

During 2010, a two-year negotiated agreement between Namdeb and the Mineworkers Union of Namibia was reached regarding substantive conditions of employment. These conditions related to wages and pensions, allowances, and administrative structures (including the creation of a number of Joint Sub-Committees). The agreement was followed by a workshop aimed at enhancing trust within the Namdeb-Union relationship.

Workforce changes in 2010

The 2% growth in the size of our total workforce in 2010 reflects the commitment of the business to maintain the approximate level of headcount achieved through the delayering and down-sizing process of 2008 and 2009. Over the year 644 permanent employees left the Family of Companies and 893 non-permanent staff were hired (see Fig. 19). The small overall increase in non-permanent employees (see Fig. 15, p52), enabled the Family of Companies to meet increased diamond demand in 2010, and to manage the risk of potential ongoing volatility.

Fig. 18

Labour turnover, 2008-2010 (%)

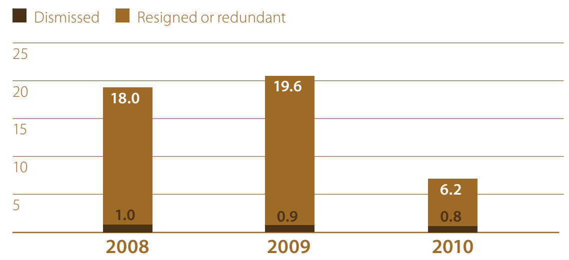
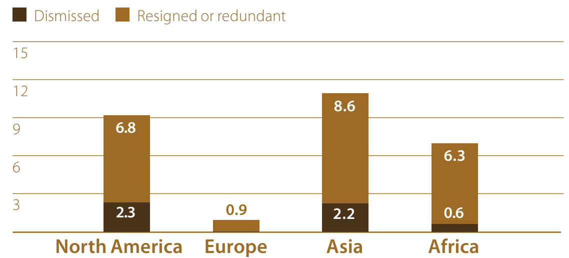


Fig. 19

Labour turnover by region, 2010 (%)



Data note 9: Figures 18 and 19 present labour turnover for permanent employees only.

A *3D diamond scanner training, Kimberley*
B *Plant operators, Voorspoed*

Variations in this trend across the Family of Companies reflected employment creation associated with mining projects and downstream business expansion.

Jwaneng Mine Cut-8 extension

Over 800 non-permanent positions were created at Debswana in 2010, the majority of which were associated with the Jwaneng Cut-8 project (see p31-32). However, the total number of Debswana employees remained relatively constant from 2009 to 2010, reflecting a decrease in the number of permanent employees as a result of the ongoing operational review.

Jwaneng Cut-8 commenced in 2010, employing 1,928 staff by year-end. Of these staff, most of whom were employed by a contractor, 84% were Botswana nationals. In addition to the job-creation associated with the project, Cut-8 will extend the life of Jwaneng Mine to at least 2025, providing continued employment for operational staff.

Snap Lake, Canada

As production at Snap Lake returned to pre-recession levels, 30 of the 99 employees retrenched in 2009 were re-employed in 2010.

Forevermark

Forevermark employed 50 additional people over 2010 to keep pace with its expansion, and plans to make 70 additional hires in 2011. By the end of 2010 *Forevermark*, De Beers' proprietary diamond brand, was available in 348 stores globally. This represents a 40% increase on the beginning of 2009.

Attracting and retaining talent

Risk: Our ability to remain agile and responsive to changing market conditions is dependent on our ability to attract and retain talented professionals in an increasingly competitive global employment market. Retaining and supporting the development of all our employees is core to delivering on our goals as a business, and those of our producer partner countries.

The strong recovery in the diamond market in 2010 placed particular demands on our people to increase productivity and take on new and challenging roles, whilst maintaining the lower cost base. The exceptional financial results for the year were evidence of their commitment and effort. As the global economy showed signs of extended recovery, we reconsidered the risks presented by attracting, retaining and developing talent.

Ensuring we have the right talent in the right places within our organisation is essential for achieving our short and longer term business goals. We are committed to retaining talented employees through offering a clear and competitive employee value proposition, whether through competitive salaries, supportive workplace environments, valuable professional experience or otherwise.

We continue to be a sought after employer, particularly in our producer countries. By employing and developing local talent at all levels of our business we build local capacity, which in turn helps to build a wider skills-base wherever we operate.

Our talent management strategy

In our talent management strategy we seek to:

- Identify talent across the Family of Companies to deliver our current goals and to build a capability pipeline to support the future vision of De Beers;
- Enable our employees to create purposeful and motivating career development plans that will improve their skills while helping to deliver greater benefit within the Family of Companies;
- Regularly review and map succession planning for all key management and specialist roles across the Family of Companies; and
- Use these activities to inform our human resources policies and procedures.

The appointment in 2010 of a Group HR Director and a Group Head of Talent Management will help to deliver our employee strategy to support and sustain the growth of the business.

Skills development

In 2010, the Family of Companies spent a total of US$9.99 million (2009: US$5.8 million) on professional development, including formal training and qualifications.

This increase in spending was accounted for primarily by the roll-out of the Safety Risk Management Programme (SRMP) across the Family of Companies, in pursuit of our goal of achieving a zero-harm workplace. The fatality that occurred at Orapa Mine in December of 2010 reaffirms our continued commitment to invest in safety-related training and development.

We also continued to provide all other mandatory training and a lean employee development programme through:

- Broadening of employment roles; and
- Internal training.

Employee engagement survey

In 2010, we focused on engaging with employees and rebuilding our employee value proposition to ensure we retain skills within our business.

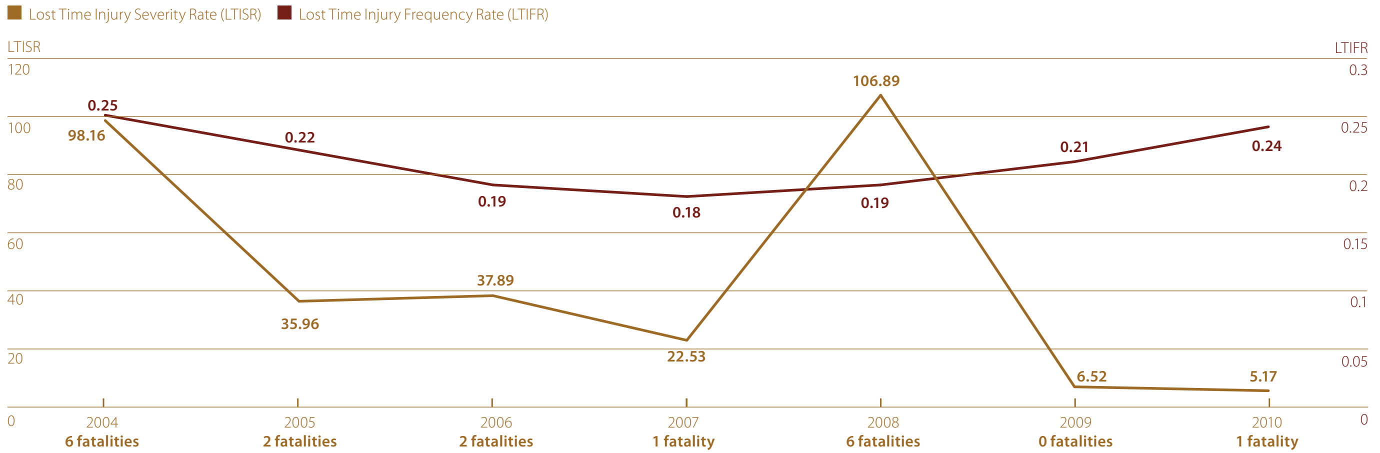
We conducted an employee engagement survey[10] during 2010 with the aim of understanding what needs to be considered and improved to develop the culture of engagement, passion and commitment we believe is attractive, stimulating and sought after by our employees. In the survey, the widespread recognition of our product and brand, our environmental responsibility and health benefits received the highest rates of employee satisfaction across the Family of Companies. However, future career and development opportunities, recognition, and people management were among the attributes with the lowest reported rates of satisfaction.

We recognise this ranking reflects the demands placed on our people through the market volatility of 2008 onwards. The results will inform activities to improve the employee experience in 2011 at the business unit level.

[10] Of the 6,752 employees asked to participate in the survey across the Family of Companies 59% responded. Debswana and E6 chose not to take part in the survey.

Fig. 18

Safety performance, 2004-2010 (LTIFR and LTISR)



Data note 10: Lost Time Injury Frequency Rate (LTIFR) = No. of Lost Time Injuries multiplied by 200,000, divided by hours worked.
Lost Time Injury Severity Rate (LTISR) = Days lost due to Lost Time Injuries multiplied by 200,000, divided by hours worked.

A Lost Time Injury (LTI) is a work-related injury resulting in the employee/contractor being unable to attend work on the next calendar day after the day of the injury with the ability to perform all of the tasks for which he/she was appointed. Fatalities are not recorded as LTIs.

Data note 11: The significant change in LTISR from 2008 to 2009 reflects a change in the measurement standard used to calculate LTISR. The LTISR reported for 2008 (106.89) was calculated using a measurement standard that quantifies each loss of life as 6,000 working shifts. The LTISR reported for 2009 (6.52) reflects the adoption of a measurement standard in 2009 that brought the Family of Companies into alignment with international practice.

Maintenance of health, safety and occupational hygiene standards

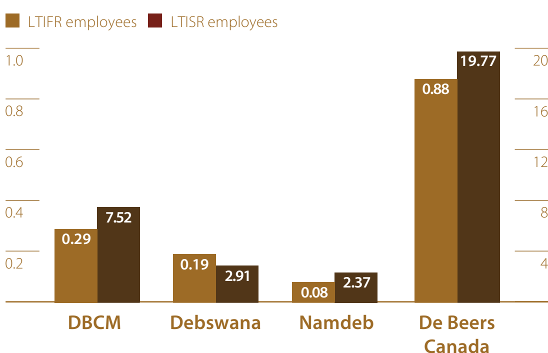
Risk: The health and safety of our employees and contractors remains one of our top priorities. The effective management of health and safety hazards protects our people from harm, and ensures our business complies with regulatory and legal standards.

Occupational Hygiene, Health and Safety form three of the five disciplines in the ECOHS programme, along with Community and Environment. The ECOHS programme provides the technical skills, leadership and governance required to align ECOHS performance with our core business strategy, and drives the integration of ECOHS practices and accountability into core business processes.

2010 was a year of consolidation for the ECOHS disciplines, as production rates at operations increased in response to the recovery of market demand. The appointment of discipline principals for Safety and for Occupational Hygiene strengthened senior leadership across the disciplines. Staffing levels overall remained constant, requiring an approach of 'doing more with less'.

Fig. 21

LTIFR and LTISR by business, 2010



Safety

Having operated for two years consecutively without a fatality, Mr. Rodney Becorney, a thirty-year old contractor, was fatally injured at Orapa Mine in December. Our Lost Time Injury Frequency Rate (LTIFR) increased to 0.24 per 200,000 hours from 0.21 in 2009, with a total of 58 lost time injuries recorded over the year, compared with 36 in 2009 (see Figs. 20 and 21).

De Beers is uncompromising when it comes to safety and we consider the fatality of 2010, which was followed by two further fatalities in early 2011, unacceptable. We continue to roll out the Safety Risk Management Programme (SRMP), to further reduce the possibility of such occurrences in future. Training and adoption of the risk assessment process is currently being rolled out at all business units and management plans have been committed for action in 2011. This action is intended to progress our business units from a majority sitting at 'compliance' maturity level, to 'proactive' maturity level.

Safety Risk Management Programme and safety performance in 2010

The Safety Risk Management Programme was developed by Anglo American and the University of Queensland to educate employees and contractors at all levels to better identify hazards and to assess and manage risks using a standard set of tools and methods. Mining operations across the Family of Companies currently operate at different application levels of the SRMP (Basic, Reactive, Compliant, Proactive and Resilient).

The SRMP is based on the concept of a complete leadership-led intellectual shift. We introduced SRMP in 2009, and the training and adoption of the programme across all business units continued in 2010 in the areas of:

- Classification: A new safety incident classification system was developed, aligned with the Health and Safety Performance Indicator definitions and other mining companies;
- Measurement: A focus on capturing and reporting more leading indicators, including non-Lost Time Injuries, first aid cases and near-hits, and on reporting, investigation and addressing high potential incidents;
- Guidance: A review of our Fatal Risk Control Guidelines, and setting a Global Contractor Management Guideline to ensure effective (safe) contractor management; and
- Culture: Ongoing development of 'Visible Felt Leadership' to maintain and promote a culture of safety awareness.

The Safety Peer Group continued to support this process through effective and comprehensive information sharing between all business units. These steps will enable us to improve the quality of our trend analysis, reporting and overall safety performance tracking, moving forward.

Engaging employees and contractors

All new employees, contractors and site visitors are required to attend a health and safety induction before being allowed on-site at our operations. Contractors are legally required to adhere to the same standards and monitoring practices as our own employees.

Employees and contractors are represented in joint committees and daily briefings with managers to monitor and advise on health and safety programmes. In South Africa, for example, the law requires that joint safety committees have 50% employee representation. At Debswana, a Safety and Health Agreement is in place with relevant unions covering health and safety committee meetings, as well as the roles and responsibilities of safety representatives.

OHSAS 18001

With the exception of the Canadian operations, all of our diamond mining operations are third party certified to the Occupational Health and Safety Assessment Series (OHSAS) 18001 standard. We expect to achieve full certification across the Family of Companies in 2011, with OHSAS 18001 in effect becoming the minimum standard for every one of our mines.

For the Canadian operations, in 2010 our Best Practice Principles Assurance Programme (BPPs) provided additional third party verification of our 'system' integrity (see p43). While no material breaches of the BPPs were identified in the 2010 audit cycle, four major and two minor infringements of the BPPs were noted at Victor Mine. The major findings were concerned with lodging/accommodation conditions, changing facilities in the mine 'dry' areas, difficulties in transporting employees to and from site where there are delays because of weather or mechanical problems with aircraft, inconsistency in application of some policies, and issues with the effectiveness of employee committees to address concerns. Corrective action plans to address these issues were promptly developed. No other significant health and safety infringements were noted at any of our other operations. More broadly, no statutory fines for safety performance were imposed on the Family of Companies in 2010.

Safety strategy

In 2011, we are planning to finalise our Risk Assessment Guidance document, which is based on the Anglo American Risk Assessment Matrix and the SRMP four-layer risk-approach.

Health and wellbeing

Health risks vary depending on geographical location and type of operation. In exploration and mining operations, inherent occupational health risks include exposure to noise, airborne pollutants and infectious diseases. In addition, ergonomic and psycho-social factors are risks in all workplaces.

We have an holistic approach to the health and wellbeing of our employees. This approach is articulated in a set of Health, Occupational Hygiene and HIV Policies, and managed through a suite of standards and guidelines. The Health discipline focuses on the prevention, identification and treatment of illness associated with work (occupational medicine), as well as non-occupational conditions including chronic diseases such as HIV, and promotion of health and wellbeing. Occupational Hygiene focuses on ensuring that the systems and programmes are in place to anticipate, recognise, evaluate and control exposures that may cause occupational disease.

Integrated health care in the workplace

In 2009, our approach to employee health was one of 'doing more with less' and hence to streamline, yet maintain, health services during the economic crisis. In 2010, we focused on consolidating and integrating different components of health services and surveillance across the diamond pipeline and ultimately moving towards resilient, cost-beneficial health services.

During the year we achieved significant site-appropriate integration of aspects of primary health care, including HIV management in hyper-endemic countries, into the occupational medical services. In Canada, progress has also been made on the integration of occupational medical surveillance into existing on-site medical services for comprehensive care (see case study, p57). This integration facilitates the Family of Companies achieving its outcome standards, which are:

- All employees being fit for the work they perform;
- Undertaking risk-rated medical surveillance of employees; and
- An annual absenteeism rate for illness of less than 2%.

Radiography facilities at Orapa Hospital

Ongoing restructuring of employee health services in 2010 included fully integrating Namdeb's HIV and wellness team into the Occupational Health Department, with the aim of creating a one-stop-shop approach to delivering health promotion and access to health care (see p62-63).

Risk-based surveillance

During 2010, the occupational hygiene discipline was repositioned through establishing central leadership and creating a formal Family of Companies' Occupational Hygiene Peer Group.

These developments initiated a review of global risk-based surveillance and operations' baseline hazard assessments with the aim of achieving the 'outcome standard' that all employees are protected from exposure to hazards and, where reasonably practicable and where measurable, that exposure does not exceed 50% of any occupational exposure limit.

Focus in 2010

The Family of Companies' Health Peer Group responded to safety-related concerns by developing guidelines for the medical surveillance of people working at heights. Psychological assessment tools were also piloted by medical personnel across the Family of Companies for employees in 'at risk' occupations. Stress-related disorders that interfere with fitness to work prompted the development of screening tools and sourcing best practice guidance for stress management.

Health outside the workplace

To prioritise health issues beyond the workplace, DBCM reviewed the causes of non-work related deaths of employees between 2004 and 2010. The cause of almost half (46.7%) of the 137 deaths was 'undefined', being unobtainable from employee health, human resources, or medical scheme records. Of the remaining deaths, HIV-related causes accounted for the largest proportion of identified non-work related employee deaths (see Fig. 22).

Despite DBCM providing what is regarded as one of the foremost HIV treatment programmes in the private sector, it is clear that a lack of uptake by employees is leading to a large number of unnecessary deaths in service. The review also highlighted the need to introduce a system to identify the cause of death for every employee who dies in service and to extend the activities addressing the preventable causes through a collaborative medical, wellbeing, safety and employee assistance programme.

Health performance

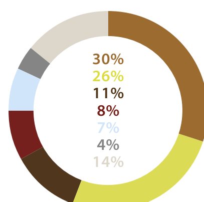
OHSAS 18001: 2007 certification was retained or obtained by all our southern African mining operations and some of the global non-mining operations during the year. The overall quality of our occupational medical services at diamond mining operations that conducted the Family of Companies' integrated audit was maintained or improved in 2010 in the face of a growing workload with operations running at higher capacities through the year, even though resource levels remained at 2009 levels.

Fig. 22

Known causes of non-work related employee deaths, DBCM, 2010

DBCM 2004-2010 (73 deaths)

- HIV-related
- Road accidents and trauma
- Cancer
- Respiratory
- Cardiac
- Suicide
- Other (stroke, epilepsy, post-operative complications)



Case study:

Snap Lake: Integrating occupational health into emergency and primary care

Snap Lake's remote, fly-in fly-out location in extreme environmental conditions presents unique challenges for health and wellbeing. Initial health services involved providing adequate on-site emergency care and medical evacuation by air to Yellowknife.

Ongoing evaluation of health needs and health service delivery at Snap Lake led to the integration of occupational medicine and occupational hygiene programmes into existing emergency and primary care services, the delivery of wellbeing initiatives, and a streamlining of primary care provision to complement that provided by the Northwest Territory provincial government health services.

Because of the remote situation, on-site personnel are trained to conduct tests such as respirator-fit-testing, audiology and spirometry, the results of which are interpreted remotely so providing a cost-effective use of resources. Educational updates are provided for mine personnel in person and online.

Raising employee awareness about the different roles of health providers has resulted in more seamless health care for the fly-in fly-out population. This is particularly important in managing prevalent conditions such as hypertension and diabetes. Obesity and general wellbeing are also being prioritised through a revised catering contract providing healthier food choices, weight loss challenges, exercise, and lifestyle education.

Both of our Canadian mines are in remote fly-in fly-out locations

All underground and surface mining operations with existing OHSAS 18001: 2007 certification maintained a Family of Companies' occupational medical service audit rating of more than 85%.

Emergency medical care

All underground and surface diamond mining operations that participated in the emergency medical care audit maintained their pre-recession standard. The reduction in our emergency medical care capacity in 2009 continues to be mitigated by ongoing emergency training and innovative surgical skills retention (see p62-63).

Performance against targets

The Family of Companies outcome standards for occupational illness are:

- An occupational illness fatality rate of zero; and
- An occupational illness frequency rate (OIFR) of less than five cases per million hours worked.

Definitions of occupational diseases and statutory reporting requirements differ between business units. Across the Family of Companies, 18 cases of occupational disease were diagnosed and reported in employees; seven cases of occupational malaria; five cases of noise-induced hearing loss; three cases of occupationally aggravated asthma and chronic obstructive airways disease; and three cases of occupational dermatitis or sensitivity.

DBCM's OIFR continued to improve in 2010 reaching 0.15 cases per million person hours worked (2009: 0.44). The Group Exploration Division of De Beers Group Services reported eight cases of occupational disease, seven of which were malaria, and thus established a baseline OIFR at 9.36 cases per million person hours worked. During 2010, the health and occupational hygiene peer groups collaborated to develop an occupational medical incident reporting standard which will form a uniform basis for diagnosing and recording cases of occupational disease and determining a composite OIFR for the Family of Companies.

Tuberculosis is an important endemic disease and health indicator in southern African countries that are hyper-endemic for HIV infection. The estimated national incidence rate of tuberculosis in South Africa is 970 cases per 100,000 population.[11] This compares to an incidence rate among DBCM permanent employees in 2010 of 188 per 100,000 (2009: 137 per 100,000).[12]

Although malaria remains a significant occupational health challenge for people working at exploration sites in Angola, implementing the Group Exploration Five-Point Plan was very successful in reducing cases of malaria in both expatriates and local workers (see case study).

[11] Latest figures: Global Tuberculosis Control 2010, World Health Organization http://www.who.int/tb/publications/global_report/2010/en/

[12] This is a higher and more reliable rate than that including contractors since contractors are more likely to receive primary care off-site and with the link between HIV infection and tuberculosis, there may be under-diagnosis by our at-mine health services.

Case study:

Exploration malaria and HIV interventions – in the workplace and the community

Our Group Exploration has identified malaria infection and resulting absenteeism as a health priority at the Lucapa site in Angola. Studies in 2008 and 2009 resulted in implementing a Malaria Five-Point Plan in 2010, which included mosquito larvae control and spraying. This has succeeded in reducing cases of occupational malaria in expatriate employees from 185 reported cases per hundred person years (phpy) in 2009 to 25 confirmed cases phpy in 2010.

Phase one of the plan was implemented in the tented exploration camp and complemented existing anti-mosquito measures. Phase two involved providing mosquito nets to local employees and families not living in the camp, as well as indoor spraying of employees' homes. As a results, the number of reported malaria cases in local employees dropped from 96 in 2009 to 19 in 2010.

A partnership with the local government and Consaúde Ltd, an NGO, has meant preventive measures have expanded into the surrounding malaria-endemic community in 2010. This partnership has also extended to another global health priority – HIV and Aids. Along with the local government and Consaúde Ltd, the Exploration team has embarked on an awareness campaign, HCT (HIV Counselling and Testing) and prevention and health care for those testing positive.

Exploration site, Angola

Orapa Hospital pharmacy

Integration initiatives and challenges for 2011

Stress and mental health

Integrating general medical care for employees within our occupational medical services has highlighted the need for managing not only stress but also mental disorders affecting health and safety in the workplace.

Chronic disorders

We will also target other common chronic disorders such as hypertension, diabetes and obesity through the wellbeing component of our occupational health services. Monitoring of illness absenteeism, and the effects of wellbeing initiatives, will become integral to our ongoing health surveillance.

Women's health

The increasing number of women in the workforce remains an important focus with respect to specific physiological characteristics and work-life balance.

Contractor health

Contractors who change jobs frequently present a challenge to optimal medical surveillance and the Health Peer Group will explore options for better management of this group.

Data collection

The lifetime exposure history for both permanent employees and contractors poses an extreme challenge to the prevention and identification of occupational disease. This will be addressed through additional data collection during routine medical surveillance (see case study).

Case study:

Asbestos risk and surveillance in diamond mining

The nature and location of kimberlite pipes in relation to asbestos deposits can be associated with potential occupational and environmental exposure to asbestos. Autopsy research in 2007 from the South African National Institute for Occupational Health (NIOH) on deceased diamond miners indicated that the work and non-work related asbestos exposure information – and thus the determination of risk – were inadequate.

Subsequently, NIOH investigated job histories of deceased South African mine workers with asbestos-related diseases and measured the asbestos fibre content in lungs of non-diseased workers. DBCM collaborated with NIOH in a subsequent study to analyse a limited number of workplace and environmental samples to assess potential sources of exposure.

Of 559 deceased workers who had, according to the autopsy records, apparently worked exclusively on diamond mines, 24 had asbestos-related diseases. However, only six workers had no evidence of having worked elsewhere, since nine had worked in asbestos mines or were boilermakers and 11 had incomplete working histories, and even in these six, macro-environmental exposure could not be excluded. In the 11 lung specimens analysed from non-diseased workers, five had significant quantities of tremolite-actinolite fibres. In the workplace samples, tremolite-actinolite and/or chrysotile asbestos fibres were found in the tailings from the underground and surface mines, and from the country-rock surrounding the kimberlite.

These findings[13] indicate that ongoing exposure monitoring and medical surveillance remain essential, particularly where asbestos is found in the bedrock or kimberlite pipes, and also in non-mining workplaces, such as workshops.

In addition, we have identified the need for cross-functional collaboration between geologists, occupational hygienists and medical experts to recognise and mitigate the potential for asbestos exposure on all new mining operations.

[13] Nelson G, Murray J, and Phillips JI. The risk of asbestos exposure in South African diamond miners (accepted for publication in Annals of Occupational Hygiene)

HIV and Aids management

Risk: The majority of our employees live in countries classified as hyper-endemic for HIV. Their exposure to HIV and Aids represents a real threat to their health, their families, the continuity of our business and the long term development of Africa.

Sub-Saharan Africa accounts for 67% of all global HIV infections. In Botswana, for example, UNAIDS estimates that the 2009 national infection rate for HIV amongst adults (15-49 years) is 24.8%. By contrast, the rate in Canada is 0.2%.

Managing HIV and Aids

HIV and Aids management is a complex matter as it has social and developmental challenges that require an integrated and systems-based approach. Although integration of HIV and Aids management into our broader health services is underway as part of our comprehensive health and wellbeing approach, HIV remains a priority issue in our southern African business units, where the majority of our employees are based, and we report on it as a specific risk.

Our holistic strategy for managing the HIV risk includes prevention, treatment, care and support. Our ultimate goal is the integration of our HIV and Aids programmes with the public health systems of each of our countries of operation.

Awareness-raising

Our approach to preventing HIV infection, both within our workforce and more broadly, is built on awareness-raising, testing and research. Awareness and training interventions are oriented towards preventing and managing HIV and Aids, as well as related risks such as tuberculosis.

Debswana and DTC Botswana focus on behaviour change and communication to help ensure that relatively high levels of awareness are translated into the 'right' behaviour and practices. In 2010, a successful new HIV and Aids initiative 'My campaign, My health, My wealth' emphasised ownership of health outcomes by all employees.

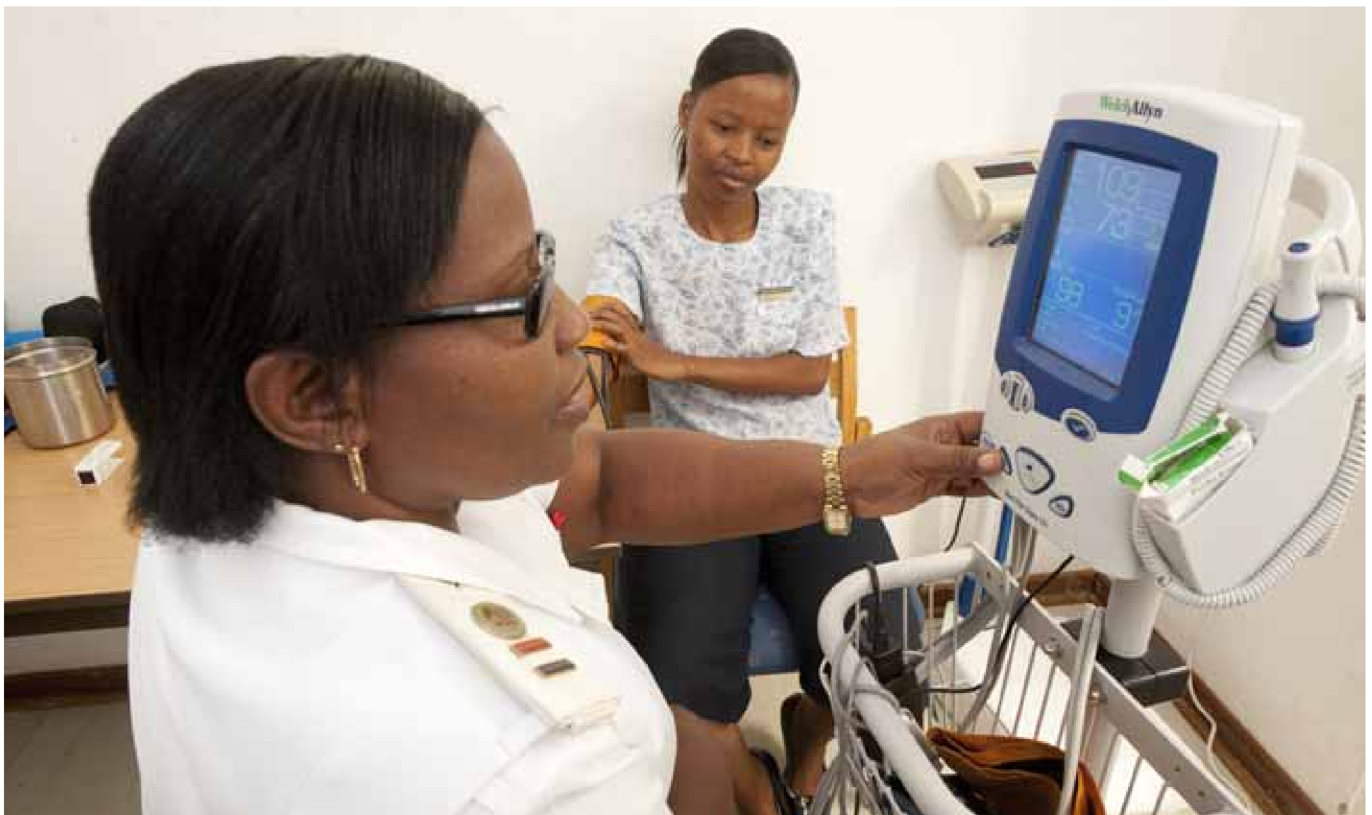
Fact Box

According to UNAIDS,[14] almost 60 million people have been infected with HIV and 25 million have died since the beginning of the epidemic. There are 33.3 million people living with HIV. Taken from their latest country prevalence report, the 2009 national infection rate estimates for HIV amongst adults (15-49 years) in our countries of operation are as follows:

- Angola: 2%
- Canada: 0.2%
- China: 0.1%
- Belgium: 0.2%
- Botswana: 24.8 %
- DRC: no estimate
- India: 0.3%
- Israel: 0.2%
- Japan: <0.1%
- Luxembourg: 0.3%
- Namibia: 13.1%
- South Africa: 17.8%
- United Kingdom: 0.2%
- United States of America: 0.6%

[14] www.unaids.org/documents/20101123_GlobalReport_Annexes1_em.pdf

A nurse at Orapa Hospital taking the blood pressure of an employee



Furthermore, our HIV and Aids principals continue to engage actively with external organisations at local, regional and international levels (see p15).

Testing

Routine HIV Counselling and Testing (HCT) through Provider Initiated Counselling and Testing (PICT) facilitates HIV testing of employees during medical consultations at mine clinics, either during occupational medical examinations or primary care consultations. HIV tests are available to all employees, spouses, life partners and contractors. Private-public partnerships also help to make testing available in communities near our operations.

Despite our maintaining a strong HIV and Aids risk management programme, some aspects have been affected by the recession. For example, we have lost our dedicated HIV and Aids coordinator roles in South Africa and this has reduced our ability to carry out proactive testing and to analyse data.

Research

The Family of Companies conducts operational and 'in-field' research projects to improve the effectiveness of our existing HIV and Aids risk management (see case study).

Treatment

Anti-Retroviral Treatment (ART) is available free to HIV-infected employees and their spouses or life partners where it can be provided in a responsible and sustainable manner. In 2010, our ART programmes in Botswana, Namibia and South Africa continued to be coordinated externally by Aid for AIDS as our principal Disease Management Service Provider. Our goal is to encourage all HIV positive employees and spouses or life partners to join a disease management programme as early as possible and to maintain 100% accessibility of treatment in the countries affected by HIV and Aids.

There have been a number of national developments in South Africa since our HIV programme began in 2003. Free ART has become available at public health centres and medical schemes have introduced HIV treatment as a prescribed minimum benefit. As a result, company programmes supplement these offerings, typically during the tenure of employment.

All employees in our South African operations (since July 2010) are covered by medical insurance and their medical schemes provide cover for HIV and Aids. In South Africa, fewer people are continuing on the company programme, which is available to employees upon retirement or retrenchment, as they can now access the government programme. This differs in Botswana and Namibia where, when employment ends, the retired or retrenched employee is seamlessly migrated from company to government programmes.

In addition to ART, our Disease Management Programme provides employees with access to programmes that address physical and psycho-social wellbeing related to HIV infection and treatment. This includes:

- Post-exposure prophylaxis;
- Medication to prevent opportunistic infections;
- Pathology;
- Counselling and support;
- Wellness advice; and
- Nutritional supplements.

Almost 63% of all employees who have ever registered with one of our HIV programmes since they began in 2001 are still members at the end of 2010 (see Table 4).

Case study:

Research partnership with HEARD

In a longitudinal study, our research partners in the Health Economics and HIV/AIDS Research Division (HEARD) at the University of KwaZulu Natal, have examined factors that challenge adherence to HIV treatment services.

Early results have identified a number of issues including logistics, a perceived lack of confidentiality, fear of being seen to take medication in the workplace, and other related factors which affect the uptake and delivery of Anti Retroviral Treatment (ART) and voluntary counselling and testing (VCT).

Stage one of the operational research (May 2007 to February 2008) provided baseline data for the VCT and ART services offered at our Finsch Mine in the Northern Cape and helped us to reposition our testing practice from VCT towards provider initiated counselling and testing (PICT) during 2008.

Stage two (March – October 2008) comprised ethnographic research methods to elicit the perceptions and experiences of VCT and ART at the site. The findings were published in 2008.

Other research projects have followed in 2009 and 2010:

- Behavioural and quality of life study;
- Patient usage and a couples support and disclosure study; and
- Adherence study conducted on those receiving ART.

Initial findings were presented[15] in November 2010 and a final report will be completed in 2011.[16]

Table 4: Registration and outcomes on Family of Companies' HIV programmes

Country, start date	Current registrations	Deceased from all causes*	Left programme	Ever registered
Botswana, May 2001	1,110	137	426	1,673
South Africa, July 2003	290	112	202	604
Namibia, May 2004	252	17	83	352
Total	1,652	266	711	2,629

Data note 12: The deceased indicator* is a 'crude' measure that ideally needs to be adjusted for the duration of enrolment and the cause of death. Source Aid for AIDS, December 2010.

[15] Presented at the 3rd SABCOHA/WITS/HEARD Prevention Conference November 2010

[16] Bhagwanjee, A., Petersen,I., Akintola, O., and George, G. 2008 Bridging the gap between VCT and HIV/AIDS treatment uptake: Perspectives from a mining sector workplace in South Africa. African Journal of AIDS research, 7, 271-279.

Health and wellbeing

We take an holistic approach to the health and wellbeing of our employees in and beyond the workplace.

Our aim is to identify possible causes of, prevent and manage ill health, while promoting health and wellbeing for the workforce, their families and our communities. Forging partnerships to improve community health care in the countries where we operate is one way we work towards leaving a positive post-mine legacy.

In 2010, our goal was to achieve appropriate, comprehensive health service delivery while mining activity returned to pre-recession levels. To achieve this goal we focused on the integration of different components of health services, from exposure identification and occupational medical surveillance to primary and emergency medical care.

Holistic care of our employees
Holistic care of our employees, their families and the community in partnership with health care stakeholders.

COMPREHENSIVE HEALTH CARE DELIVERY

Management systems: Health audits, Peer groups, Employee engagement

JOINING DE BEERS

Environment and personal risk assessment
Case history collection, Health and safety induction

A

CASE STUDY:
Understanding the root causes of ill health
It is well-known that kimberlite pipes may be associated with exposure to asbestos. We collaborated with the South African National Institute for Occupational Health (NIOH) researchers in an attempt to quantify the risk of potential workplace and macro-environmental asbestos exposure for diamond mine workers. A limited number of workplace and environmental samples were taken from selected mines and analysed to augment an autopsy data review. The research indicates the difficulty in identifying the timing and sources of exposure and our need to gather better data on lifetime exposure history. In addition, we identified the need for cross-functional collaboration between geologists, occupational hygiene and medical experts to understand and mitigate the potential for asbestos exposure on all new mining operations.

WORKING AT DE BEERS

Emergency medical care
Emergency preparedness

Comprehensive primary health care

Continued occasional health surveillance
Noise, Dust, Endemic diseases

B

CASE STUDY:
A smart partnership for health care
At Oranjemund in Namibia, health care is delivered through a state-run primary health care clinic and the Namdeb-owned Private Hospital in a 'smart partnership', which alleviates the need to send non-insured community members to the nearest District Hospital over 400 km away. Namdeb provides medical services, occupational health and comprehensive care for employees, secondary medical care for the community and also emergency medical care for the crew of vessels operated by De Beers Marine Namibia.

Their innovative model of maintaining expertise is to second medical practitioners on rotation to the academic hospital in Windhoek to update their emergency and operative skills so they can provide better health care services.

There has also been complete integration of the HIV and wellness teams into the occupational health service in 'a one-stop approach' for employees which has enhanced the uptake of HIV counselling and testing and reduced the stigma associated with a disease-specific programme.

100% eligibility of employees, spouses or life partners for free Anti-Retroviral Treatment where it can be provided responsibly and sustainably.

BEYOND EMPLOYMENT

Seamless transfer to public health care programmes for chronic conditions
HIV/Aids prevention and treatment

C

CASE STUDY:
Providing long term care and support
Sub-Saharan Africa accounts for 67% of all global HIV infections and most of our workforce is in the hyper-endemic countries where exposure to HIV is a real threat to our employees' health, their families and the continuity of our business.

Our holistic strategy for managing the HIV risk includes prevention, treatment, care and support. We run awareness-raising sessions and we provide confidential HIV counselling and testing to all employees, spouses, life partners and contractors. Anti-Retroviral Treatment (ART) is available free to HIV-infected employees and their spouses or life partners where it can be provided in a responsible and sustainable manner. Where it is not available through public health systems, we continue to provide lifelong ART upon retirement or retrenchment.

A Radiography facilities at Orapa Hospital.
B Oranjemund Hospital Pharmacy.
C A nurse conducting a health check-up.