This supplemental information should be read with the PDF of our 2013 integrated report (click here)

exxaro

POWERING POSSIBILITY

CONTENTS

Disclaimer

Opinions expressed in this report are, by nature, subject to known and unknown risks and uncertainties. Changing information or circumstances may cause the actual results, plans and objectives of Exxaro Resources Limited to differ materially from those expressed or implied in any forward-looking statements. Financial forecasts and data in this report are estimates which at times are based on reports prepared by experts who, in turn, may have relied on management estimates. Undue reliance should not be placed on such opinions, forecasts or data. No representation is made on the completeness or correctness of opinions, forecasts or data in this report. Neither the company nor any of its affiliates, advisors or representatives accepts any responsibility for any loss arising from the use of any opinion expressed, forecast or data in this report. Forward-looking statements apply only as of the date on which they are made and the company does not undertake any obligation to publicly update or revise any of its opinions or forward-looking statements, whether to reflect new data or future events or circumstances. The financial information on which the forward-looking statements are based have not been audited nor reported on by the company's independent external auditors.

Ongoing feedback from a range of stakeholders helps us to contextualise certain issues better for more informed understanding by readers.

Contact:

Hanno Olinger | Manager: Sustainability

Tel: +27 12 307 3359

Fax: +27 12 307 5327

Mobile: +27 83 609 1094

Email: Hanno.Olinger@exxaro.com
Web: www.exxaro.com

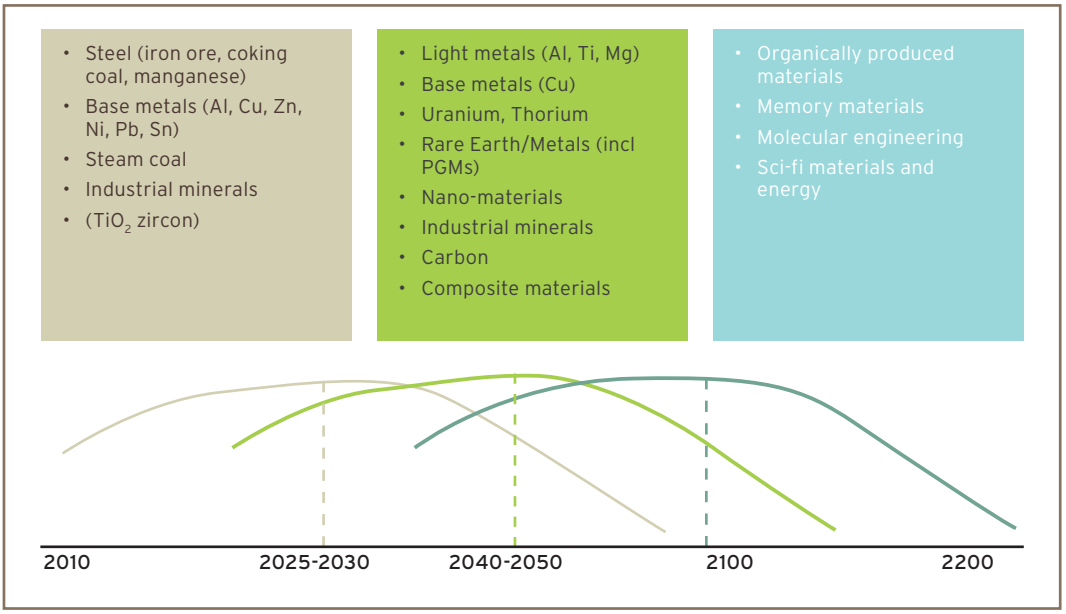
Strategy

01

FOCUS ON INNOVATION AND THE NEXT PROGRAMME

The world is developing and changing at a phenomenal rate and, together with even greater technological advancements, the resources industry will need to drastically adapt to supply the necessary resources that will remain in high demand to sustain and improve our way of life.

THE RIGHT COMMODITIES BASED ON FUNDAMENTALS



The predicted demand trend in materials is illustrated above. Other future trends relevant to the mining industry are increasing pressure on licence-to-operate aspects (social and environmental), automation, ever-reducing ore quality, more complex and remote ores bodies and step changes in technological innovation. To align our business to these future requirements will present substantial new challenges and opportunities.

The current methods we use to extract and beneficiate resources may become unsustainable far sooner than we envisage. This presents a significant opportunity for Exxaro to lead the industry through innovation for sustainability.

Since 2010 Exxaro has been working on an innovation programme to make systematic innovation part of the group's DNA. Under this banner, the NEXT (new Exxaro tomorrow) project is aimed at bringing to life Exxaro's vision of "Through our innovation and growth we will be a powerful source of endless possibilities"

The NEXT journey

To conceptualise a thriving Exxaro in future, the world and industry of 2030 were envisaged (overleaf), based on key design criteria derived from global and industry megatrends, as well as disruptive technologies.

Senior managers have been assigned to oversee detailed research in specific areas for application in Exxaro. Known as strategic thrusts, these are aligned to our strategy and are providing a roadmap to move from our current state to an optimum, sustainable mining state.

Our strategic thrusts include long-term planning in:

- Smart exploration: focuses on new and developing exploration methods and technologies to accurately define and model the

NEXT PROGRAMME OVERALL TRANSITION ROADMAP

2013

- Increasing shareholder expectations (profits)
- Extreme escalation in operating costs
- Rapid technological innovation, ie IT/Coms
- Increased pressure on social and regulatory compliance
- Unbalanced relationship between government, community and mining
- Current core processes sub-optimised (exploration, geology, mining processing and logistics)
- High levels of waste and discard materials from production
- High impact on environment and insufficient rehabilitation
- Fossil fuel-based economy/carbon emissions
- Energy supply/cost constraints
  Limited focus on downstream beneficiation
- Current workforce ill-equipped for the future (high levels of semi-skilled employees, shortage of highly skilled employees)
- Communities dependent on mining activities

10 STRATEGIC THRUSTS

- Smart exploration
- New mining technologies
- New processing technologies
- Asset management/ logistics
- Clean coal technologies
- Innovation to zero harm
- Social responsibility
- Sustainable energy
- Automation
- Integrate/redefine value chain

2030

Sustainable licence to operate:

- Creating inclusive wealth – all stakeholders
- Balanced and sustainable partnership between government, community and resources industry
- Small footprint/limited environmental impact
- Self-sustaining economically viable community > beyond life of mine

- Smart exploration: accurate, predictable, instant, information and models
- 100% resource extraction
- Zero waste
- Zero harm – safety/health
- Energy, carbon and water-neutral
- Workforce equipped to support the 2030 business
- Hybrid/renewable/alternative energy solutions
- Capitalise on trend of advanced/light materials/metals
- Integrated, optimised and redefined value chain

ore body and perform efficient resource characterisation

- Next-generation mining processes: focuses on new mining methods and technologies to maximise production and efficiency, decrease cost and allow recovery of difficult reserves
- Next-generation processing: focuses on new processing methods and technologies that will increase the mineral recovery, minimise waste, and are much more water and energy efficient
- Logistics and physical asset management: an integrated approach to manage all assets and the logistics chain, while examining possibilities to improve performance, risk management and expenditure over the total life cycle
- Clean-coal technology: technologies that increase the efficiency of coal use and reduce the environmental impact of coal on emissions, water pollution and waste
- Automation: an integrated platform to manage production information and automated equipment to maximise the value of the entire operation along the value chain
- Innovation to zero harm: ensures zero harm to employees and communities, and minimises environmental impact
- Social responsibility: focuses on equipping employees for the future and co-creating a sustainable economic environment for mining communities beyond the life of mine
- Sustainable energy: focuses on optimising energy consumption as well as maximising energy generation and recovery opportunities at current and future operations
- Redefining the value chain: improves the value chain by implementing innovative solutions and redefining and integrating the current value chain, including downstream processing and by-products.

STAKEHOLDER ENGAGEMENT

Broader industry participation

As a stakeholder in the mining industry, Exxaro actively participates in shaping appropriate policies in South Africa through many channels, including:

- The Chamber of Mines
- JSE Limited and Computershare forums
- National Energy Regulator of South Africa (NERSA)
- Energy intensive users group (EIUG)
- National electricity response team (NERT)
- Energy efficiency accord through the technical committee facilitated by the National
- Business Institute (NBI)
- Industry energy policy-influence workshops
- World Wildlife Fund (WWF) round table event
- South African Chamber of Commerce and Industry's (SACCI) electricity dialogue
- SANBI (South Africa National Biodiversity Institute).

Exxaro is also involved in the initiatives of:

- South African Independent Power Producers Association (SAIPPA)
- Coaltech 2020
- Fossil Fuel Foundation
- Peace Parks Foundation (over R12 million to date)
- SA Centre for Carbon Capture and Storage with international and local partners
- Clinton Foundation.

In terms of research and advocacy, Exxaro funds several university chairs (detailed on page 28), including:

- Business and climate change (Unisa)
- Energy efficiency (Pretoria)
- Global change and sustainability (Wits)
- Business and biodiversity leadership (Pretoria).

Commitment to external initiatives

Integral to our goal of leadership in sustainability, Exxaro actively participates in initiatives that benefit both the industry and South Africa.

Initiative	Purpose	Progress
Community health project	To create HIV awareness and encourage HIV testing in communities surrounding our business units. We aim to create an environment that has no stigma against people living with HIV/Aids	Projects initiated at Arnot, Leeuwpan and North Block Complex in 2010, followed by Inyanda, Matla and New Clydesdale in 2011. In 2012, Grootegeluk, Reductants and Tshikondeni implemented this initiative. Community activities include awareness and home-based care
Exxaro chair in earth science at University of Pretoria	Encourage research and dialogue	Support provided until 2013
University of Pretoria community-based project module	Compulsory community module for second year engineering students	Student support of community projects run by business units
Mineral Education Trust Fund	Pool industry resources to support tertiary education in the South African minerals industry and jointly seek solutions to related challenges	Annual contribution of over R2 million
National Business Initiative	To ensure a coordinated response to issues such as climate change and water	Corporate membership Exxaro participates in the Carbon Disclosure Project (CDP) programmes for energy and water to ensure responsible stewardship
People development initiative	Bridging year to prepare students for tertiary education in mining-related studies as well as sponsorships in the fields of education, health and entrepreneurial studies	Annual funding of over R1 million

Performance

02

SAFETY

Highlights

- Exxaro recorded a fatality-free year in 2013 for the first time in its history. This proves we can reach our target and is a powerful incentive to all our teams
- Six business units worked a calendar year without a lost-time injury (LTI), while nine of 19 reached their safe-day targets (days without LTI)
- Ten business units achieved the LTIFR (lost-time injury frequency rate) target of less than 0,15
- Exxaro successfully rolled out the Global Minerals Industry risk management programme which standardises approaches to improve risk identification and management. This in turn should sustain our drive for continuous improvement in safety processes
- Exxaro also rolled out the safety, health and environmental representatives' empowerment programme to promote health and safety in the workplace.

Lowlights

- Exxaro did not achieve its LTIFR target of 0,15, recording 0,19 at year end. However, LTIs improved significantly from 66 in 2012 to 41 in 2013.

The safety of our people is fundamental to our business, and we will not rest until we achieve our safety goals through collective responsibility, commitment and ongoing focus. As part of this focus, all 12 operational business units have international health and safety accreditation (OHSAS 18001).

Our ultimate target remains zero injuries and, therefore, zero fatalities. To reach this goal, we review our lost-time injury frequency rate (LTIFR) target annually based on prior performance, and apply stringent management protocols, programmes and systems. Every lost-time injury is investigated by the relevant business unit manager, while all fatalities are investigated by a committee with the appropriate skills, headed by an independent chairman. Findings are reported to the executive committee and the sustainability, risk and compliance committee and escalated to the board if required. Each business unit tracks its adherence to standards and legislation through a programme of self-assessments and corporate audits.

Exxaro's key generic risks range from limited hazard awareness to varied safety skills and not adhering to group safety standards. Collectively, these may result in Exxaro being perceived as an unsafe business – and that is a material risk to our sustainability. Accordingly, we have a timeline to reach our targets that covers:

- Zero fatalities
- Zero lost-time injuries
- Effective hazard identification and risk assessments (HIRA)
- Visible felt leadership as a key driver of safety excellence
- Zero repeat incidents.

Focus areas

To maintain our OHSAS 18001 certifications, Exxaro committed R60 million over five years (2009 to 2013) to achieving its safety targets:

- Zero fatalities in the longer term and a calendar-year fatality-free period in the short term
- LTIFR target for 2013 of 0,15 – actual performance of 0,19 (34% better than 2012)

Exxaro's CEO safety indaba is an annual forum where employees engage on relevant topics.

At the inaugural summit in 2009, we identified five key areas that would enable us to make a tangible difference to safety performance:

- Consequence management
- Safety training
- Culture (the Exxaro safety way of life)
- Mini-HIRA (hazard identification risk assessment)
- Communication.

These issues remain pivotal to the group's safety performance.

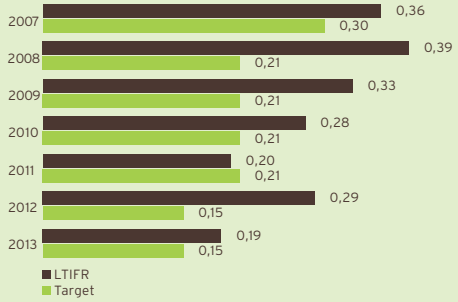
With the support of government, the Chamber of Mines and Exxaro's recognised unions, this focus is producing tangible results. By year end, six business units had worked for 12 months without a lost-time injury.

Exxaro set a target of zero fatalities, and an LTIFR (per 200 000 hours worked) of 0,15 for 2013. The fatality frequency rate per 200 000 hours worked in 2013 was 0,00 compared to 0,06 in 2012. Our target remains zero, as no death is acceptable. Disappointingly, actual LTIFR performance was 0,19 – below our target but a 34% improvement on 0,29 in 2012. Management is currently implementing several programmes to improve performance:

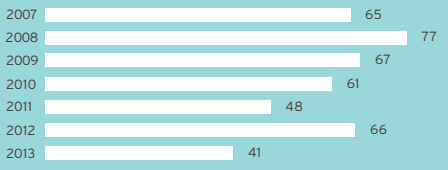
- The mini-HIRA (hazard identification and risk assessment) process is being reviewed to enhance its effectiveness. This is expected to significantly minimise or prevent injuries
- Visibility of management in the plant is being increased by enhancing visible felt leadership (VFL)
- Risk identification and management through the Global Mining and Minerals Industry risk management programme.

SAFETY PERFORMANCE 2013

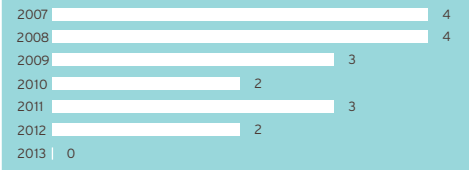
LTIFR PERFORMANCE VS TARGET 2007-2013



LTI TREND – 2007-2013



FATALITIES TREND – 2007-2013



Zero fatalities

In 2013, no fines or sanctions for non-compliance with safety and health laws and regulations were imposed on any Exxaro operation. As a group, Exxaro was served with three section 54 and six section 55 notices in 2013, of which all were amicably resolved as quickly as possible.

While key risks differ by operation, our major challenges are vehicle incidents, energy and machinery isolation, and risk awareness and discipline at all levels. Because skills shortages exacerbate these challenges, we concentrate on continuous on-the-job training to ensure sufficient trained people are in place, applying safe working practices.

Safety awareness

Two years ago, Exxaro launched a safety recognition award (for teams reaching their safe-day targets). This also recognises year-on-year safety improvements in LTIFR and reinforces safety behaviour.

In 2013, team members at ten business units achieved their safe-day targets (days without LTIs):

- Arnot
- Durnacol
- Ferroland
- Hlobane
- GMEP
- New Clydesdale
- Research and development
- Semi-coking plant
- Zincor
- Mayoko.

These teams have qualified for the R1 300 safety recognition incentive per employee. Because achievements are recognised immediately, teams may qualify more than once in a year. In addition, for the past three years, each Exxaro operation has raised a 'safe day' flag for each day without a lost-time injury. These visible flagpoles keep safety awareness high and celebrate every day without injury.

HEALTH

HIGHLIGHTS

The group-wide **HIV disclosure initiative** is encouraging employees to disclose their status

51%
improvement in number of employees enrolled on the HIV/Aids programme – 545 in 2013 from 361 in 2012.

LOWLIGHTS

Continued reporting of new **occupational diseases** – despite a 25% decrease in the number of newly reported cases of occupational diseases in 2013.

CHALLENGES

Potential impact of **chronic diseases** of lifestyle on people's health and safety in the workplace.

Exxaro's vision for health and hygiene is to create a workplace that has no adverse health effects on our employees and affected communities. We keenly understand the health risks posed by mining as an industry, and therefore implementing programmes to reduce new cases of occupational diseases is integral to a healthy workforce:

- A healthy workforce enables Exxaro to deliver on its strategy. Employees have various opportunities to access healthcare including their medical aid schemes, occupational health services, HIV/Aids and tuberculosis (TB) programmes
- Workplace risks that affect the health of employees are identified and prioritised
- Prevention programmes are implemented.

Our medical surveillance processes have been progressively strengthened to ensure our employees remain healthy and productive.

Key health and hygiene indicators are reported to the executive committee monthly, quarterly and annually. Regular reporting enables management to more effectively monitor the risk identification and assessment process, comply with legislation and reporting requirements, and track the implementation of programmes against set targets.

In 2013, we continued to make progress on several major health-related projects, including:

- Following a review of our health and hygiene programme and identifying the factors influencing the prevalence of occupational diseases, we revised our guideline for detection, investigation and follow-up of health and hygiene incidents
- We also conducted risk assessments at three business units
- We continued designing system requirements to support health processes
- A survey on chronic diseases of lifestyle at some operations has established the prevalence and contributing social factors. Follow-up and monitoring of those individuals is being carried out by our health practitioners
- Current implementation of our TB programme was reviewed at the remainder of our sites in 2013 to ensure early detection and compliance to treatment. In 2014, we will implement corrective actions and share best practices across the group.

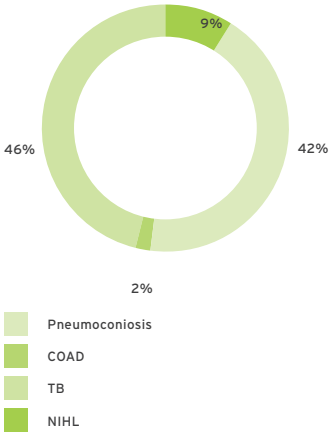
Occupational diseases

Reported occupational diseases

Reported cases are those newly diagnosed and submitted to the compensation authorities to confirm they are work-related and eligible for compensation as per the Compensation for Occupational Injuries and Diseases Act (COIDA) and Occupational Diseases in Mines and Works Act (ODMWA).

In 2013, Exxaro reported 87 occupational diseases compared to 118 in 2012. Some 46% are TB (40), and the balance pneumoconiosis (37), chronic obstructive airways diseases (COAD) (2) and NIHL (8).

Reported occupational diseases



Accepted occupational diseases

These are cases where the condition is demonstrably work-related and accepted for compensation. In 2013, Exxaro had 12 occupational disease cases accepted for compensation: pneumoconiosis (3), and occupational TB (9). There were no cases of silicosis and NIHL.

Accepted occupational diseases 2013

Reported occupational diseases (cumulative)

	2008	2009	2010	2011	2012	2013
NIHL	3	11	12	47	22	8
Pneumoconiosis	3	2	23	31	24	37
Silicosis	–	–	–	–	7	–
COAD	1	1	–	2	–	2
Occupational TB	15	6	52	54	65	40
Dermatitis	–	–	2	2	–	–
Asbestosis	–	–	–	1	–	–
Work-related upper limb disorders	–	–	1	–	–	–
Total	22	20	90	137	118	87

Mining sector targets on noise and silicosis

In 2003, the mining sector set targets to eliminate silicosis and noise-induced hearing loss:

NOISE

Reduce NIHL to less than 10% per individual by 2008

Reduce noise from equipment to under 110dB(A) by 2013.

SILICOSIS

By December 2008, 95% of all exposure measurement results <0,1mg/m^3 for respirable crystalline silica

Eliminate silicosis by 2013.

CURRENT STATUS (2013)

In 2013, Exxaro has:
No cases of silicosis

Eight cases of employees with hearing loss were submitted to Rand Mutual Assurance (RMA) and no cases were accepted for compensation.

Although there was a decrease in the number of newly reported occupational diseases, we continued to implement hearing conservation and dust-control programmes to further reduce the number of new occupational diseases.

Chronic diseases of lifestyle

According to the World Health Organization (WHO), 40% of deaths from non-communicable diseases occur in low- and medium-income countries. WHO projects that between 2006 and 2015, global deaths from non-communicable diseases will increase by 17%, with the greatest increase in the African region (27%). A healthy lifestyle is key to preventing almost 80% of non-communicable diseases including obesity, hypertension and diabetes.

A recent Human Sciences Research Council (HSRC) survey indicated that South Africa was facing an emerging epidemic of chronic diseases of lifestyle. Lack of exercise was a major contributor, with 28% of men and 45% of women found to be unfit. Obesity is another major risk factor, with 20% of men and 68% of women having a waist circumference that puts them at risk of chronic diseases.

Equally, the impact on families when a member has a heart attack or stroke is disproportionate spending on medical costs and loss of income, often driving the family to poverty.

In the mining industry, possible injuries as a result of side effects of treatment or complications from any condition could be fatal. Controlling and managing chronic diseases is thus a proactive measure to reduce deaths and ill health, and to contribute to an improved quality of life.

Exxaro's survey on chronic diseases indicated that:

- **36%** of those with a chronic disease of lifestyle had a history of smoking
- **66%** of smokers had hypertension
- **75%** of those with hypertension were obese
- **17%** of those with diabetes were obese.

Based on this information, we are integrating the prevention and control of chronic diseases in our workplace health programmes. A standardised approach on collecting information has been implemented to ensure information on chronic diseases is captured. This is supported by case management and monitoring the progress of individuals with chronic diseases.

HIV/Aids and TB

The prevalence of HIV/Aids across Exxaro is currently estimated at over 8%, below the industry average. We continue to educate our people about this pandemic. With appropriate counselling and support, 80% of our workforce (excluding contractors) voluntarily tested between 2010 and 2013, and more are seeking treatment.

We recorded a 51% improvement in the number of employees enrolled on the HIV/Aids programme to 545

in 2013 compared to 454 in 2012. A total of 521 employees are on anti-retroviral treatment (ART).

Prior to launching our disclosure initiative in 2012, only two employees had openly disclosed their HIV-positive status. An additional three employees have now disclosed their status. Most business units have now rolled out this initiative.

Exxaro is making headway in its fight against the spread of HIV/Aids. Since January 2010:

- 10 317 people have attended HIV training
- 10 005 (97%) were counselled
- 9 602 (93%) were tested and 9 285 (90%) know their status
- 2 584 had never tested before (or not in the prior two years)
- 998 tested HIV positive; and 367 (37%) were testing for the first time
- 8 604 tested HIV negative
- 521 people are on anti-retroviral treatment.

Community HIV programme

In recent years, we have initiated community HIV programmes in areas surrounding operations in Mpumalanga and Limpopo. A total of 168 community peer educators have been trained as part of our HIV community awareness programme.

Tuberculosis

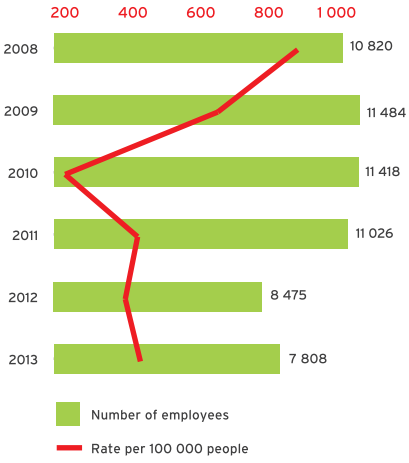
Worldwide, TB is the most common opportunistic infection affecting HIV-positive individuals. Although HIV-related TB is both treatable and preventable, its incidence continues to climb in developing nations.

It is widely recognised that the HIV/Aids and TB epidemic will affect every workplace, with the potential for prolonged staff illness, absenteeism and death affecting productivity, employee benefits, occupational health and safety, production costs and workplace morale.

Early diagnosis and proper treatment are therefore key to tackling a disease that has reached crisis proportions in our country.

Exxaro's TB rates (per 100 000) are similar to the general population. In 2013 we reviewed the implementation of our TB programme. In 2014, we will implement corrective actions emanating from these reviews as part of our continual improvement.

Exxaro's TB rates



Employee wellness

An employee assistance programme provides access to an external counselling service to ensure support for any of our people facing difficulties. This is a preventive measure that helps employees take the necessary steps to manage personal concerns, and assists management in minimising productivity issues.

During the year, an increasing number of our people used this service for:

- Financial problems
- Personal and emotional difficulties
- Family matters
- Work-related challenges
- Dependency on substances.

HIGHLIGHTS

Exxaro's talent pipeline and feeder schemes enabled over **800 jobless youth to obtain qualifications**, in-service training and employment

36 employees enrolled for postgraduate studies and 372 for company-sponsored management development programmes

Collective bargaining on wages and conditions of employment resulted in **two-year wage agreements** to June 2015

Production levels ramped up steeply to pre-strike levels in the month following the strike

Section 189 mine-closure consultations with organised labour for both New Clydesdale and Tshikondeni **successfully concluded** and a collective agreement signed that will regulate the closure process

Redeployment process for New Clydesdale completed – of 371 employees, only 40 were retrenched (mostly for medical reasons) or retired. Redeployment of Tshikondeni employees will continue until mine closure

Four more business units completed the skills audit

Following press reports, **Exxaro funded** two students with excellent matric results but no financial resources to study electrical engineering

Ranked top employer in the South Africa mining industry 2013/2014.

LOWLIGHTS

Unprotected strike lasting 18 days in first quarter of 2013 after missed production targets resulted in short-term incentives not being paid.

The shortage of specific skills in South Africa is a particular challenge and a national plan is in place to address critical or scarce competencies. Accordingly, attracting, retaining and developing these skills is a priority for all mining companies and a competitive point of difference. This is the driving force of Exxaro's feeder schemes which are currently benefiting over 800 people.

Supported by the leading practices developed in recent years, Exxaro concentrates on exceeding compliance targets in South Africa by training and development to maximise individual potential, equality and safety in the workplace, meet our employment equity targets and improve living standards in our stakeholder communities. Collectively, our initiatives contribute to reducing the shortage of skills in our industry.

Skills development

For companies like Exxaro, the skills deficit in South Africa translates into issues of leadership, culture, literacy and numeracy, and providing a pipeline of core and critical skills. We continue to believe the collective sustainability of business depends on rapidly developing the skills each company needs to run its operations which, in turn, enable it to empower employees to develop their full potential and ultimately contribute to national economic growth. The private sector, therefore, cannot afford to wait for the public education system to produce the calibre of people it needs at every level.

Accordingly, Exxaro focuses on ensuring all staff have the knowledge and skills they need to develop personally and to help us grow the company for the benefit of all. Our policy is to invest an appropriate amount of total salaries and wages each year on human resource development. In 2013, this was 6,5% or an investment of R200 million (2012: 5,5% or R177 million).

We encourage our people to be jointly responsible for managing their career growth. We provide financial assistance to permanent employees with potential to continue their education through part-time studies of recognised, approved courses and programmes. Those we nominate to attend courses or programmes are fully sponsored for tuition, examinations, travel, accommodation costs and study leave. In 2013, 36 employees enrolled for postgraduate studies and 372 for management development programmes sponsored by Exxaro.

Specific strategies to ensure the accelerated learning and development of black people, women and people with disabilities include:

- Fast-tracking those with leadership and management potential
- Accelerated development for occupation-based skills
- Formal study assistance
- Adult basic education
- Life skills programmes
- Learnerships
- Bursaries and internships.

Skills development

	Spent			
Rm	2013	2012*	2011	2010
Total training spend	200	177	225	140
Training spend on HDSA	161	134	172	115

* *Decrease reflects disposal of mineral sands operations and certain closures.*

Current and future skills requirements

To meet its current and future skills requirements, Exxaro invests in its current employees, and in the community and future employees.

Graduate programme

Exxaro's three-year professionals-in-training programme blends academic theory with the work environment. Each graduate has a mentor who supervises exposure to various commodities, leadership and management training. Mentors also assist with fulfilling registration requirements for relevant governing bodies and professional associations. In 2013, there were 80 professionals (38% women) in training throughout Exxaro (2012: 80) in a R39 million programme.

Bursary programme

There are currently 94 bursars studying at South African institutions at a cost of R9,4 million per annum. Over two-thirds are historically disadvantaged South Africans and 27% are women.

As part of our bridging programme, we granted ten bursaries in 2013 to school-leavers interested in technical disciplines such as engineering (metallurgical, chemical, mechanical, electrical, industrial, mining or civil), mine surveying and geology. Candidates must be grade 12 students from

Exxaro communities who want to study for a technical degree or diploma. Eight students secured Exxaro bursaries in the 2013 intake, and two for the 2014 intake. The total annual cost of this programme is R1,3 million.

Training

Training and development across the group are based on a comprehensive needs analysis, incorporating business strategy, identified skills gaps via the performance management process and training matrixes, succession-planning requirements, employee career progress and employment equity plans.

In the past two years, we have conducted skills audits at several operations, with North Block Complex, Inyanda and FerroAlloys completed to date and Leeuwpan in the final stages of its audit. Grootegeluk and Matla will start in 2014. The skills audit identifies current job and competency requirements, comparing these with what is needed currently and, more importantly, in future to achieve organisational goals and objectives.

Exxaro offers sponsored training in engineering learnerships at the Grovos training centre in Lephalale, as well as engineering and mining learnerships at Colliery Training College (CTC, where Exxaro is a shareholder) in Mpumalanga. As part of the talent pipeline, Exxaro also provides sponsored on-the-job training in core skills programmes like plant operators, maintenance operators and mobile equipment operators.

Grovos performed very well in 2013 as indicated by the following facts:

- The intake of 157 candidates is its second highest
- 28% black female intake is the highest ever
- 112 candidates qualified, its second best achievement since inception
- 87% first-time pass rate is second best in its history
- Income of R9,8 million (mainly grants) is the best ever, resulting in a 26% saving on budget
- Cost per student per year is lower than 2012 and the full training-period cost dropped below R200 000 per student, against an industry benchmark of around R300 000.

Three Exxaro business units (Grootegeluk, Matla and Tshikondeni) are MQA-accredited training providers in selective mining and engineering disciplines. This enables our people to be trained in mining and engineering, declared competent and obtain their MQA certification inhouse.

Talent pipeline/learner feeder schemes

Bursars (engineering and geology)	94
Bursars and scholarships (other)	14
Interns (professionals-in-training)	80
Interns (other)	21
Engineering learners	490
Mining learners	41
Maintenance operator	53
Plant operators	48
Mobile equipment operators	51
Admin learners	15
Total	**907**

Literacy and numeracy

All employees with qualifications below NQF level 1 are given the opportunity to become functionally literate. Candidates are screened and counselled to ensure informed decisions, and where employees complete training in their own time, there is an incentive scheme for each level completed.

Exxaro pays for voluntary adult basic education and training (ABET) programmes at all operations, investing R6 million in 2013 (2012: R6 million). We have accredited ABET training centres at Grootegeluk (partnership with external provider), Tshikondeni and Matla, while accredited external providers are used by the other business units.

In 2013, 54 employees and 126 non-employees completed various ABET levels successfully, while 85 employees and 190 non-employees enrolled on various ABET levels. More than 1 250 employees have passed one or more ABET levels since the inception of this programme.

With only 16% of Exxaro's total workforce now having a qualification below NQF 1, communication is more effective, particularly on safety issues.

Functional literacy and numeracy rates

	2013	2012	2011	2010	2009
Total staff count	8 203*	8 873*	10 903*	10 510*	11 180
Employees below ABET level 3	812	1 155	1 177	1 683	2 236
Employees on ABET level 3	464	501	595	511	345
Employees above ABET level 3	6 927	7 217	9 131	8 316	8 599

* *Number of full-time employees as per 2013, 2012, 2011 and 2010 workplace skill plans. Decrease in employee numbers from 2011 to 2012 reflects corporate activity.*

Community education

In 2013, 190 community members enrolled for adult basic education and training (ABET) at Exxaro. At North Block Complex almost R700 000 was spent on grade 12 learners in Saturday schools to improve science and mathematical knowledge and understanding.

Sponsorships

In 2013, we committed to offer scholarships to students in the fields of education, health sciences, entrepreneurial studies and in the areas of Exxaro's research chairs. These individuals are expected to practise their crafts in communities where Exxaro operates for a specific period. Alternatively, their research should support the objectives of the chair or add value to Exxaro. During the year, four scholarships were awarded to two medical students and two education students.

Talent management

Exxaro remains committed to developing its employees to increase the talent pool and achieve its strategic objectives. As such, our talent management processes were enhanced and an integrated framework developed in 2013. The objective of this framework is not only to enable the human resources function to operate more efficiently, but to create an integrated system for managing people that will allow Exxaro to rapidly and effectively respond to business needs.

This framework is being implemented in phases, starting in 2013 with people identified as high-potential employees. The purpose of this step is to accurately and effectively identify their strengths and developmental needs, provide career guidance, and assist Exxaro's succession-planning process as well as developing real actions for talent and leadership development.

Simultaneously, bargaining category employees are undergoing a skills audit, with training matrixes and career paths being part of the outcome. In 2014, we will focus on taking talent management further in this category by establishing succession planning forums at our business units, similar to those at corporate office for the management and specialist categories.

Leadership development

Exxaro places a high premium on promoting the skills and competence of leaders. Leadership is therefore a fundamental thrust in attaining organisational goals by internalising Exxaro's unique defined leadership philosophy.

The foundation of the group's leadership journey is a selection of management development programmes. Developing leadership is further reinforced through several channels. We use an integrated approach that includes individual assessment and different conversational as well as strategic integration and team development forums. (In) credible leadership, Exxaro's signature leadership framework, is progressively gearing up to become a catalyst in a work climate where people are central to performance.

Exxaro started a new initiative that aims to assess leaders against the group's defined leadership competencies. In 2013, 99 leaders completed this assessment. This will form part of leadership-driven development plans that support our strategic goals.

Attracting and retaining a skilled workforce

For the past seven years, we have been building a culture that reflects Exxaro's values and philosophy by engaging our talent to unlock value for the company and its stakeholders. Our aim is to develop a high-performance, enabling culture at every level using integrated and benchmarked practices aligned with our strategy and focused on meeting business targets.

Exxaro progressively measures itself as an employer of choice against several other organisations, nationally and internationally, on the key drivers of culture, talent and engagement. As example, specific strategic responses are identified from results in the prestigious Deloitte Best Company to Work For survey in which we participate every second year. Our aim is to steadily improve our rating, reflecting the group-wide emphasis on performance in a healthy employee climate that proactively attracts and retains talent.

In 2013, Exxaro was first among mining companies in the Top Employers Institute survey. This global ranking certifies excellence in conditions employers create for their people to grow and develop. The certification programme is the result of months of rigorous research, and independent auditing. To achieve this certification, organisations are researched and audited on primary benefits, secondary benefits and working conditions, training and development, career development and culture management.

Benchmarking ourselves through surveys ensures we continually address gaps in the way we work, understanding that continual improvement is the only way to ensure we remain an employer of choice.

Employee/management relations

Throughout the group, our approach on matters relating to the employment relationship is based on the principles of constructive engagement or regulated co-operation of all stakeholders.

Labour legislation serves as a broad framework within which employee relations policies, systems and procedures are developed and in terms of which employees are managed (individually and collectively) in Exxaro.

Almost 73% of our employees are represented by affiliated unions recognised by Exxaro subsidiaries: primarily National Union of Mineworkers (NUM) (59%) and Solidarity (13%).

Exxaro concentrates on maintaining sound relations with employees in bargaining units through ongoing engagement with employee representatives. Negotiations for wages and conditions of employment are conducted through various in-house forums and the Chamber of Mines.

In addition, forums with organised labour exist at operations where management and organised labour (recognised as the collective bargaining agent(s) of employees) will engage on matters concerning the employer/employee relationship.

Exxaro's disciplinary codes are based on the principle of fairness as required by labour law, and our supervisors have the skill to implement the codes. Diversity training is ongoing throughout Exxaro.

An extensive post-strike "back@work" programme assisted in a rapid production ramp up (reaching pre-strike levels in the first month). This programme focused on re-engaging the workforce through debriefing sessions, followed by counselling where needed. First-line managers received training in relationship building through coaching and communication. Senior management engaged employees extensively in workplace meetings and initiated special measures to restore production to normal levels. Despite these back@work activities taking place in working hours, production ramped up steeply.

Share ownership

The current employee share ownership plan was implemented in July 2012 (Mpower 2012) and will run until May 2017, with 7 290 participants each receiving 387 units worth R75 000, regardless of remuneration level or years of service. New qualifying employees will receive a pro-rated number of units.

Under Mpower 2012, employer companies in the group contributed cash to the trust to purchase shares. This means there is no loan to repay, so Mpower 2012 participants will enjoy potential growth and profit from the outset. Participants received dividends totalling R16 million for the 2013 financial year.

Employment equity

When we created Exxaro — South Africa's largest black-owned mining company at that time — our stated intention was to be the best example of how South African companies should be run. We made a commitment to our people to ensure their progress and to build the skills base we needed to fulfil our vision. Employment equity is just one of the ways in which we are doing this.

During the year, Grootegeluk and Waterberg region trained over 400 employees in a diversity programme developed to create awareness and manage diversity.

At the heart of our employment equity strategy are detailed plans developed by each business unit in consultation with its employees and unions. These are updated and progress reported to the SRC and social and ethics committees in accordance with their annual plans and government annually.

By following these plans, each unit ensures that recruitment and skills development is conducted responsibly, encouraging transformation without affecting existing positions in the company. Each business unit has a dedicated senior manager for employment equity, and an employment equity forum responsible for ensuring appropriate plans are developed, executed, monitored and communicated to employees.

Exxaro's staff complement was 7 920 at 31 December 2013, split into employees in bargaining units (78,5%) and the management and specialist category (21,5%) (2012: 7 721, 80%/20%).

The breakdown of Exxaro's annual employment equity reports, as submitted to the Department of Labour, is shown below. As these reports cover 1 August 2012 to 31 July 2013, totals differ from year-end numbers which may appear elsewhere in the report.

Exxaro workforce by category and region

Region	Bargaining unit					Management and specialist					Grand total
	Male	% of total workforce	Female	% of total workforce	Total	Male	% of total workforce	Female	% of total workforce	Total	
Gauteng	59	0,74	18	0,23	77	466	5,88	404	5,10	870	947
KZN	67	0,85	22	0,28	89	2	0,03	1	0,01	3	92
Limpopo	2 225	28,09	343	4,33	2 568	383	4,84	74	0,93	873	3 441
Mpumalanga	2 904	36,67	517	6,53	3 421	276	3,48	62	0,78	338	3 759
Foreigners	59	0,74	–	–	59	12	0,15	3	0,04	15	–
Expats	–	–	–	–	–	15	0,19	3	0,04	353	353
Local nationals	–	–	–	–	–	4	0,05	1	0,01	5	5
Grand total	**5 314**	**67,10**	**900**	**11,36**	**6 214**	**1 158**	**14,62**	**548**	**6,92**	**1 706**	**7 920**

A – African, I/A – Indian/Asians, C – coloured, W – white.
Table reflects figures as submitted to the DOL on 31 December 2013.
12 local nationals have been excluded because they do not qualify under designated groups.

For 2013, Exxaro's average employee turnover rate was 6,7% (2012: 11,7%), primarily because of death, resignation, dismissal and disability. The turnover rate by employee group is shown below:

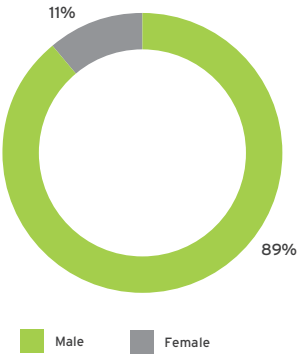
Breakdown of turnover – level

	Terminations Jan-Dec 2013	
	% workforce	Number
Top management	–	–
Senior management	3,64	4
Middle management	5,61	49
Junior management/skilled	8,92	249
Semi-skilled	5,35	180
Unskilled	6,21	48
Total	6,69	530

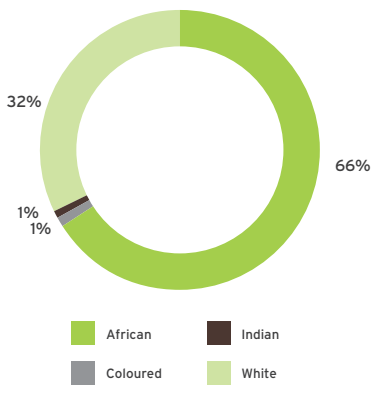
Note: Highest turnover in the junior management/skilled category specifically due to high turnover of artisans and miners.

Breakdown of turnover

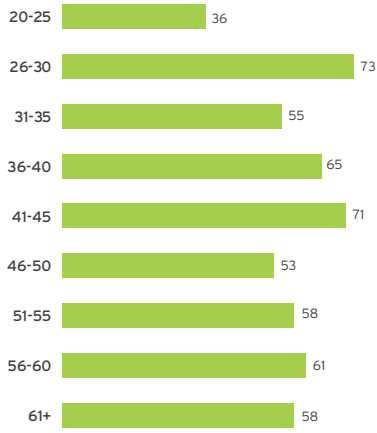
Gender breakdown



Ethnicity breakdown



Turnover per age group



Remuneration

Our brand is built on a strong vision – everything we do and deliver today will allow others to realise their vision tomorrow. We believe in the power of people and their ability to explore and shift boundaries, which leads to success. As such, our people strategies have been developed to reinforce our brand values:

- People-powered
- Inspired leaders
- Leading performance
- Sustainable effort.

Our total remuneration approach includes guaranteed and variable components. These play a critical role in attracting, motivating and retaining the high-performing and talented individuals required to build a sustainable business.

One of our competitive sources of value is our people: to meet our strategic goals, our reward policies and objectives must:

- Be integral to an overall human resources strategy, geared to support business strategies
- Be designed to motivate and reinforce superior performance, and continually demonstrate the company values
- Encourage the development of organisational and individual performance
- Encourage the development of skills required to meet future business needs
- Be based on the premise that employees should share in the success of the company
- Be designed to attract and retain high-quality individuals with the optimum mix of skills
- Be aimed at securing our people's commitment to goals via the optimum mix of financial and non-financial rewards.

Managing work conditions

A comprehensive suite of policies covers employment, labour relations, occupational health and safety, training and education, diversity and equal opportunity. Our aim is to provide working conditions that are safe and healthy, opportunities that are enriching and an environment conducive to performance.

Eliminating discrimination and resolving grievances

As an employer, Exxaro is firmly committed to the concept and practice of equal opportunity, irrespective of race, religion, gender, health status, sexual preference or nationality.

Our corporate values guide the way we do business, and discrimination on any grounds is not acceptable. Managers and supervisors are continuously trained on the appropriate application of disciplinary measures should the need arise.

Human rights policy

Exxaro complies with labour legislation in South Africa and International Labour Organisation guidelines. As a signatory to the United Nations Global Compact, the group encourages freedom of association and collective bargaining, ensures child labour is not tolerated and that forced or compulsory labour is not practised.

Our induction programmes educate employees about human rights. Policies on discrimination, harassment and racism are in place, as are structures to protect employees' human rights in the workplace. Security personnel are fully trained on human rights aspects relevant to each operation. Refresher courses also cover human rights issues.

Women in mining

In Exxaro, 18% of the workforce comprises women, and we continue to focus on attracting women through our talent pipelines. Although this remains a challenge, 38% of young professionals-in-training (PITs) are women, 27% of our full-time bursars in engineering and mining at universities are women and 30% of the intake to learnerships and skills programmes comprises women.

Housing

Our focus on home-ownership complies with both the mining charter and our own business needs. It is based on a long-term housing strategy, with the goal for all employees to have the opportunity to participate in home-ownership by 2014.

Since introducing a five-year mortgage repayment subsidy for first-time homebuyers who are permanent employees in 2009 – a period characterised by the unprecedented scarcity of bank mortgage finance – 191 employees have benefited from this plan. In addition to this subsidy, Exxaro has approved a housing capital assistance scheme that was piloted at Arnot. This will assist first-time homeowners on specific salary grades with a capital amount of R75 000 after tax. Both schemes focus on making homeownership more affordable, especially for employees on lower income levels.

While our housing policy focuses on homeownership, employees receive a housing or living-out allowance to assist with accommodation. The housing allowance is paid to employees with a registered bond and the living-out allowance to employees renting accommodation. The value of these allowances in 2013 was over R181 million.

The decrease in workforce numbers from 2011 to 2012 reflects corporate activity.

* *Employees sharing a room.*

** *Includes 191 employees using Exxaro's first-time homeowner scheme.*

While South African legislation dictates much of any mining company's community initiatives, Exxaro has long been an active and responsible corporate citizen. Legislatively, our community initiatives are focused on socio-economic development (SED) and local economic development (LED) projects as detailed in our five-year social and labour plans. Our aim, however, is to exceed these requirements by building sustainable communities and leaving a positive legacy wherever we operate or draw our labour from.

Exxaro invests substantial amounts on community development each year, aiming to exceed the government's BBBEE target of 1% of net profit after tax. Our focus is on our local communities – those in the immediate vicinity of our operations or in significant labour-sending areas. As many of our operations are in rural areas characterised by high levels of unemployment and poverty, the challenge remains for Exxaro to assist in creating viable and sustainable communities.

Exxaro's community development initiatives are focused on areas that are relevant and strategic to South Africa's development agenda, and aimed at alleviating poverty and improving the lives of identified communities. These financial commitments are channelled through the Exxaro Foundation and Exxaro Chairman's Fund, registered non-profit organisations established over 30 years ago. The objective of our community development initiatives is to support income-generating projects that will eradicate poverty, support infrastructural projects identified by municipal integrated development plans and improve the lives of people in identified communities. The themes we are currently focusing on include:

- Enterprise development
- Skills development
- Infrastructure development
- Education
- Health and welfare
- Agriculture and environment.

Social and labour plans 2008-2012

Challenges of the first five years

Exxaro completed an internal audit on social and labour plans in 2013. Key findings included:

- Lack of project management skills and systems which resulted in not all milestones being achieved on time
- Although LED projects had positive impacts, a significant percentage could be regarded as unsustainable post mine closure.

The audit also highlighted gaps that need to be addressed to optimise benefits for our communities and achieve the desired return on investment:

- Strategic control
- Provide project management support
- Adequate human resource staffing and training
- Partnership with government and industry (scale and sustainability).

These gaps have been addressed in the new five-year social and labour plans (2013-2017). All related LED projects will be managed by Exxaro's formal enterprise-wide project management system and committed community specialists and practitioners at all business units.

In terms of partnerships with government and industry, we considered a number of criteria in developing our new social and labour plans. These are summarised below.

- **DMR and mining charter requirements for community development projects:**
  - Focus on local (ie host) communities near operations
  - Ensure alignment with municipal integrated development plans
  - Five-year plan with clear annual milestones
  - Create sustainable socio-economic communities
  - Focus on alleviating poverty
  - Focus on creating jobs
  - Consultative and collaborative approach with community stakeholders – quarterly progress reports
- **New realities faced by the mining industry**
  - Community activism
  - Demand by community for participation and ownership
  - Demand for greater local procurement opportunities
  - Current CSI initiatives perceived as having minimal impact on long-term community sustainability
  - Need for partnerships for achieving economies of scale and size
  - Demand by government for greater coordination and cooperation with them to address national priorities

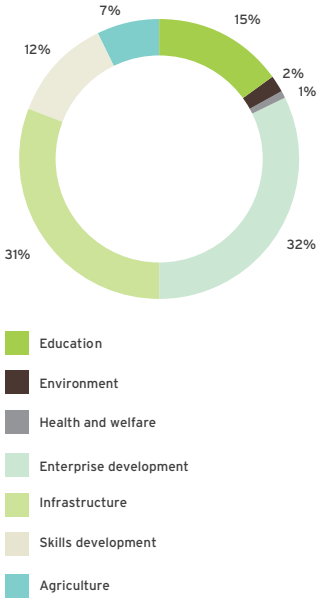
- **National provincial and local strategic focus areas**
  - The first Mpumalanga mining lekgotla was jointly arranged by the DMR and Office of the Premier, with keynote addresses by the ministers of DMR and Water Affairs as well as the premier of Mpumalanga. The objective was to align mining houses, municipalities and government departments on socio-economic and sustainable development in the province. Exxaro is participating in each identified commission or focus area:
  - **Human capital development:**
    1. Establishment of a math, science and technology academy;
    2. A hi-tech centre of excellence aimed at skills development;
    3. A centralised bursary support scheme;
    4. Support for the proposed Mpumalanga University
  - **Enterprise development:** Developing local procurement capacity and establishing business incubators
  - **Urban renewal:** Rejuvenation of mining towns, road and infrastructure maintenance, beneficiation, and an integrated approach to streamlined social and labour plans
  - **Sustainable development and environment:** Strengthening mine rehabilitation policy and procedures, protecting water resources, biodiversity and strategic environmental management, adaptation measures to climate change and waste management
  - Effective basic education system
  - Community skills development
  - Address high unemployment, especially among youth
  - Address endemic rural poverty.

Exxaro Chairman's Fund and Exxaro Foundation

In 2013, the group spent R57 million on community development projects (2012: R50 million). This represents 0,9% of net profit after tax (versus the BBBEE target of 1%). Of this, R50 million was spent on social and labour plans compared to R24 million in the prior year.

The chart below reflects employee volunteerism projects and discretionary donations by Exxaro Chairman's Fund and Exxaro Foundation in 2013.

The breakdown by focus area is shown below (funds not spent in the review period are carried over to the new financial year).



In line with Exxaro's commitment to robust corporate governance, our community initiatives are governed by formal policies, including:

- Donation policy
- Community development strategy
- Exxaro Chairman's Fund and Exxaro Foundation policy
- Volunteerism policy
- Social compact
- Community engagement policy
- Republic of the Congo – Mayoko community development strategy and action plan.

Analysing our impact

With the first five-year cycle of social and labour plans complete, Exxaro commissioned KPMG in 2013 to assess the social return on investment (SROI) across the spectrum of projects, both quantitatively and qualitatively. Combined with insights gained by our own project managers, this has produced useful data in ensuring that more projects succeed in the next five-year cycle.

The scope of the assessment includes Exxaro's social and labour plans (SLPs) and corporate community projects from 2008 to 2012 and planned SLP local economic development (LED) initiatives for 2013 to 2017.

The objective was to measure the impact of Exxaro's community development projects, using that information to guide the design and implementation of future investments to maximise social impact. SROI methodology is a useful framework to evaluate

the social, environmental and economic outcomes of projects and express this as a ratio of benefits to costs for each project in rand terms, ie the social, economic and environmental return (in rands) for every R1 invested by Exxaro.

The value of this exercise lies in providing a common basis for evaluating different projects and identifying the key features of successful investments (those that produce the highest social return). In doing so, it enables future projects to be designed to maximise social impact and bring the greatest benefit to communities.

The assessment was structured around the six main areas that make up Exxaro's social development investments: enterprise development, infrastructure development, skills development, education, agriculture and environment, health and welfare. The process involved visiting a sample of 25 projects in Gauteng, Mpumalanga and Limpopo provinces of South Africa. These were selected to ensure all themes were covered and to provide a mix of past SLP projects (those implemented in 2008 – 2012) and planned LED projects (for 2013 – 2017) across Exxaro's business units. Social impact assessments alone were conducted where this was the most appropriate approach for the projects concerned (Lephalale Development Forum, enterprise development incubator and supplier skills development centres and Mayoko projects).

Exxaro achieved a weighted average social return on investment of R1,32 for every R1 invested (or planned to be invested). This represents a social investment portfolio where the majority of projects are generating a positive return. Individual results are shown on the next page.

Exxaro invests substantial amounts on community development each year.

OUR COMMUNITIES
continued

The projects

		Project
Enterprise development	New enterprises	Siyathuthuka Butterfield Bakery Soft & Soapie Chemical Boitlamo brick-making
	Infrastructure	SMME outlets
Weighted average		
Infrastructure development	Housing Roads Waste management Sports infrastructure	Serviced housing Marapong road building Ga-Nala landfill (forecast) Klarinet sports field (forecast)
Weighted average		
Skills development	Skills development Sanari skills development centre	 Tshikondeni Mogolo skills development academy
Weighted average		
Education	Saturday school Whole school development Chairs Bursaries Funds	Glisa Saturday school Lephalale whole school development (forecast) Unisa climate change chair Exxaro bursaries Minerals Education Trust Fund
Weighted average		
Agriculture and environment	Agri-business	Lephalale Agricultural Corridor Musunda citrus farm Mohlasedi poultry farm Ekulindeni hydroponics
Weighted average		
Health and welfare	Community HIV projects Ad hoc support	HIV awareness Beeld Children's Fund
Weighted average		

Positive return

Close to positive return

Negative return

Business unit	Social return on investment	Investment (Rm)	Beneficiaries
Glisa Glisa Grootegeluk			
Matla			
	1,73	7,06	41
Glisa Grootegeluk Matla Inyanda			
	0,62	21,35	+3 500
0,02 Grootegeluk			
	2,34	6,95	893
Glisa Grootegeluk Corporate Corporate Corporate			
	1,11	36,24	2 037
Grootegeluk Tshikondeni Grootegeluk Arnot			
	1,37	5,32	38
Glisa Corporate			
	3,85	4,16	1 991

Grouping projects into the six themes of Exxaro's community development initiatives provides insight to the reasons for a project's success (or failure) and can help plan future investments to maximise impact. The weighted average ratio and a summary of key findings for each theme are provided below:

Enterprise development

Exxaro's investments aimed at enterprise development produced an SROI of R1,73, which is notably higher than the overall weighted average of R1,32.

- The projects that achieved the highest social return demonstrated a high degree of self-sufficiency and sustainability, provided opportunities for partnership and integration with other development- or business-focused initiatives, and focused on reducing poverty and unemployment
- The projects that underperformed in their SROI depended on Exxaro for their survival and suffered from poor planning and design, which in turn could be attributed to insufficient stakeholder engagement in planning.

Infrastructure development

The portfolio of infrastructure projects severely underperformed relative to the overall weighted average, producing an SROI of only R0,63. This is particularly important as infrastructure, along with education, accounts for the highest levels of investment in the overall portfolio.

- Only one project had an SROI greater than 1. The relative success of this intervention can be attributed to meeting a specific need for the main beneficiary (the municipality) while producing significant co-benefits for other beneficiaries (the community)
- Key reasons for the poor performance of most other projects include poor execution (eg poor quality of infrastructure built in some cases) and the lack of additional value for beneficiaries relative to the baseline.

Skills development

Projects aimed at skills development generated an above-average SROI of R2,34. Among the six themes, this set produced the second-highest SROI results, primarily because the largest project (by investment share) attained a high ratio.

- The success of the project reflects an effective combination of long-term benefits (from skills-enabled employment creation) and short-term benefit (direct cash injection via a stipend)
- The failure of the other projects can be attributed to poor planning, which in this case resulted in the benefits of the skills development programme not being realised given low economic activity in the region.

Education

These projects produced an SROI of R1,16, notably lower than the average. This is particularly important as education is one of the largest clusters of investments in Exxaro's portfolio.

- Common success factors in this portfolio stem from a focus on long-term development objectives (such as overall learner development and improved employment prospects) and the flow of co-benefits to people other than primary beneficiaries
- The lower SROI of some projects reflects interventions that either did not demonstrate additionality (ie the benefit may have occurred without Exxaro's involvement or does not have a large impact relative to a baseline), or those that focused on only one aspect of a larger developmental challenge (eg only focusing on learners and not teacher development as well).

Agriculture

This portfolio produced an average SROI of R1,37. The largest positive impacts flow from interventions planned holistically across time (achieve short- and long-term objectives) and space (focus on all-round development, including non-cognitive skills development).

- The low performance of some projects can be attributed to inappropriate design through the project lifecycle, including inputs (overly capital intensive), production (lack of technical support) and outputs (lack of integration with markets).

Health and welfare

Projects focused on health and welfare produced the highest SROI across all themes, generating a ratio of R3,85.

- The main reason for the high return is that interventions address core elements of human life and welfare. These have very long-term impacts on beneficiaries (individuals) and significant co-benefits for others (families and communities).

The key success factors and areas of development identified for each of the six themes can be used to improve the relative performance of projects under the same theme. In addition, cross-cutting lessons from the evaluation can be applied to all projects and themes to maximise social impact. Some of these already form part of Exxaro's approach to community development while others provide new opportunities for improvement.

Below, we summarise key points from three of the most and least successful projects. For all projects, lessons learned will be communicated throughout the group and to relevant stakeholders to increase the prospects of sustainable initiatives in future.

Community projects

What worked?

Siyathuthuka Butterfield Bakery	• The business is successful and has generated significant profits in its first 14 months, influenced by strong Exxaro governance and monitoring • Direct economic benefit through permanent employment accounts for almost half the total social value. Regular income has had other impacts, such as reduced substance abuse, increased self-esteem and confidence among youth beneficiaries • Indirect benefits include reduced poverty and unemployment in the community
HIV awareness	• Direct and indirect benefit of improved quality of life through the HIV awareness programme – with 1 892 people living with HIV directly impacted since the inception of the programme in 2009 • The main benefits are realised by people living with HIV who have improved health status, higher levels of confidence and self-esteem, a greater sense of belonging in the community due to reduced stigma, and improved livelihood prospects • While the direct benefit to Exxaro is limited, the value created through an improved quality of life, combined with strategic partnerships with government, is significant
Mogolo skills development academy	• This project demonstrates the value of skills development in a region that will be able to use these skills in creating employment • Its success is supported by a daily stipend for attending classes • Indirect benefits include reduced poverty and unemployment in the community • Other indirect benefits include improved self-esteem, confidence and aspirations for the youth

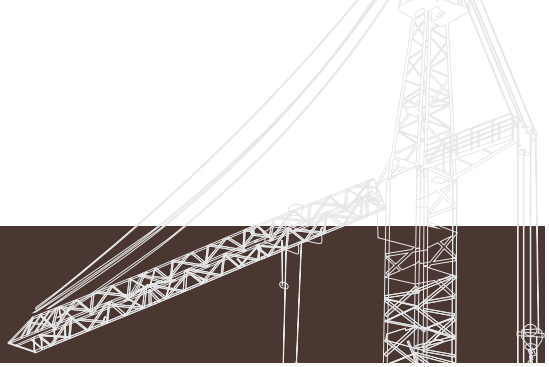
What went wrong?

Marapong road building	• Poor execution of the construction process • The main benefit is more convenient travel due to increased access to public transport • Almost 40% of the social value created was via employment opportunities for sub-contractors
Sanari skills development centre	• Limited economic activity in the area • The drop-out rate of beneficiaries was very high for the sewing, furniture-making and welding skills development programme due to lack of market demand
Ekulindeni hydroponics	• High drop-out rate among beneficiaries • Shortage of manpower to run the day-to-day farming activities (relative to size of land) • Limited access to market (lack of transport and strategic support) • The most significant benefits are to the youth (secondary beneficiaries) who receive on-the-job skills training. This has resulted in sustained livelihoods, enhanced pride and avoiding the social risks associated with unemployment

Common themes in successful projects

High impact on value of life	Extensive reach without compromising quality	Using strategic and specialist partners
Examples • HIV awareness • Agri business	**Examples** • Mogolo skills development academy • HIV awareness	**Examples** • Beeld Children's Fund • HIV awareness
Demand for product/service and access to market	Integration across projects	Focus on holistic needs of beneficiaries
Examples • Siyathuthuka Butterfield bakery • Boitlamo brick-making	**Examples** • Mogolo skills development academy • Boitlamo brick-making • Serviced housing • Mohlasedi poultry farm	**Examples** • Lephalale whole school development • Beeld Children's Fund

AREAS FOR IMPROVEMENT



STRATEGY AND GOVERNANCE

Projects to be better aligned with business objectives

Clear performance measures to be set at design stage

Exit strategies and ongoing sustainability of projects incorporated into project design

Project risk management to be strengthened

IMPLEMENTATION

Exxaro support on the ground managed to ensure dependency is not created

More strategic social development skills required

Projects to be executed through competent strategic partners

Ensure flexibility during project implementation

MONITORING AND EVALUATION

Monitoring and evaluation guideline and tools to be further developed

Performance measurement to be undertaken

Stakeholder perceptions to be evaluated more regularly

REPORTING

Strengthen impact reporting

Develop reporting guideline and tools

Strengthen integrity of data reporting systems and processes

Communicate internally and externally to key stakeholders

Aligning community strategy with Exxaro's strategy

Exxaro is part of a South African (and African) society. Our society comprises diverse institutions, individuals and cultures that interact to establish interests, expectations and objectives that result in what can be referred to as 'net economic benefits'. This net economic benefit can be measured in both tangible and intangible ways, such as monetary, emotional (dignity, love and respect) and spiritual benefit. Exxaro's place in this society carries a specific, but unvoiced or delegated, role. Equally, Exxaro has a responsibility to generate a net economic benefit to members of that society, both directly and indirectly. This role and responsibility manifest in the business activity and strategy Exxaro has chosen.

Society seeks economy and hence the role of business is defined by society's interests, expectations and objectives. However, for business success, Exxaro must identify those members of society who are directly and indirectly impacted by its chosen business activity – its stakeholders. Through a considered and structured approach to engagement, Exxaro can share with stakeholders its business vision, mission, values and strategy, identify risks and opportunities to this strategy and execute a strategy that benefits its stakeholders, thus creating and increasing stakeholder value.

Extract: Exxaro strategy 2014

In South Africa, all mining groups must have social and labour plans (SLPs) supporting targets in the mining charter. Exxaro's strategy describes each SLP as a set of initiatives designed to minimise any negative social impacts and maximise the positive social opportunities of mining operations. The objective is to ensure real sustainable development and growth in communities.

Our community activities are directly linked to our strategy by ensuring Exxaro's sustainability, and protecting and building its reputation by fostering mutually beneficial relationships with local communities (those in the immediate area of Exxaro's operations and from major labour-sending areas).

Local economic development projects refer to deploying funds, goods and labour to provide sustainable services for the local community that can be owned, managed and maintained by that community. Unlike a donation, Exxaro's role extends beyond funding to active involvement in how these funds are used, as well as a project management role.

In considering a project, our overarching objective is to alleviate poverty and improve the life of identified communities. This is even more important given the rural location of most of our operations – areas characterised by a high level of unemployment and related development needs. Most of our initiatives stem from identified community needs and are considered against the local municipality's integrated development plan.

An important element in our approach is generating new non-mining economic opportunities in identified local communities, particularly for local BEE companies and SMEs owned by disadvantaged groups. Our role is to support the establishment and growth of SMEs and develop effective links with funded, accredited training and development institutions.

In terms of local economic development, our strategies reflect ongoing commitment via the Exxaro Chairman's Fund and Exxaro Foundation, aimed at entrenching the group as a caring corporate citizen in the community.

In line with policy, we encourage volunteerism and participation in local economic development projects to create a culture of socially conscious employees.

Creating socially conscious employees – volunteerism

Exxaro supported its people in various projects that connected with an employee's personal values, passions and interests. This was aimed at merging the values of the company and the employee, as this helped them define what social responsibility meant to them as individuals. A total of R1,1 million was spent on employee volunteerism initiatives in 2013.

In line with our volunteerism initiatives, Exxaro business units participate in Mandela Day every year.

Community development – actual investment

In 2013, Exxaro spent R59 million on community development initiatives which included corporate projects (26%), discretionary donations (14%) and volunteerism (2%).

In terms of the group's social and labour plans, Exxaro has 63 local economic development projects unfolding over the next five-year period. These are being implemented with all relevant stakeholders to ensure a collaborative approach. The number of jobs that will be created through these projects exceeds 235, indirectly benefiting over 1 175 people.

Developing the body of knowledge

Exxaro contributed R15,2 million in 2013 (2012: R11,9 million) via corporate projects, including four university chairs, skills development initiatives, education and membership fees to national and international bodies such as the National Business Initiative, WWF and the Peace Parks Foundation.

We are particularly committed to developing the body of knowledge at tertiary level by funding chairs in carefully selected disciplines. At present, Exxaro is funding four university chairs:

- **Exxaro chair in business and climate change** (Unisa) – promotes and advances research, teaching and advocacy-orientated community engagements in this field, especially in developing economies. Key research themes for this chair include:
  - Business response to climate change in key industry sectors in South Africa, including mining, finance and insurance, retail, agriculture and automotive
  - Green economies and green jobs
- **Exxaro chair in global change and sustainability** (Wits) – provides a research platform of global significance and local impact, fostering informed and innovative actions for adaptation and mitigation strategies for sustainability in the rapidly changing southern African region. Key research themes include:
  - Sustainable urbanisation
  - Healthy and productive ecosystems
  - Sustainable communities post mining
    - *Post-mining ecology*
    - *Post-mining economy*
- **Exxaro chair in business and biodiversity leadership** (University of Pretoria) – focuses on thought leadership in the interface between the spheres of business and biodiversity. Key research themes include:
  - Implementation of voluntary ecosystem valuation
  - Identification and evaluation of current business responses to biodiversity in Exxaro and other industries
  - Land rehabilitation
  - Linking biodiversity with environmental management and other issues such as climate change and water with special emphasis on wetlands
- **Exxaro chair in energy efficiency** (University of Pretoria) – participates at the forefront of research activities in energy efficiency, to deliver world-class research and educational outputs. Key research themes include:
  - Mining system components: energy efficiency study (conveyor belts, crushers, winders, pumps, etc)
  - Design efficiency in capital projects (eg designing green- and brownfield mining and processing projects from start using energy efficiency guiding principles)
  - Mine engineering for energy efficiency (eg above and underground distance, opencast vs underground mining method, HVAC or heating, ventilation and air-conditioning, material handling)
  - Co-generation, using waste heat to produce electricity that could be used in the same or related processes in the same operations (ie smelters, process plants, flares)
  - Smelter technology and smelter efficiency
  - Clean development mechanism (CDM) and carbon trading (carbon footprint and carbon-neutral study), as well as the low-carbon economy
  - Energy efficiency measurement, verification, energy baseline determination and evaluation.

Exxaro sponsors (with other industry partners) the chair in the centre of excellence for maintenance engineering at the University of Pretoria. This programme aims to equip engineering students to address maintenance challenges in industry, given the growing industrial need. The portfolio of theoretical modules spans the field of maintenance and its management over the lifecycles of equipment and infrastructure. Although research concentrates on condition-based maintenance, it also covers reliability, maintenance modelling and optimisation. The centre is finalising a postgraduate programme in physical asset management – a multidisciplinary programme spanning the fields of mechanical, electrical, civil, industrial and mining engineering. This will be a major step forward in properly equipping engineers in industry. The work being performed is highly relevant to South African industry, and benchmarked globally, as reflected in the growing number of international citations received.

By co-sponsoring the Exxaro/Kumba chair in the geology department at University of Pretoria, we support geological research opportunities for previously disadvantaged students, contribute to geological research and host international guest lecturers for to advance the discipline in South Africa.

Exxaro is also a founding co-sponsor of the South African Minerals to Metals Research Institute (SAMMRI), a collaboration between mining industry members and the Department of Science and Technology (DST). Its objective is to develop high-level technical skills for the South African extractive industry by sponsoring research projects at tertiary institutions aimed at industry needs.

Local economic development – Republic of the Congo

In 2013, we made good progress in developing a strategy to guide our community initiatives around Mayoko. In addition, initial projects undertaken during the year responded to immediate community and operational needs:

- A socio-economic study and survey of local development was conducted
- Critical community needs were identified with relevant stakeholders such as the local chief, community workers and local management in Mayoko
- Houses on the exploration camp site were relocated
- Small-scale infrastructure projects in the community (improving facilities and schools)
- Financial and infrastructure support for local schools
- Basic water supply
- Fumigation (pest control)
- Improving roads
- Job creation as most of the labour is sourced from the local community.

The Mayoko community development committee was established and monthly meetings held with all stakeholders. The following community development projects have been agreed and will be rolled out over the next two years.

- **Safety**
  Two police barracks have been built to accommodate a detachment of 30 policemen based in Mayoko.
- **Sport**
  Implementation of an inter-village soccer tournament, Pierre OBA (named for the Congolese minister of mining).
- **Omni sports stadium of Mayoko**
  To encourage sporting activities, an Omni sports stadium will be constructed in Mayoko.
- **Education**
  Constructing a modern comprehensive school in Mayoko to cater for all standards/grades of basic education.
- **Lap-desk project**
  Mayoko mine distributed almost 2 000 lap desks in November 2013 to schoolchildren in the greater Mayoko area who do not have desks.
- **Transport infrastructure**
  We have made contact with the Agency of National and Civil Aviation (ANAC) in Brazzaville to upgrade Mayoko airport in Lehala.
- **Urban infrastructure**
  A site has been identified by local authorities of the district of Mayoko to construct a market.
- **Community centre**
  A site has been identified near Mayoko mine to construct a community centre that will serve as an office for both Exxaro's community development department and community organisations, as well as a cultural centre and meeting point for the community.
- **Training centre**
  A training facility will be developed for locals to become boilermakers, mechanics, electricians, millwrights, etc, and a workshop built in the town for practical training.
- **Health**
  Terms of reference are being finalised to develop and implement an HIV/Aids programme.

Enterprise development

The aim of Exxaro's enterprise development initiative is to develop suppliers that sell to Exxaro as well as support and develop rural communities close to our operations.

Exxaro has formed a partnership with Anglo Zimele and Shanduka Black Umbrella to establish a pilot incubator for supplier and enterprise development in the Waterberg area. Support will include business training, providing offices with support services, mentorship and financial assistance for small entrepreneurs.

Education

An education strategy for Exxaro was developed and approved during the year.

Skills development

In most of our SLP and LED projects, skills development has been addressed.

Sustainable procurement

In implementing our philosophy on supply chain sustainability, we aim to ensure that when making procurement decisions we source, contract, lease, hire and procure goods and services from suppliers that demonstrate commitment to sustainable business practices and support Exxaro's compliance efforts in terms of the mining charter.

Exxaro has identified green procurement, HDSA procurement and sustainable supplier engagement as key elements of sustainable procurement.

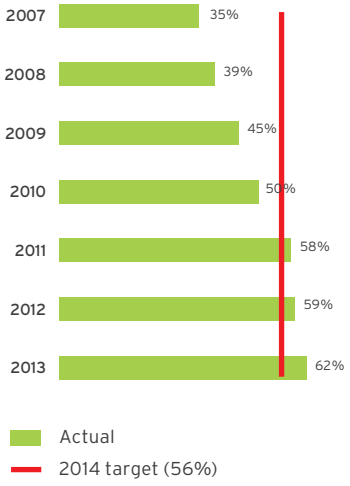
During the reporting period, we have configured our enterprise resource planning system and created the capability to code, track and monitor 'green' purchased items. In terms of sustainable supplier engagement, we have implemented a supplier code of conduct communication and awareness capability on the Exxaro website, spanning purchase orders and request-for-quotation processes. A web-based supplier audit and engagement capability is under development and should be operational by the second quarter of 2014.

Supply chain management

Our sustained commitment to procuring from HDSA suppliers (including black-owned, black-empowered, black women-owned and black-influenced) is reflected in the steady progression from under 40% in 2007 to 59% (against the target of 52%) in 2012.

In 2013, we recorded actual procurement of 62% from HDSA companies against our target of 54%, or R7,8 billion spent with HDSA-owned companies. In terms of mining charter compliance, Exxaro exceeded the 2013 targets set for capital and consumables. Measures to address the services element have been implemented by awarding service contracts to black-empowered vendors in May 2013.

Procurement from HDSA suppliers



Contractor management

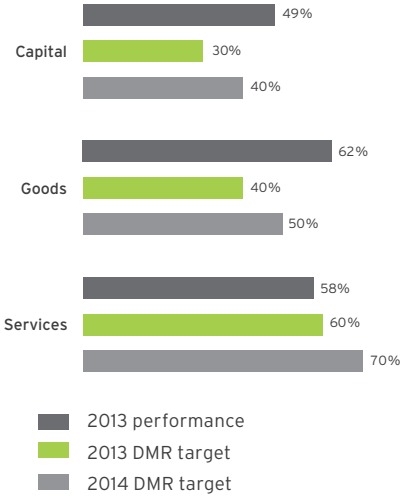
Exxaro focuses on its core activities and subcontracts specialist tasks. At any point, hundreds of contractors are moving through our sites, presenting specific health, safety and environmental risks. We require contractors to adhere to group standards as part of our legal compliance process. As such, managing contractors is now a key compliance indicator in its own right.

Our induction and training centre at Marapong near Grootegeluk is reducing the time and cost incurred by new contractors before they start work at the mine. Contractors complete all their computer- or classroom-based induction at this centre in one process, from registration to issuing access cards, which takes about five days.

All contractor employee data was captured on to Exxaro's HR database in 2012, enabling us to monitor, control and enforce compliance. The system also provides accurate and timely business information, and effective forecasts of people-related statistics (from medical surveillance to e-learning).

To date, Exxaro has invested over R35 million in HR system enhancements and data maintenance to comply with relevant legislation.

Preferential procurement from BEE entities as per mining charter targets for 2013 and 2014



Environment

03

HIGHLIGHTS

Exxaro again qualified for **Climate Disclosure Leadership Index** in CDP South Africa Climate Change Report 2013

22% reduction in diesel consumption at North Block Complex in 2013

24% less water withdrawal at Grootegeluk since 2011

Mapping all **biodiversity-sensitive areas** in all our mining rights

CHALLENGES

Increased **demand for water**

Higher **demand for energy** during the (Medupi) expansion of coal operations

Exxaro's green timeline

2013	• Cennergi achieves financial closure and construction begins on Amakhala Emoyeni and Tsitsikamma wind farms • Agreement with GDF SUEZ focuses on energy security through independent power production • Agreement with Linc Energy on underground coal gasification focuses on cleaner energy.
2012	• Carbon footprint significantly reduced • Cennergi preferred bidder on two wind energy projects totalling 234MW.
2011	• Launched biodiversity, waste and air programme • Formed stand-alone energy company, Cennergi, with international energy partner • R107 million spent on developing cleaner energy initiatives – co-generation, carbon credit trading, renewable energy, biodiesel, coal-bed methane development and coal base-load projects.
2010	• Major water management programme introduced • Developing renewable energy projects.
2009	• Comprehensive response developed to energy, carbon and climate change management
2008	• Energy efficiency task team established, voluntary champions at each business unit • Sponsors Unisa chair in business and climate change for three years.
2007	• Carbon emissions reported for the first time (19 million tonnes of CO_2e)
2006	• Exxaro adopts Energy Efficiency Accord

Investing in our natural world

Sustainable development issues are central to our business, particularly the use of natural resources like water, air, biodiversity and land. For Exxaro, responsible use means:

- Ensuring all activities are properly authorised
- Using energy and water as efficiently as possible
- Ensuring activities are conducted responsibly from the twin perspectives of compliance and natural resource use.

As such, we focus on conserving natural resources and reducing the burden of pollutants on the environment by:

- Minimising the use of natural resources
- Complying with all statutory environmental requirements as a minimum
- Actively participating in voluntary environmental benchmarks such as the global carbon and water disclosure projects, among others
- Developing innovative policies and programmes for addressing environmental impacts and use of natural resources.

All Exxaro's business units have ISO 14001 accreditation, reflecting the global industry standards in place to minimise environmental impacts.

All our South African operations have environmental management programmes (EMPs) as required under the Mineral and Petroleum Resources Development Act (MPRDA) and the National Environmental Management Act (NEMA). These EMPs are key indicators in ensuring Exxaro remains a sustainable business. Exxaro also adopts the precautionary principle entrenched in NEMA in evaluating the environmental impacts of business opportunities.

All South African operations have submitted applications for integrated water use licences, with 23 granted to date and pending authorisation on two applications for existing operations (many Exxaro business units need more than one licence). In the outstanding areas, Exxaro's water use is permitted under the Water Act no 54 of 1956.

Comprehensive group standards have enhanced the implementation of legal requirements and sustainable use of natural resources. These include management standards for air quality, water, energy, rehabilitation and mine closure, and environmental incident management and reporting.

Legal compliance

South African mining companies are heavily regulated: receiving, converting and retaining all mining rights centres on compliance. To ensure we continue to meet legal requirements as a minimum, compliance across Exxaro is monitored by two board-mandated entities: the sustainability, risk and compliance committee as well as the social and ethics committee.

Running all our operations with approved EMPs is fundamental to our sustainability and legal compliance. Some EMPs are being updated to align to the MPRDA and to include new developments, for example the Medupi conveyor and Medupi warehouse. Eleven amendments were made to EMPs in 2013.

Exxaro received no stoppage directives during the review period and no significant fines were incurred.

As applications for various projects are at different stages of regulatory assessment, we continuously engage with the relevant authorities, agencies and other stakeholders to expedite these licences.

The table below details the licences obtained in 2013 and those projected for 2014.

Exxaro's environmental authorisations – obtained in 2013

Legislation	Authorisations
NEMA air quality	1
NEMA environmental impact assessment	5
MPRDA EMP	5
Integrated water use	2
Waste management	1
Total	14
2014 licences (projected)	32

Incident reporting

A standardised reporting system ensures all business units manage incidents effectively, leading to a safer and more sustainable work environment. In 2013, seven level 2 incidents occurred and were reported to the relevant authorities. Corrective actions to remedy the incidents and prevent recurrence were approved by authorities prior to implementation. There were no significant (level 3) incidents in 2013.

Environmental incidents – group

	Level 1		Level 2		Level 3	
	2013	2012	2013	2012	2013	2012
Arnot	4	55		–	–	–
Char plant	–	4		–	–	–
Durnacol	–	–		–	–	–
Grootegeluk	71	129	2	2	–	–
Hlobane	–	–		–	–	–
Inyanda	16	17		2	–	
Leeuwpan	51	73		–	–	
Matla	22	32		–	–	
New Clydesdale Colliery	1	46	1	–	–	
North Block Complex	9	–		–	–	
Tshikondeni	1	1	4	2	–	

Level 1: Minor impact and/or non-compliance.
Level 2: Intermediate impact and/or non-compliance.
Level 3: Major impact and/or non-compliance.

Environment incidents – level 2

Business unit	Description	Receiving environment	Response
Grootegeluk	Overflow of Olifantskop dam	Unlined trench containing dirty water	Water was contained in the trench with low pollution risk
Grootegeluk	Slimes line spill	Moderate ground pollution	The loose flanges were fixed, and the spilled material in the surrounding environment was removed
NCC	Major water overflow from pollution control dam	Ground water and surface water pollution in Steenkoolspruit	Broken pumps were replaced and the water was pumped back into the pollution control dam
Tshikondeni	Dust threshold exceedance	Potential air pollution	None
Tshikondeni	Low dam overflow due to leaking clamps	Potential ground water pollution	The leaking clamp and the pipes were replaced and most of the leaked water was pumped back into the pollution control dam
Tshikondeni	Moderate dam overflow due to power outage and excessive rain (Mutale)	Potential ground water pollution	A plan was put in place to rehabilitate the veld
Tshikondeni	Moderate dam overflow due to power outage and excessive rain (Vhukati)	Surface water pollution	Some water used for dust suppression and the balance pumped back into the pollution control dams

Focus areas

After a strategic review of key environmental risks from Exxaro's operations, the following challenges were identified:

- Air quality management
- Water quality management, security of supply (page 48)
- Hazardous waste management (page 53)
- Biodiversity management (page 54)
- Ongoing rehabilitation (page 58)
- Cost of, and provision for, environmental liabilities
- Lead time for securing environmental authorisations
- Increasing statutory and non-statutory environmental requirements.

Air quality

As a mining group, air quality is a risk to Exxaro on several levels, particularly dust and other criteria pollutants (eg PM_{10} and $PM_{2.5}$) from opencast operations. Accordingly, we focus on:

- Minimising impact on the receiving environment
- Full legislative compliance
- Air quality management planning
- Risk management
- Monitoring, measurement and reporting.

Objectives	Critical success factors	Key outputs		Progress
		What	When	
Fully-compliant, sustainable air quality management system, managed and controlled by trained specialists at business units	Integrated air quality management planning in core operational processes	Baseline air quality assessments Air quality impact assessments Optimise air quality monitoring programme	Third quarter 2012 Third quarter 2012	Baseline assessments and air quality impact assessments have been completed in some business units and are still under way in others as part of the group-wide air quality management initiative
Ensure Exxaro's air quality framework enables sustainable business growth		Develop air quality management plans Performance review	First quarter 2013 Third quarter 2013	Air quality management plans have been developed for most business units. Work is under way to complete the remainder

Long- and short-term goals for air quality management

	Target	Progress 2013
Initiating smaller particulate matter (PM^{10} and $PM^{2.5}$) monitoring at some business units, particularly those close to sensitive receptor areas	**2016**	Some business units have budgeted for this in 2015 due to financial constraints
Redesigning dust fallout and PM^{10} monitoring networks in our business units, in line with mining schedules. This will ensure fair representation and accuracy of monitored data	**2015**	Dust fallout networks have been redesigned in most business units
Meteorological monitoring to ensure availability of surface data for temperature, wind direction, wind speed, and more. This data will be used for dispersion modelling, baseline characterisation, dust fallout monitoring and reporting, etc	**2016**	Some business units have purchased meteorological stations, while others have committed to buying these in 2015
Ensuring compliance to air quality standards and guidelines in the country	**2015**	All business units currently monitor dust fallout and results are assessed for compliance to national dust regulations

Emissions from mining operations

Daily environmental management measures ensure we address the challenges of Exxaro's dust-generating activities (blasting, drilling, crushing and screening, vehicle entrainment, materials handling and wind erosion of exposed operational areas). These include applying dust-suppressant agents on haul roads, watering secondary unpaved operational roads, vegetating topsoil stockpiles and overburden material.

All mining operations monitor daily dust fallout rates and results are assessed against national dust control regulations that were promulgated in November 2013.

Although our operations are classified under industrial targets according to the new regulations, some are close to residential areas. As such, we track our compliance against the more stringent residential limit (600mg/m^2/day) instead of the industrial limit (1 200mg/m^2/day) to minimise the impact on residents.

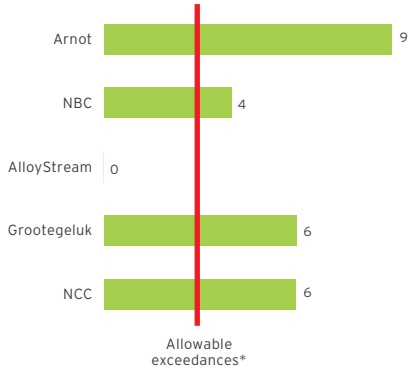
We are concentrating on improving our mitigation measures for operational activities that contribute significantly to dust. This will ensure fallout dust is reduced to the residential limit.

Comparing Exxaro's dust fallout rate against the regulated industrial limit (1 200mg/m^2/day), our averaged coal operations exceeded the limit for three months in 2013. However, Grootegeluk dust samples for November and December 2013 were spoilt and, therefore, unusable.

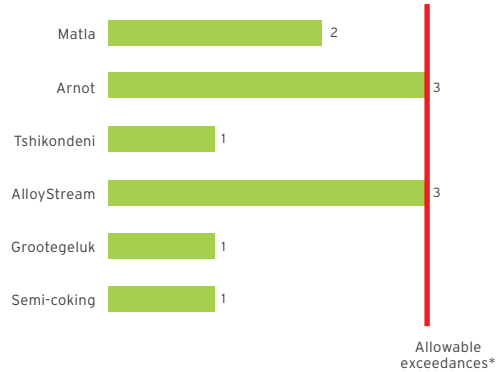
Dust fallout 2013

	Long-term target	Average monthly fallout rate 2013	2012	2011
Coal	300mg/m²/day	351	480	393

Residential limit (600mg/m²/day) – January – December 2013



Industrial limit (1 200mg/m2/day) – January – December 2013



** Draft regulations.*

Climate change and carbon footprint

Carbon footprint

Definitions and background

Scope 1 refers to direct greenhouse gas (GHG) emissions, measured in tons of carbon dioxide equivalent (tCO_2e) emissions from sources owned or controlled by the company. For example, emissions from diesel, petrol, gas and anthracite combusted in the day-to-day mining operations.

Scope 2 emissions account for GHG emissions from electricity generation by Eskom, purchased by Exxaro.

Scope 3 emissions are those outside of Exxaro's control but which occur as a result of the company's products or activities. An example of this might be a customer burning coal sold by Exxaro.

The scope 1, 2 and 3 emission protocol provides a common measurement platform to compare firms, and makes it possible to better aggregate to a national level, and compare countries.

South Africa has set arguably the most aggressive carbon abatement targets of any developing country: to abate emissions by 34% below business-as-usual by 2020, and by 42% by 2025.

Following the notable reduction in carbon and other greenhouse gas emissions from 2010 to 2012, Exxaro remained committed to reducing its carbon footprint in 2013.

Our energy and carbon measurement, data management, accounting and reporting continues to develop and mature. Exxaro reports carbon emissions through the Carbon Disclosure Programme South Africa, where we remain among the leading companies by reporting on scope 1, 2 and 3 emissions.

Exxaro bases its accounting and reporting for GHG emissions on the Greenhouse Gas Protocol initiative – corporate accounting and reporting standard. We have also elected to use the operating control accounting approach for emissions. In light of our divestment and discontinuation activities over the year and in line with the guidelines of the reporting standard, energy consumption and GHG emissions for 2011 and 2012 in this report have been restated.

Accounting and reporting for GHG emissions

The Greenhouse Gas Protocol initiative, launched in 1998, is a multi-stakeholder partnership of businesses, NGOs, governments and other stakeholders convened by the World Resources Institute and the World Business Council for Sustainable Development.

The initiative's mission is to develop GHG accounting and reporting standards for global businesses and promote their broad adoption. Its vision is to harmonise GHG accounting and reporting standards internationally to ensure different trading schemes and climate initiatives adopt consistent approaches to GHG accounting. Its stated objectives are to:

- Help companies prepare a GHG inventory that is a true and fair account of their emissions, by using standardised approaches and principles
- Simplify and reduce the costs of compiling a GHG inventory
- Provide business with information that can be used to build an effective strategy to manage and reduce GHG emissions
- Increase consistency and transparency in GHG accounting and reporting among various companies and GHG programmes.

The standard requires accounting and reporting to be applied to six greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6).

The GHG Protocol corporate accounting and reporting standard contains accounting rules relating specifically to significant structural changes and requires a company to develop a base-year emissions recalculation policy clearly articulating the basis and context for recalculation.

Greenhouse gas emissions

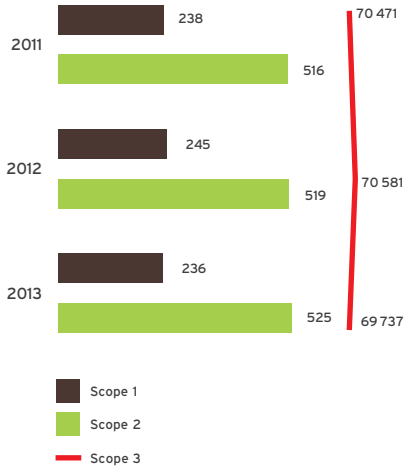
(kt CO_2e)	2013	2012	2011
Scope 1	236	245	238
Scope 2	525	519	516
Total scope 1 and 2	761	764	754
Year-on-year change (%)	(0,4)	1,4	
Scope 3	69 737	70 581	70 471
Year-on-year change (%)	(1,2)	0,2	

Scope 2 emissions: Electricity-based emissions are derived from the grid emission factor for South Africa (0,94t CO_2e/MWh).

Scope 3 emissions: Reported emissions are based on emissions from the use of product sold by Exxaro plus transmission and distribution losses from the South African grid derived from Eskom's emissions factor for electricity sold (1,03t CO_2e/MWh) and the grid emission factor for South Africa (0,94t CO_2e/MWh). Reported emissions represent over 99% of Exxaro's scope 3 emissions.

In absolute terms (ie no adjustments are made for divestments and discontinuations in the reporting period), in 2013 Exxaro reduced scope 1 emissions by 31,8% and scope 2 emissions by 52,4% against 2012. This resulted in a 47,5% reduction in scope 1 and 2 emission combined over the period.

Greenhouse gas emissions (kt CO_2e)



The following adjustments have been made against GHG emissions reported in the previous period to account for divestments in line with the Greenhouse Gas Protocol initiative – corporate accounting and reporting standard:

($kt CO_2e$)	2013	2012	2011
Scope 1	–	100,4	205,6
Mineral sands	–	98,4	194,4
Base metals	–	2,0	11,3
Scope 2	6,9	598,5	1 346,7
Mineral sands	–	573,4	974,9
Base metals	6,9	25,1	371,8
Total scope 1 and 2	6,9	698,9	1 552,3

In line with GHG reporting guidelines, which require adjusting for divestments and discontinuations to baseline periods, Exxaro reduced scope 1 emissions by 3,8% and slightly increased scope 2 emissions by 1,2% in 2013 against 2012. This resulted in a reduction of 0,4% for combined scope 1 and 2 emissions. Scope 3 emissions for 2013 were 69 737kt CO_2e, marginally lower than the 70 581kt CO_2e reported for 2012. Scope 3 emissions for 2013 include 59,8kt CO_2e for transmission and distribution losses.

The reduction in GHG emissions reflects lower overall energy consumption for the period. Diesel and electricity remain the primary sources of energy for Exxaro. Total energy consumed reduced by 2,1% in 2013 to 4,2 peta-joules. The bulk of savings during the period came from reduced diesel use, with energy consumed from this source dropping by 4,2%. Energy sourced from electricity consumption rose by 1,2% in 2013, with the bulk of this due to expansion activities at Grootegeluk.

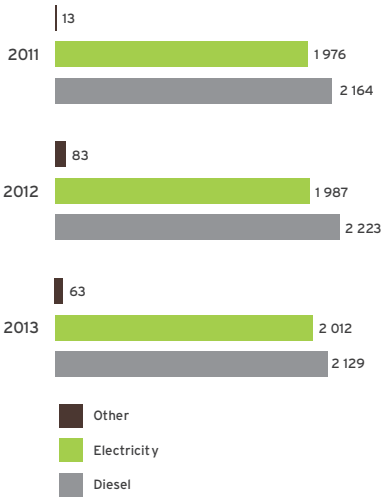
Exxaro energy and carbon framework

Exxaro has consolidated its approach to sustainability at the corporate level and integrated this into the group strategy. Our operational activities are informed and guided by our climate change response strategy and position statement. The energy and carbon programme steering committee oversees, reviews and assesses improvement projects and activities, and ensures they are aligned with Exxaro's climate change position statement.

This gives a clear understanding of the risks and opportunities presented by energy and emissions in the broader sense, and enabled operations to focus on improving capacity and capability to manage energy, emissions and other climate change-related issues.

The Exxaro energy and carbon framework is a guideline for the energy and carbon programme to define and understand how activities and projects contribute to the overall Exxaro strategy, a mechanism to help prioritise projects and initiatives, and a communication tool to ensure consistent effort across various operations.

Energy consumption by source (terajoules)



Carbon disclosure

The Carbon Disclosure Project (CDP) is a UK-based global climate change reporting system. CDP data provides valuable insights into the strategies of companies and helps channel investment to companies adhering to sustainable carbon and emissions management.

Exxaro participates in two CDP programmes: CDP Climate Change (since 2008) and CDP Water. To facilitate our preparation for the climate change programme, we manage a central data repository that records energy consumption, energy intensity performance,

carbon emissions measurement and cost performance in each business unit and the group. This database undergoes annual external assurance audits.

In 2012, Exxaro became the first South African company and the third company globally to score 100% on disclosure in the CDP Climate Change programme.

In 2013, Exxaro was again included in the JSE 100 Climate Disclosure Leadership Index (CDLI), one of only 11 companies assessed to have met the criteria this year. Exxaro's performance in the CDP is one of the contributors to our continued presence in the top ten on the Nedbank Green Index.

This clearly demonstrates Exxaro's leadership in our commitment to transparency, improving disclosure and reducing carbon emissions.

Exxaro also participated in the Business Unity South Africa (BUSA) climate change initiative and industry task team on climate change. Through BUSA, Exxaro supported the Department of Environmental Affairs' investigation into South Africa's emissions potential to 2050: this went beyond reporting just Exxaro's views to supporting the review of methodology and grid emissions factor calculations. The task team was instrumental in influencing National Treasury to consider refinements to proposed carbon tax legislation.

Exxaro is focused on reducing its carbon footprint.

Energy consumption by business unit by energy source#

(GJ)	Electricity			Diesel		
Business unit	2013	2012	2011	2013	2012	2011
Coal	1 923 707	1 897 646	1 923 201	2 128 526	2 221 489	2 162 868
Year-on-year change (%)	1,4	(1,3)		(4,2)	2,7	
Arnot	183 733	186 447	177 988	20 989	19 570	52 383
Char plant	–	–	22 610	5 857	3 081	2 369
Durnacol	612	354	349	1 903	2 533	4 465
Grootegeluk	1 008 230	950 991	966 374	905 312	830 549	731 913
Hlobane	86	15	16	1 376	1 275	1 682
Inyanda	28 397	27 747	26 437	119 968	166 070	196 857
Leeuwpan	85 576	88 927	90 946	539 944	605 280	606 766
Matla	434 560	459 302	447 659	84 530	69 087	63 970
New Clydesdale	63 086	59 599	55 862	18 532	23 947	81 457
North Block	26 867	22 490	19 788	267 426	343 347	321 374
Tshikondeni	92 560	101 774	115 172	162 690	156 750	99 632
Corporate	88 013	89 666	53 124	137	1 074	812
Year-on-year change (%)	(1,8)	68,8		(87,2)	32,2	
AlloyStream	35 672	38 205	3 366	–	347	–
FerroAlloys	19 638	21 362	18 169	114	294	–
Head office	27 216	24 922	24 434	24	155	554
R&D	5 486	5 177	7 155	–	278	258
Total	2 011 719	1 987 312	1 976 325	2 128 665	2 222 563	2 163 681
Year-on-year change (%)	1,2	0,6		(4,2)	2,7	

 # 2011 and 2012 data reported for current operations, consistent with GHG emissions reporting.
** Other energy sources include paraffin, Sasol gas, LP gas.*

Petrol			Other energy sources*			Total energy used		
2013	2012	2011	2013	2012	2011	2013	2012	2011
7 066	7 583	9 129	692	442	341	4 059 990	4 127 160	4 095 539
(6,8)	(16,9)		56,5	29,6		(1,6)	0,8	
2 010	2 285	2 837	–	31	–	206 732	208 333	233 207
–	–	–	347	23	174	6 204	3 104	25 153
211	160	257	–	–	–	2 726	3 047	5 071
1 592	2 251	2 900	262	196	132	1 915 396	1 783 987	1 701 319
51	64	134	–	–	–	1 514	1 354	1 832
–	–	–	–	3	–	148 364	193 820	223 294
14	–	–	–	49	–	625 534	694 256	697 712
3 187	2 823	3 002	75	102	35	522 352	531 314	514 666
–	–	–	–	25	–	81 618	83 571	137 319
–	–	–	–	1	–	294 292	365 838	341 162
–	–	–	7	12	–	255 257	258 536	214 804
2 573	3 022	2 683	52 378	70 976	1 127	143 101	164 738	57 747
(14,9)	12,6		(26,2)	–		(13,1)	185,3	
46	63	42	51 171	69 698	3	86 890	108 313	3 411
15	30	28	1 183	1 278	1 123	20 950	22 964	19 320
2 511	2 838	2 487	7	–	–	29 757	27 915	27 475
–	91	126	17	–	1	5 503	5 546	7 540
9 638	10 605	11 812	53 070	71 418	1 468	4 203 091	4 291 898	4 153 285
(9,1)	–		(25,7)	–		(2,1)	3,3	

Exxaro's energy consumption

After divesting of the mineral sands and base metals businesses in recent years, our coal operations now account for almost all energy consumption in the group. Informed by the energy and carbon framework and as part of Exxaro's energy and carbon management programme, our coal operations have focused on reducing energy consumption. This has included projects and initiatives to specifically increase efficiency of diesel and electricity use. This led to a slight decrease in overall energy consumed through diesel and electricity use in 2013, on the back of notable improvements in diesel consumption.

In line with this, specific energy-efficiency improvement targets were set for each operation in the reporting period. These targets will form part of relevant managers' remuneration-linked performance contracts from 2014 and further absolute emission reductions are expected from these initiatives during the year.

Diesel consumption performance in coal operations

	Diesel (kℓ)			Production (kt)			Diesel consumption intensity (ℓ/kt)		
Business unit	2013	2012	2011	2013	2012	2011	2013	2012	2011
Coal	58 236	60 779	59 176	37 332	38 808	39 244	1 560	1 566	1 508
Year-on-year change (%)	(4,2)	2,7							
Arnot	574	535	1 433	1 633	2 081	2 291	352	257	626
Char plant	160	84	65	91	43	142	1 754	1 960	456
Durnacol	52	69	122				–	–	–
Grootegeluk	24 769	22 724	20 025	17 813	17 517	18 231	1 391	1 297	1 098
Hlobane	38	35	46				–	–	–
Inyanda	3 282	4 544	5 386	1 992	1 845	1 918	1 648	2 463	2 809
Leeuwpan	14 773	16 560	16 601	2 240	2 601	3 239	6 594	6 366	5 125
Matla	2 313	1 890	1 750	10 133	10 948	10 150	228	173	172
New Clydesdale	507	655	2 229	419	717	628	1 210	914	3 551
North Block	7 317	9 394	8 793	2 668	2 717	2 346	2 743	3 457	3 748
Tshikondeni	4 451	4 289	2 726	343	339	299	12 968	12 645	9 106

Diesel is the most significant energy source in our coal operations, consuming 2,1 million GJ of energy, notably ahead of 1,9 million GJ of energy from electricity consumed in 2013.

By focusing on diesel efficiency, we reduced our coal operations' diesel consumption by over 2,5 million litres or 4,2% in 2013 from 2012, despite a 9% rise in diesel consumption at Grootegeluk, our largest diesel consumer. Increases at Grootegeluk are a direct result of expansion which include broader pit operations and additional processing plants.

Notably, although Grootegeluk was not able to maintain its diesel consumption intensity (up from 1 297 litres of diesel per kilotonne of production in 2012 to 1 381 litres in 2013), diesel-intensity improvements at other business units fully compensated for this. In a commendable performance, North Block Complex's revised operating model led to an absolute reduction in diesel consumption of over 2 million litres (-22,1%) in 2013 from 2012.

The focus and effort in the coal operations which reduced absolute diesel consumption in 2013 also resulted in an overall improvement in diesel consumption intensity based on tonnes produced against 2012.

Electricity consumption performance in coal operations

	Electricity (MWh)			Production (kt)			Electricity intensity (MWh/kt)		
Business unit	2013	2012	2011	2013	2012	2011	2013	2012	2011
Coal	534 363	527 125	534 232	37 332	38 808	39 244	14,3	13,6	13,6
Year-on-year change (%)	1,4%	(1,3%)							
Arnot	51 037	51 791	49 425	1 633	2 081	2 291	31,2	24,9	21,6
Char plant	–	–	–	91	43	142	–	–	–
Durnacol	170	98	97				–	–	–
Grootegeluk	280 064	264 163	268 444	17 813	17 517	18 231	15,7	15,1	14,7
Hlobane	24	4					–	–	–
Inyanda	7 888	7 708	7 333	1 992	1 845	1 918	4,0	4,2	3,8
Leeuwpan	23 771	24 703	25 272	2 240	2 601	3 239	10,6	9,5	7,8
Matla	120 711	127 584	124 365	10 133	10 948	10 150	11,9	11,7	12,3
New Clydesdale	17 524	16 556	15 530	419	717	628	41,8	23,1	24,7
North Block	7 463	6 247	5 498	2 668	2 717	2 346	2,8	2,3	2,3
Tshikondeni	25 711	28 271	31 988	343	339	299	74,9	83,4	106,9

 # Supplied by Grootegeluk.

In line with Exxaro's operational focus on energy efficiency, business units were assigned electricity intensity reduction targets against historical performance for 2013 (based on 2011 and 2012 performance). These targets will be incorporated into the remuneration-linked performance contracts of relevant managers for 2014.

Slightly lower production levels across coal operations were not mirrored by a decrease in overall electricity use. Exxaro coal operations' electricity use in 2013 has risen slightly, with 534,4GWh reported against 527,1GWh in 2012 (1,4% increase).

While Matla, Leeuwpan and Arnot showed good improvement in absolute electricity use, expanding operations at Grootegeluk led to a 6% increase in electricity use over 2012 (2013: 280GWh vs 264 GWh). While Grootegeluk did increase production levels during the year, it was unable to improve its electricity use intensity despite several initiatives focused on improving electricity efficiencies in its expanded production processes.

Given Grootegeluk's scale, its electricity use intensity had a notable effect on overall intensity in our coal operations. Consequently, electricity intensity based on production tonnages at coal operations rose from 13,6MWh/t to 14,3MWh/t in 2013. To mitigate this trend in 2014, relevant coal management teams have been assigned electricity intensity reduction targets as part of their performance contracts. In addition, we expect further benefits from specific electricity management projects initiated in the review period to be realised in 2014.

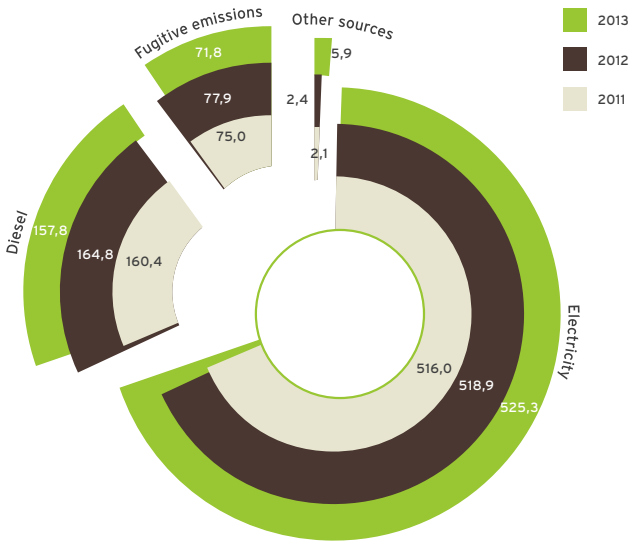
Noteworthy electricity optimising projects initiated at Grootegeluk in 2013 include implementing energy-saving multi-drive (VSD) conveyors in its discard system and the Grootegeluk 2 plant. In both cases smaller, lower electricity consumption motors were installed. The enhanced technology and revised system design allow electricity use to be adjusted depending on belt loading. This approach ensures limited energy wastage, while allowing reduced start-up and loading times of conveyer systems. Expected savings from these significant electricity-consuming systems are 20-25% in absolute electricity use and 25-40% in operational efficiency. This approach is being reviewed for implementation at other operations within Grootegeluk and other business units.

COAL OPERATIONS: ENERGY CONSUMPTION

	Grootegeluk	Matla	NBC	Leeuwpan	Inyanda	Arnot	NCC	Tshikondeni	Char plant
ELECTRICITY Total **534**GWh	280	121	7	24	8	51	18	26	–
DIESEL Total **58,2**Mt	24,8	2,3	7,3	14,8	3,3	0,6	0,5	4,5	0,2
PRODUCTION Total **37,3**Mt	17,8	10,1	2,7	2,2	2,0	1,6	0,4	0,3	0,1
ENERGY INTENSITY Total **108**GJ/kt	107	51	110	279	74	125	195	744	64

Carbon emissions

Greenhouse gas emissions by source (kt CO_2e)



(kt CO_2e)	2013	2012	2011
Electricity	525,3	518,9	516,0
Year-on-year change	1,2%	0,6%	
Source proportion	68,8%	68,9%	68,5%
Diesel	157,8	164,8	160,4
Year-on-year change	(4,2%)	2,7%	
Source proportion	20,8%	21,6%	21,3%
Fugitive emissions	71,8	77,9	75,0
Year-on-year change	(7,8%)	3,9%	
Source proportion	9,4%	10,2%	9,9%
Other sources	5,8	2,4	2,1
Year-on-year change	147,3%	11,5%	
Source proportion	0,8%	0,3%	0,3%

Greenhouse gas emissions by business unit by source

($kt\ CO_2e$)	Purchased electricity			Diesel		
Business unit	2013	2012	2011	2013	2012	2011
Coal	502,3	495,5	502,2	157,8	164,7	160,4
Year-on-year change (%)	1,4	(1,3)		(4,2)	2,7	
Arnot	48,0	48,7	46,5	1,6	1,5	3,9
Char plant	–	–	5,9	0,4	0,2	0,2
Durnacol	0,2	0,1	0,1	0,1	0,2	0,3
Grootegeluk	263,3	248,3	252,3	67,1	61,6	54,3
Hlobane	–	–	–	0,1	0,1	0,1
Inyanda	7,4	7,2	6,9	8,9	12,3	14,6
Leeuwpan	22,3	23,2	23,7	40,0	44,9	45,0
Matla	113,5	119,9	116,9	6,3	5,1	4,7
New Clydesdale	16,5	15,6	14,6	1,4	1,8	6,0
North Block	7,0	5,9	5,2	19,8	25,5	23,8
Tshikondeni	24,2	26,6	30,1	12,1	11,6	7,4
Corporate	23,0	23,4	13,9	0,01	0,08	0,06
Year-on-year change (%)	(1,8)	68,8	–	(88)	35,0	–
AlloyStream	9,3	10,0	0,9	–	0,03	–
FerroAlloys	5,1	5,6	4,7	0,01	0,02	–
Head office	7,1	6,5	6,4	–	0,01	0,04
R&D	1,4	1,4	1,9	–	0,02	0,02
Total#	525,3	518,9	516,0	157,8	164,8	160,4
Year-on-year change (%)	1,2	0,6		(4,2)	2,7	

* *Other sources include explosives, petrol, paraffin, Sasol gas, LP gas and limestone.*

\# *Total scope 1 and scope 2 emissions.*

Exxaro remains focused on reducing its carbon footprint in line with its commitment to reduce energy consumption and improve energy efficiency. In 2013, based on targets to improve overall energy efficiency across the group, we expected a reduction of scope 1 and scope 2 emissions of around 5%.

In absolute terms, Exxaro reduced its carbon footprint by 695kt (47,5%) of carbon dioxide equivalent ($kt\ CO_2e$) from scope 1 and scope 2 emissions over 2012.

The bulk of this reduction reflects from our divestment or discontinuation of our mineral sands and Zincor operations. In line with the GHG Protocol corporate accounting and reporting standard, Exxaro no longer reports on disinvested operations, and has restated its historical baseline accordingly.

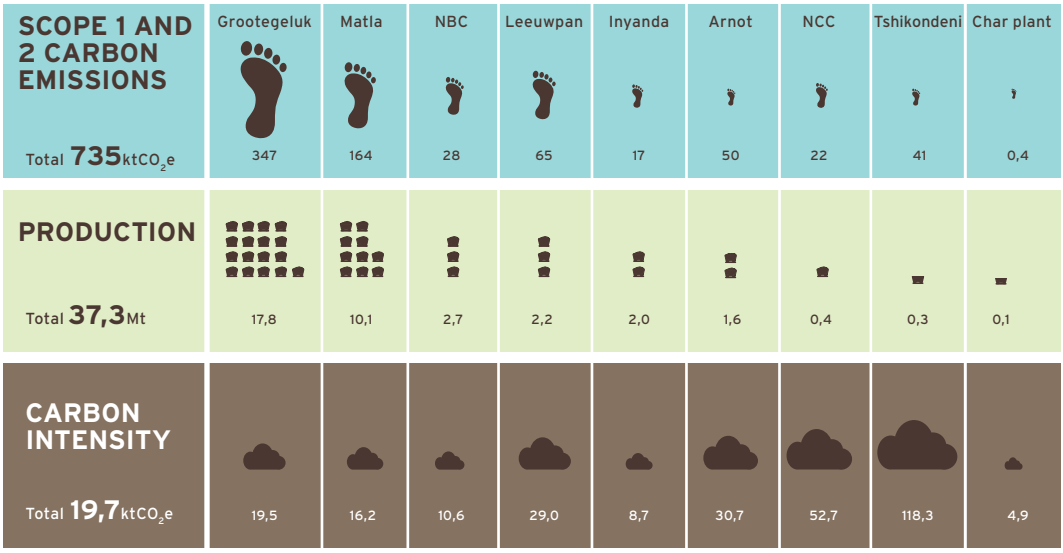
As such, when considering the carbon footprint of continuing operations only in 2013, Exxaro reduced scope 1 emissions by 3,9%, from 245,0kt CO_2e in 2012 to 235,5kt CO_2e in 2013, while scope 2 emissions rose slightly from 518,9kt CO_2e to 525,3kt CO_2e. Overall, Exxaro's carbon footprint from scope 1 and 2 emissions from continuing operations reduced marginally from 763,9kt CO_2e in 2012 to 760,8kt CO_2e in 2013, resulting in a combined reduction of 0,4% in the period.

The coal operations are now largely responsible for Exxaro's carbon footprint, so their performance defines our overall emissions performance. As a result, while we reduced scope 1 emissions during the year, overall expected carbon emissions reductions were not realised in 2013, despite improved energy efficiency at most operations.

Scope 3 emissions were reported for the first time in 2012. After a slight reduction in product sales volumes during the year, our scope 3 emissions decreased by 1,2% in 2013 to 69 737kt CO_2e from 70 581kt CO_2e in 2012.

Fugitive emissions			Other sources*			Total emissions#		
2013	2012	2011	2013	2012	2011	2013	2012	2011
71,8	77,9	75,0	3,0	1,2	0,6	735,0	739,3	738,1
(7,8)	3,9		150	100		(0,6)	0,2	
0,4	0,5	0,6	0,1	0,2	0,2	50,1	50,9	51,2
–	–	–	–	–	–	0,4	0,2	6,1
–	–	–	–	–	–	0,3	0,3	0,4
14,7	14,2	15,2	1,8	0,5	0,2	347,0	324,6	322,0
–			–	–	–	0,1	0,1	0,1
1,0	0,9	1,0	–	–	–	17,3	20,5	22,5
2,3	2,5	3,0	0,3	–	–	65,0	70,6	71,7
43,8	47,4	43,9	0,2	0,2	0,2	163,8	172,6	165,7
4,2	7,1	6,1	–	–	–	22,1	24,5	26,8
1,5	1,4	1,3	–	–	–	28,3	32,7	30,2
3,8	3,9	3,9	0,5	0,3	–	40,6	42,4	41,3
–	–	–	2,80	1,14	1,51	25,8	24,6	**15,4**
–	–	–	145	(24)	–	4,7	59,6	**–**
–	–	–	2,56	0,89	–	11,9	10,9	0,9
–	–	–	0,06	0,06	–	5,2	5,7	4,7
–	–	–	0,17	0,19	1,51	7,3	6,7	7,9
–	–	–	–	0,01	–	1,4	1,4	1,9
71,8	77,9	75,0	5,8	2,4	2,1	760,8	763,9	**753,6**
(7,8)	3,9		147	11,5		(0,4)	1,4	

COAL OPERATIONS: SCOPE 1 AND 2 EMISSIONS



Water management

Water is a key strategic natural resource for South Africa. Exxaro recognises this and understands that it is also key to our business and must be managed as such. Initiatives to conserve water are considered at all sites to ensure water use is optimised.

Exxaro uses a holistic strategy to manage water-related risks, minimise impacts, and operate efficiently through reduction, reuse and recycling. We are drafting water conservation plans that support the national strategy to ensure equitable distribution of water resources that allows for business growth and protection (sustainable use).

We are also committed to protecting and improving water quality, by ensuring the water we discharge is of the same or better quality than the original. Central to this are the three water treatment plants planned for our Mpumalanga region as part of our long-term water management strategy. These plants will have total capacity to treat 11,5 mega litres per day. Plants at Matla and North Block Complex's Glisa are scheduled for delivery in 2014 while the Arnot plant is at prefeasibility stage.

Optimising the use of recycled water remains our prime focus and we have installed a filtration plant at Matla to treat water for reuse in underground workings.

Innovative passive water treatment systems are being evaluated by our R&D department in collaboration with the University of the Free State, as a long-term solution to water management including post-closure. We envisage that the pilot plant will be implemented at North Block Complex in 2014.

We are collaborating with other mining houses through a local research institution on a project to develop appropriate technology to deal with waste from planned water treatment plants. This will enhance the efficiency of the waste treatment process and mitigate potential exposure linked to waste management.

We are in the scoping phase of a company-wide project to optimise our water-flow monitoring systems. This will include rolling out telemetric water meters across our business units.

The Exxaro water management policy defines our commitment to water management to ensure the sustainable use of water, with a strong focus on efficiency through reuse and recycling. This policy is aligned to the legislative environmental framework governed mainly by the National Water Act no 36 of 1998. In support of the act, the Department of Water Affairs has issued an integrated water resource management hierarchy that prioritises mine and waste management decisions and actions. This hierarchy informs both our policy and strategy on mine and waste water management as:

- Pollution prevention
- Minimise environmental impacts
- Maximise water reuse and reclamation
- Responsible water discharge and disposal
- Water treatment.

In support of our water management policy, we have developed a management standard on water for mining and industrial use. The standard articulates our commitment to develop and implement an effective integrated water and waste management plan and applies to the full lifecycle of a mine. This includes planning, construction, operational, decommissioning, closure and rehabilitation phases. The standard reflects management's vision to:

- Ensure a cost-effective integrated approach to water management
- Be environmentally responsible
- Be ecologically sustainable.

These management standards are enacted by adhering to the Department of Water Affairs' best practice guidelines on:

- The integrated water and waste management plan
- Stormwater management planning
- Water and salt balances
- Water monitoring systems
- Water reuse and reclamation
- Pollution control dams
- Environmental performance indicators.

Flowing from the policy and management standard is the water management programme. Water management is a material issue for Exxaro and, in recent years, we have made considerable progress on our focus areas in the water management programme, notably:

- Our vision, strategy and policy for water management
- Data management that facilitates water accounting and reporting
- Regulatory compliance
- Improving skills and knowledge in water management
- Water and related technology solutions
- Water business opportunities
- Stakeholder engagement
- Communications.

The aim of this comprehensive programme is to achieve responsible and sustainable water management across Exxaro. The programme concentrates on relevant water-use and related risk issues – from security of supply to water efficiency and water-cost management – and manages these within the ambit of current and anticipated regulatory compliance requirements. This is supported by continually enhancing our competence in water-management issues through company-wide research and skills development. We also reinforce awareness of water issues through ongoing communication and training.

While 16 strategic initiatives have been identified to reach specific three- to five-year goals, our strategy also articulates aspirational goals that include

becoming self-sufficient in our operational water requirements and becoming a leader in water technology solutions.

Water use monitoring and measurement

Exxaro monitors and reports against JSE SRI reporting categories, which are aligned to the definitions and environmental categories from the GRI's mining and metals sector guidelines. While the accuracy of water measurement, monitoring and reporting has improved significantly since 2011, on-site operational challenges remain. In line with this, this report includes water abstraction data, although rainfall captured, abstraction from the sea and dewatering data are not included.

In 2013, we made significant progress in improving metering and measurement of dewatering and rainwater catchment data specifically. With the roll-out and implementation of this robust approach across all business units, Exxaro intends disclosing all water inflow categories in the next reporting period. This will bring reporting in line with the intent of our water management policy and correlate to the reporting format of the annual submission to the Carbon Disclosure Project – Water (CDP-Water), where we remain one of the leading companies in terms of disclosure.

To facilitate measurement, data management, accounting and reporting, a centralised database is maintained. This was developed from standard water accounting definitions, standard practice instructions, a water standard and Exxaro policy.

Our water accounting methodology includes measuring water volumes and water quality against efficiency and intensity targets, water-use permit conditions and internal benchmarks and trends. The accurate measuring and monitoring of water volumes and quality enables a wide range of reporting, particularly our voluntary disclosure against GRI and CDP-Water standards.

The water volume methodology is structured as water inflows, outflows, storage, recycling and reuse. Various aggregations and intensity figures can be derived from this. Water inflows include abstraction from all sources, municipal and other sources of raw and potable water, process water and dewatering. Water outflows include various water uses from dust suppression to potable water use as well as discharges and water lost in production. Water storage includes raw, clean, polluted and rainwater capture. Water reuse and recycling within operations is also measured and accounted for.

Water withdrawal measurement continues to be refined in our business units. This includes projects across our operations to install comprehensive metering of water flows using both analogue and telemetric meters, and automated meter readings.

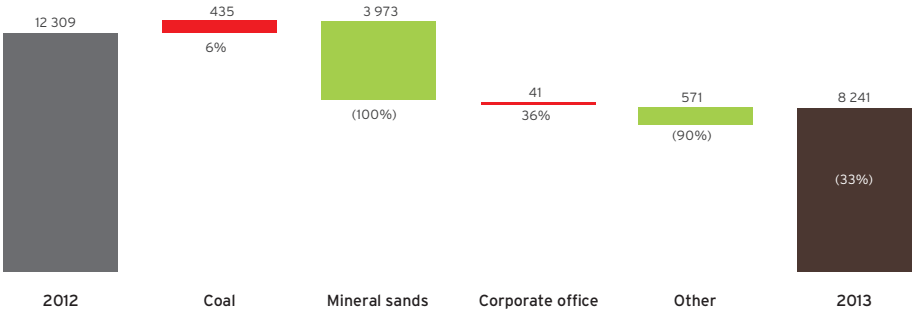
Water withdrawal performance

		Water withdrawals (kℓ)		
Business unit	Water source	2013	2012	2011
Coal		8 024 612	7 589 992	10 544 173
Year-on-year change (%)		6	(28)	
Arnot	Potable water supplier	559 480	523 232	572 107
Char plant	Supplied by Grootegeluk	82 388	53 121	152 210
Durnacol	Water abstraction: river Municipal supply: potable	26 808	33 768	31 785
Grootegeluk	Water abstraction: borehole Water abstraction: dam Potable water supplier	4 512 003	4 160 771	6 292 888
Hlobane	Municipal supply: potable	1 820	937	1 205
Inyanda	Water abstraction: borehole Water abstraction: dam	298 448	99 543	123 011
Leeuwpan	Water abstraction: borehole	174 044	5 963	470 000
Matla	Potable water supplier	1 324 667	1 401 538	1 493 114
New Clydesdale	Water abstraction: river	55 149	74 920	289 070
North Block Complex	Municipal supply: potable	28 637	17 596	476 553
Tshikondeni	Water abstraction: river	961 168	1 218 603	642 230
Mineral sands			3 972 597	9 038 940
Year-on-year change (%)		(100)	(56)	
KZN Sands	Municipal supply: potable Municipal supply: raw		2 498 329	6 199 120
Namakwa Sands	Municipal supply: potable Water abstraction: canal		1 474 268	2 839 820
Corporate office		154 089	112 975	68 685
% year-on-year change		36%	64%	
AlloyStream	Municipal: potable – invoiced	45 058	52 256	242
FerroAlloys	Municipal: potable – invoiced	18 822	9 728	5 077
Head office	Municipal: potable – invoiced	87 047	46 166	52 083
R&D	Municipal: potable – invoiced	3 162	4 825	11 283
Total		8 240 594	12 308 604	not reported
Year-on-year change (%)		(33)		

Note: Water management reporting from business units is not subject to audit review.

Production (kt)			Water withdrawal intensity (ℓ/t)		
2013	2012	2011	2013	2012	2011
37 332	38 808	39 244	215	196	269
1 633	2 081	2 291	343	251	250
91	43	142	902	1 235	1 072
17 813	17 517	18 231	253	238	345
1 992	1 845	1 918	150	54	64
2 240	2 601	3 239	78	2	145
10 133	10 948	10 150	131	128	147
419	717	628	132	104	460
2 668	2 717	2 346	11	6	203
343	339	299	2 800	3 595	2 148
	794	1 549		5 003	5 835
	335	509		7 458	12 179
	459	1040		3 212	2 731

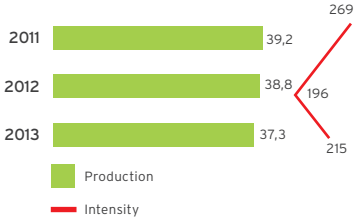
Water withdrawal performance 2013 vs 2012 (mega-litres)



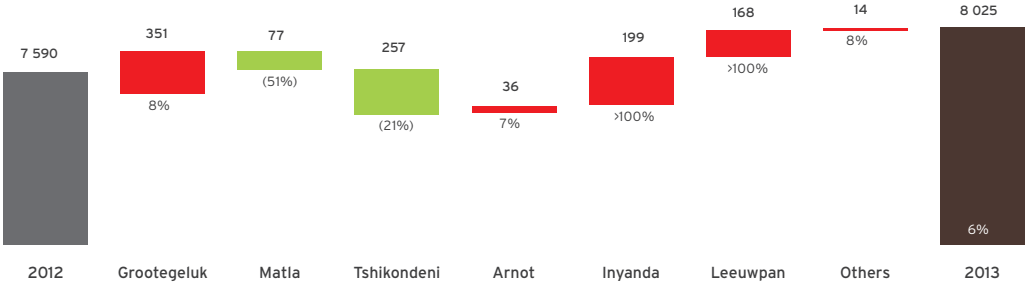
Exxaro reduced water withdrawals by 33% in 2013. This was primarily a result of corporate restructuring following the divestment of our mineral sands operations in 2012, but supported by management and operational focus in our coal businesses during the reporting period.

In our coal operations, ongoing management initiatives reduced water extraction significantly in 2012 and 2103 from previous years. While this improving trend is generally maintained compared to the pre-2012 period, there was a slight increase in overall water extraction of 6% in 2013 versus 2012.

Water efficiency at coal operations



Water withdrawals at coal operations 2013 vs 2012 (mega-litres)



In 2013, coal operations accounted for 98% of Exxaro's water withdrawals. Overall withdrawals in coal operations increased by 6%, while the intensity of water withdrawals relative to production increased. This means that while Exxaro's coal operations were unable to increase output, the amount of water required to achieve this rose slightly. This was largely a consequence of increased withdrawals at Grootegeluk, driven by its expanded operations which in turn led to higher water withdrawal intensity. Given the relative scale of Grootegeluk, this increased water withdrawal intensity across our coal operations. While this is contrary to the trend of past years, improved management focus, technology and enhanced monitoring and measurement of water withdrawals have had a notable positive effect at most larger water-withdrawing operations.

Grootegeluk remained the largest water-withdrawing business in 2013, accounting for over half of all water withdrawn by Exxaro's coal operations. During this reporting period, water withdrawals at Grootegeluk rose 8%, mainly due to the expansion project, which includes two new processing plants. Given its scale relative to other business units, this increase was primarily responsible for the overall rise in coal operation water withdrawals. However, compared to withdrawal levels at Grootegeluk in 2011, these volumes were down 24% in 2013.

Most other significant water-withdrawing business units reduced absolute withdrawals and improved intensity in 2013. For example, Tshikondeni reduced volumetric water withdrawals by 21% to reduce water intensity by over 20%, while Matla reduced volumetric water withdrawal by 5% in 2013.

Performance in relatively smaller water-withdrawing operations did not generally mirror larger operations, although New Clydesdale reduced water withdrawals 26% in 2013.

The focus in 2014 will be on maintaining progress at larger water-withdrawing operations, while rolling out initiatives at other operations. To support these endeavours, water-withdrawal intensity targets across all types were introduced in 2013. Monitoring and reporting against these targets will continue in 2014 and we intend to include these targets in the performance contracts of relevant managers in 2015.

Water use licensing

Water use for most Exxaro operations is authorised under the old Water Act. In recent years, after all operations submitted their integrated water use licences (or IWULs), we have steadily migrated these authorisations to the new (1998) National Water Act. By January 2014, 16 IWULs were approved and ten still pending.

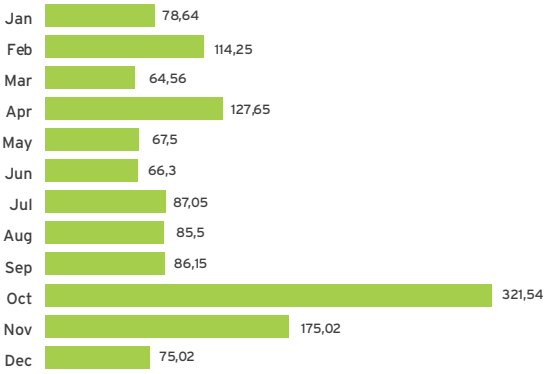
Hazardous waste management

Given that hazardous waste is a material risk to Exxaro's business, we have instituted a more proactive approach based on accurate data and group-wide standards. This will address material issues, such as avoidance, minimisation, management and correct disposal of hazardous waste.

The total weight of hazardous waste generated at our managed coal operations improved slightly in 2013 to 1 349 tonnes to landfill (2012: 1 484 tonnes).

The significant increase in volumes during October reflects the end of mining activities at one Exxaro operation, with more hazardous waste removed on site. Also, a major clean-up project was undertaken to upgrade the storage facility at another major Exxaro operation in the same month – this contributed to the increase in waste removed on site in October and November. The graphs shows waste removed from Exxaro operations between January and December 2013.

Waste movement – tonnages in 2013



Exxaro has developed a group policy and waste management standard for hazardous and non-hazardous waste which will introduce initiatives such as waste prevention, practice reuse, recycling, recovering energy and ensuring safe disposal of waste to reduce environmental and health risks, and contribute to the sustainability of Exxaro's business units.

A waste stream assessment was completed for key operations towards the end of 2013. Implementation plans will be finalised in the first quarter of 2014 and performance monitored regularly to enable the group to report more fully on this component. These initiatives will effectively address all risks by stipulating requirements/ guidelines for managing waste in Exxaro operations.

Responsible conservation of biodiversity

Our vision is to conserve biodiversity for future generations through the sustainable co-existence of our mining operations and the country's natural resources. In addition to complying with legislation and best practice, we aim to develop a competitive advantage through conservancy and re-establishing resilient ecosystems that underscore Exxaro's commitment to entrench duty-of-care principles.

In 2012, we developed the strategy and framework to reach our goals, and compiled baseline reports and biodiversity action plans for most business units. A draft wetland policy and management standard was compiled in 2013 but not finalised or approved, given that Exxaro needs to align this with best practice guidelines and the regulatory wetland offset guideline is not yet finalised.

However, the general principles of the wetland offset guideline (as it stands) were considered in our proposed projects. As example, the proposed Belfast project's mine layout plan was adapted to avoid impacts on sensitive hillslope wetland and pans through consist interaction, inputs and liaison with DWA.

Performance reviews against biodiversity action plans will begin in June 2014. Our detailed management standard (referred to above) guides business units in implementing group policy, aiming to:

- Ensure a cost-effective integrated approach to biodiversity management
- Be environmentally responsible in protecting and managing biodiversity
- Be ecologically sustainable by ensuring biodiversity-rich areas are contained within mining right areas, to manage and monitor protected and threatened Red Data species, and control declared category 1, 2 and 3 invasive plants.

Wetland baseline assessments for almost all business units were updated in recent years. Matla's baseline assessment is currently being updated to fill gaps and update wetland maps. For all operations, this data is used to consider biodiversity-sensitive areas as part of our business and mine-planning decisions.

Significant impact of activities

While Exxaro is not yet able to quantify its impact in protected sites or areas of high biodiversity value, new industry guidelines were used in 2013 to update areas of high biodiversity value for all business units. However, all biodiversity-sensitive areas within the mining rights of all business units were mapped during the updated baseline studies since 2012.

Please see table on page 58.

Approximately R30 million was spent in 2013 on biodiversity management, including wetland offsets, wetland delineation and wetland studies and biomonitoring.

Environmental rehabilitation – financial provisions

Exxaro's cradle-to-grave approach integrates our operational activities from the planning and feasibility stages of a mining project to post closure. Environmental risks are monitored until mine closure is obtained.

Our goal is to budget for and schedule ongoing rehabilitation aligned with individual mining plans. Integral to this process is minimising any negative impacts on affected parties or the environment, and communicating rehabilitation actions via established forums.

Financial liabilities for mine closure are satisfactorily provided for under the Exxaro Environmental Rehabilitation Trust Fund and financial guarantees issued in favour of the DMR. Eskom and

Exxaro have established an environmental rehabilitation trust for the Matla and Arnot captive mines. Although the fund contribution mechanism is not yet finalised between the two parties, we expect this finalisation and first contributions to be made in 2014.

In terms of rehabilitation and mine closure, business units report quarterly on set indicators, while environmental risk assessments are conducted five years before closure. At December 2013, total land disturbed was 9 449ha and total rehabilitated 1 725ha. The Exxaro Environmental Rehabilitation Fund (EERF) provides for most liabilities, while additional bank guarantees are taken out to provide for new developments and cover any shortfalls in financial provisions. Environmental rehabilitation liabilities are updated bi-annually for internal reporting at interim and financial year end; and submitted annually to the Department of Mineral Resources (DMR).

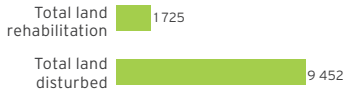
Exxaro contributed R92 million to the environmental trust fund in 2013 and had R685 million in its trust fund at 31 December 2013 for mine-closure activities (2012: R56 million and R554 million respectively). In addition, the group had bank guarantees of R685 million in place by December 2013. Updating these provisions annually highlights potential rehabilitation alternatives that could decrease long-term closure liabilities of mines.

External closure-cost reviews were completed at five operations during the year. Performance assessments against the objectives of environmental management

135 tonnes

LESS TO LANDFILL.

Rehabilitation



plan reports were completed for eight operations and submitted to the DMR. In line with the growing government focus on rehabilitation, all group business units have reviewed their rehabilitation plans (with appropriate schedules and budgets).

Mine closure

Exxaro has social and labour plans for all operations. To address the social aspects of mine closure, associated liabilities form part of operational costs during the life of mine while post-closure social liabilities are provided for in the closure cost.

Environmentally, Exxaro proactively addresses any liability build-up by tracking rehabilitation progress, reducing closure cost by including concurrent rehabilitation where possible as part of operational cost, conducting environmental impact assessments as part of ISO 14001 certification at all stages of mining as required and tracking any changes during the life of mine.

As part of the closure process, Exxaro also engages extensively with interested and affected parties to minimise the social impact. Studies are undertaken to determine if existing infrastructure and machinery can be used by the local community as part of leaving a positive legacy.

Apart from Zincor (closed in 2011), Exxaro has two mines at different stages of their closure plans – Tshikondeni and Inyanda. In 2013, appropriate funds were budgeted to cover implementation of the relevant social plans and rehabilitate negative and latent environmental impacts.

- Zincor was sold in November 2013
- At Tshikondeni and Inyanda, we have incorporated statutory requirements into our own initiatives to ensure an orderly and beneficial social closure process:
  - A social closure committee (statutory future forum) is part of the mine closure committee
  - Mine-closure stakeholder database and engagement plan
  - Structured study to assess the needs and expectations of all relevant internal and external stakeholders
  - Socio-economic impact assessment study includes a full assessment of the social impact of closure and mitigation plans
  - Finalised social and environmental closure plans
  - Obtaining buy-in from all relevant stakeholders and approval from the DMR.

Current legislation presents a number of specific risks in mine closure. These include possible pressure from affected communities to increase the corporate contribution to social programmes which will escalate the longer-term financial closure requirement. An additional risk lies in third-party applications to continue operating at mines in closure (Hlobane and Durnacol). Continued mining at these old workings is exceptionally dangerous and any incidents will have an impact on Exxaro's reputation. Future liability is likely to escalate as new and old mining impacts cannot be separated in terms of water quality, subsidence and crack formation. With any mine closure, there is also the risk that implementing the closure plan might not address all negative impacts. Exxaro has prepared as fully as possible for these contingencies in its existing closure plans.

SUCCESSFUL RELOCATION OF BABOON SPIDERS

Last year, we reported on our baboon spider relocation project near Lephalale, in Limpopo. We are greatly encouraged that our success to date is attracting the attention of a host of other organisations interested in rehabilitation and enhancing biodiversity. The relocation of populations of the golden-brown baboon spider (Augacephalus junodi) and burst horned baboon spider (Ceratogyrus darlingi) is the first project involving these species in southern Africa, and enables Exxaro to mitigate any impact of its operations on biodiversity. By publishing the study in due course, Exxaro will give other industrial operations an effective method to successfully re-establish a particular species in disturbed areas.

This project evolved from road expansions and upgrades for the new Medupi power station, and included teams from Exxaro's Grootegeluk Medupi expansion project, local residents and students (local reptile rescue), external consultants (entomologist). Broadly, the research objectives were to:

- Determine the most effective method of relocation by testing different options, including providing man-made burrows (200 releases)
- Determine if the two species could construct their own burrows after relocation (80 releases)
- Test the research theory and findings by relocating 60 individuals to a rehabilitation site where they used to occur prior to construction, but disappeared due to industrial disturbance (this objective emerged after project launch when Eskom offered a nearby rehabilitated test site at Matimba power station).

Overall, specialists removed 175 individuals of the two species along Nelson Mandela Road and 376 along Kuipersbult Road. In some cases, marked burrows were occupied by wolf spiders while other burrows were not active at all. A few trapdoor spiders of interest were recorded and sent for identification and record-keeping purposes to the National Collection of Arachnida in Pretoria. The spiders were kept and fed until they could be relocated in Exxaro's Manketti Game Reserve. Individuals collected in the same area were marked for relocation together, to minimise impacts on the population.

An 800ha portion in the south of Manketti game reserve, some 5-10km from the capture site, was identified as a suitable new habitat. The area was screened and a natural population of baboon spiders identified and used as a naturally occurring control population. Four relocation periods were planned: late August 2012, after the coldest part of winter; October and November 2012 after the first summer rains; and November 2013.

Artificial burrows were created and a steel cage (manufactured by the central plate workshop team at Grootegeluk) fixed into the ground over each artificial burrow to prevent spiders from escaping until they had adopted the burrow, and to keep predators out. Each burrow, for both relocated and control populations, was monitored weekly, directly after release, and monthly after the first three months.

A total of 80 spiders were released without burrows but in protected boxes, while 60 were relocated on Eskom's rehabilitated Matimba power station ash dump. Against the anticipated threshold of 50% accepting their new burrows within a week, the 95% acceptance rate was exceptional – and encouraging.

Generally, releasing them without a ready-made burrow is not very successful. They are usually eaten by predators such as baboons, mongooses, birds and other spiders before they can build a shelter. The teams also observed that the time of day was important: it seemed more successful to relocate the spiders in the first half of the day to give them time to settle before they become active at night.

Adult, female golden-brown baboon spiders (*Augacephalus junodi*), one of two populations successfully relocated in Limpopo.

The success of the Exxaro project elicited further corporate participation. Construction company Basil Read brought a number of spiders discovered on the Mokolo pipeline project in the Lephalale area, while mining company, BHP Billiton, and the spider club of South Africa have also shown interest.

This is the first time in southern Africa that such a project has been conducted, giving Exxaro an opportunity to add to the body of knowledge about spiders and contribute to scientific research. It has also given us an opportunity to show that while mining will impact an area, a responsible approach enables us to meet our commitment to sustainability.

Exxaro will continue to monitor the burrows of the relocated and control populations to determine survival rates and look for similar projects for future research opportunities.

Biodiversity across the Exxaro group 2013

- According to the latest national spatial biodiversity assessment report (2011) shape files of national protected areas, none of Exxaro's business units fall within protected areas. Only Tshikondeni is next to a protected area (Kruger National Park)
- However, Exxaro has evaluated and identified all protected vegetation units with important conservation targets and listed as protected by the national spatial biodiversity assessment report (2011) – refer to table below.

Geographic location		Biome	Name of vegetation unit (Mucina & Rutherford 2006)	Conservation status of vegetation units according to National Spatial Biodiversity Assessment Report — 2011	Type of operation(s)
Mpumalanga	Arnot	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Mostly underground with limited opencast
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
	North Block Complex – Glisa	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Opencast and underground
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
		Grassland	Lydenburg montane grassland (GM18)	Vulnerable with conservation target of 27%	
	NBC Strathrae	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Opencast and underground
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
	Inyanda	Grassland	Rand highveld grassland (GM11)	Endangered with conservation target of 24%	Opencast

* *Based on carbon footprint report calculations (2008).*

Land owned/leased/ managed by Exxaro	Position relative to protected/high diversity area	Size of operational site (ha) with dominant vegetation surface areas per vegetation type in brackets*	Biodiversity value (nature of area, listing of protected status)
Combination of owned, leased and managed by Exxaro – some farms in mining right area belonging to privately owned landowners/farmers. Mining activities take place only on land belonging to Exxaro/ Eskom	Not close to any Ramsar or protected areas/nature reserves under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	18 668ha (8 116ha grassland, 931ha wetland, 435ha secondary/transformed grassland consisting of abandoned croplands/rehabilitated areas, 497ha plantations, woodstocks, shelterbelts, 6 909ha cultivated lands, 902ha mine tailings and mining-related infrastructures, 518ha open water, 33ha grassland scrub and 327ha buildings)	Endangered
			Least threatened
Exxaro	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, however some plant communities listed as endangered by NSBAR 2004	1 014,43ha (246,60 ha natural grassland, 32,7ha wetland grassland, 7,00ha grassland scrub, 2,72ha buildings, 9,92ha cultivated fields, 292,75ha mine tailings and associated infrastructure, 49,22ha open water, 291,04ha plantations and 82,49ha secondary/ transformed grassland)	Endangered
			Least threatened
			Vulnerable
Combination of owned, leased and managed by Exxaro – some farms in mining right area belong to private landowners/farmers	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	6 166ha (3 206ha natural primary grassland, 358ha wetland grassland, 211ha secondary/ transformed grassland consisting of abandoned cropland and rehabilitated areas, 1 811ha cultivated fields, 296ha mine tailings, borrow pits etc, 240ha open water, 43ha plantations, woodlocks, shelterbelts)	Least threatened
			Endangered
Land owned by Exxaro	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	1 747ha (1 372ha natural grassland, 18ha grassland scrub, 248ha cultivated fields – rest consist of open water, mine tailings, secondary grassland etc)	Endangered

Geographic location		Biome	Name of vegetation unit (Mucina & Rutherford 2006)	Conservation status of vegetation units according to National Spatial Biodiversity Assessment Report — 2011	Type of operation(s)
Mpumalanga	Leeuwpan	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Opencast
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
		Grassland	Soweto highveld grassland (GM8)	Endangered with conservation target of 24%	
	Matla	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Underground
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
	New Clydesdale Colliery	Grassland	Eastern highveld grassland (GM12)	Endangered with conservation target of 24%	Opencast and underground
		Grassland	Eastern temperate freshwater wetlands (AZf3)	Conservation target of 24%	
KwaZulu-Natal	Durnacol	Grassland	Income sandy grassland (Gs7)	Vulnerable with conservation target of 23%	Historically underground
	Hlobane	Grassland	Wakkerstroom montane grassland (GM14)	Least threatened with conservation target of 27%	Historically underground

* *Based on carbon footprint report calculations (2008).*

Land owned/leased/ managed by Exxaro	Position relative to protected/high diversity area	Size of operational site (ha) with dominant vegetation surface areas per vegetation type in brackets*	Biodiversity value (nature of area, listing of protected status)
Land owned by Exxaro	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	2 073ha (111ha grassland, 225ha wetland grassland, 1 061ha cultivated lands – rest consist of mine tailings, buildings, mining-related infrastructures, secondary grassland and open water)	Endangered
			Least threatened
			Endangered
Combination of owned, leased and managed by Exxaro – some farms in mining right area belong to private landowners/farmers. Mining activities only take place on land belonging to Exxaro/Eskom	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	26 162ha (7 329ha grassland, 3 446ha wetland grassland, 115ha stream vegetation (bushveld), 11 708ha cultivated fields; 1 654ha secondary grassland)	Endangered
			Least threatened
Combination of owned, leased and managed by Exxaro – some farms in mining right area belong to privately owned landowners/farmers	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	5 383ha (1 479ha natural grassland, 174ha wetland grassland, 578ha secondary/ transformed grassland consisting of abounded cropfields, 256ha mine tailings, borrowpits, bare soils etc. Balance comprises plantations, open water, etc)	Endangered
			Least threatened
Combination of owned, leased and managed by Exxaro – some farms in mining right area belong to private landowners/farmers	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	20 102ha (11 113ha natural grassland vegetation, 4 041ha wetland grassland, 154ha stream vegetation (bushveld), 2 263ha secondary/transformed grassland consisting of abandoned cropfields and rehabilitated areas, 113ha retracted plantations, 423ha plantations, 698ha cultivated fields, 322ha grassland scrub, 97ha open water, 295ha mine tailings and related infrastructure, 582ha buildings)	Vulnerable
Combination of owned, leased and managed by Exxaro – some farms in mining right area belong to private landowners/farmers	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	5 780ha (1 070ha grassland scrub, 152ha mountain bushveld, 16ha open bushveld, 1 729ha grassland, 1 033ha plantations, 229ha wetland grassland, 63ha stream vegetation (bushveld), 291ha buildings, 328ha mine tailings and associated infrastructure, 39ha open water, 436ha retracted plantations, 33ha rocky outcrops, 305ha secondary/transformed grassland)	Least threatened

Geographic location		Biome	Name of vegetation unit (Mucina & Rutherford 2006)	Conservation status of vegetation units according to National Spatial Biodiversity Assessment Report — 2011	Type of operation(s)
Limpopo	Tshikondeni	Forest – azonal	Lowveld riverine forest (FOa1)	Critically endangered with a conservation target of 100%	Largely underground with three small mini pits
		Forest – zonal and intrazonal	Ironwood dry forest (FOz9)	Conservation target of 100%	
		Savanna	Musina mopane bushveld (SVmp1)	Least threatened with conservation target of 19%	
		Savanna – lowveld	Makuluke sandy bushveld (SVl1)	Vulnerable with conservation target of 19%	
	Grootegeluk	Savanna – central bushveld	Limpopo sweet bushveld (SVcb19)	Least threatened with conservation target of 19%	Opencast
Gauteng	FerroAlloys	Grassland	Soweto highveld grassland (GM8)	Endangered with conservation target of 24%	Industrial site – no mining

* *Based on carbon footprint report calculations (2008).*

	Land owned/leased/ managed by Exxaro	Position relative to protected/high diversity area	Size of operational site (ha) with dominant vegetation surface areas per vegetation type in brackets*	Biodiversity value (nature of area, listing of protected status)
	Surface rights belong to the state	Adjacent to the Kruger National Park	22 386ha (5 710ha mopani bushveld, 3 921ha mountain bushveld, 663ha open bushveld, 473ha riparian forest, 4 469ha thicket and encroached bushveld, 103ha woodland, 40ha wetland grassland, 412ha stream vegetation, 235ha inland forests and the rest consists of buildings (72ha), cultivated fields (709ha), floodplain bushveld (27ha) etc	Critically endangered
				Least threatened
				Vulnerable
	Exxaro	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	18 391ha (11 493ha bushveld vegetation, 2 016ha open bushveld, 960ha thicket and encroached bushveld, 36ha pans, 805ha woodlands, 0,4ha cultivated fields, 187ha floodplain bushveld, 11ha floodplain grassland, 2 257ha mine tailings and associated infrastructure, 178ha buildings, 431ha transformed/degraded bushveld and 17ha open water)	Least threatened
	ArcelorMittal	Not close to any Ramsar or protected areas/nature reserves protected under the Protected Areas Act, but some plant communities listed as endangered by NSBAR 2004	Disturbed area within an industrial area	Endangered

MINERAL RESOURCES AND RESERVES

The mineral resources and ore reserves underpinning Exxaro's current operations and growth projects are summarised in the tables on pages 66 to 86.

Mineral resources and ore reserves were estimated by competent persons on an operational basis and in accordance with the SAMREC Code (2007) for African properties and the JORC Code for Australian properties.

The tables are compiled from comprehensive independent statements received from the appointed resource and reserve competent persons at various operations and projects. Each statement forms part of a competent person's report which encapsulates the systematic and detailed estimation process conducted by or supervised by the applicable competent person. The competent persons have sufficient relevant experience in the style of mineralisation, type of deposit, mining method and activity for which they have taken responsibility, to qualify as a 'competent person' as defined in the applicable codes at the time of reporting. The competent persons have signed off their respective estimates and consent to the inclusion of the information in this report in the form and context in which it appears. A list of Exxaro's competent persons is available from the company secretary on written request.

Mineral resources and ore reserves are reported as those remaining on 31 December 2013 and mineral resources are reported inclusive of those resources, which have been converted to ore reserves and at 100%, irrespective of the percentage attributable to Exxaro. An exception is the reporting of Gamsberg and Black Mountain, because figures received from Vedanta (JORC Code) represent resources exclusive of reserves and reported as on 31 March 2013. Significant changes in the resource or reserve figures are explained by relevant footnotes to each table.

Resource estimations are based on the latest available resource models, which incorporate all new validated geological information and, if applicable, revised resource definitions and classifications. The resource models are compiled as a rule between May and August of the reporting year to align with the subsequent reserve estimation process. For the Exxaro operations and projects, Exxaro uses a systematic review process that measures the level of maturity of the exploration work done, the extent of the geological potential, the mineability, security of tenure and associated geological risks/ opportunities to establish an eventual extraction outline. The outline reflects the boundary within which ore occurrences are considered to have reasonable and realistic prospects for eventual economic extraction. All mineral resources in which Exxaro holds the controlling interest have been reviewed in 2013 to comply with the "reasonable and realistic prospects for eventual economic extraction" (SAMREC Code 2007). The location, quantity, quality and continuity of grade/ quality and geology within this outline are known within varying degrees of confidence and are continuously tested by conducting exploration activities such as geophysical surveys, drilling and bulk sampling. Mineral resources are classified into inferred, indicated or measured categories based on the degree of geological confidence. Distribution of points of observation (drilling positions, trenches, etc), quality assurance and quality control in sample collection, evaluation of structural complexities and, in the case of operations, reconciliation results are considered in the classification of resources. A formal annually compiled and signed-off exploration strategy outlines the activities planned to investigate areas of low confidence and/or geology or structural complexities to ensure that resources with a high level of geological confidence are considered for mine planning.

Ore reserves have the same meaning as mineral reserves as defined in the applicable reporting codes. Ore reserves are estimated using the relevant modifying factors at the time of reporting (mining, metallurgical, economic, marketing, legal environmental, social and regulatory requirements). Modifying factors are signed off before and after reserve estimation by the persons responsible to ensure that all factors are timeously and appropriately considered. Comprehensive modifying factor sign-off and reserve fact pacts that record losses, recoveries/ yields and other factors applied are documented in each of the independent competent persons' reports. Exxaro is keenly aware of the importance of its mineral assets, both for the short-term profitability of its operations and the sustainability of the company. The optimisation of mineral assets beyond what is generally referred to as mineral resource management is being driven as a priority. Changes in the resources market, increased awareness of protecting the natural environment and changing legislation and statutory requirements demand a change in the utilisation strategy and execution of mining operations. Exxaro is continuously assessing the various life-of-mine strategic plans to consider the best way of addressing these challenges.

It is critical for Exxaro management and investors to have a high level of confidence in the company's mineral assets and to have the assurance that these resources and reserves will deliver the expected value. Therefore, a mineral asset policy was drafted and approved by the Exxaro board in 2012. This policy was implemented in the reporting year by introducing procedures and governance measures designed to achieve

this goal, while the drive to add additional good-quality mineral assets will continue. The process will greatly support the principles of competence, materiality and transparency within Exxaro.

Mineral resources and ore reserves quoted fall within existing Exxaro Resources mine or prospecting rights. Mining rights are of sufficient duration (or convey a legal right to convert or renew for sufficient duration) to enable all reserves to be mined in accordance with current production schedules. The processes and calculations associated with the estimate have been audited by internal competent persons and are audited by external consultants when deemed essential to establish transparency. In the case of mines or projects in which Exxaro does not hold the controlling interest, figures have been compiled by competent persons from the applicable companies and have not been audited by Exxaro. Resource and reserve estimation at Exxaro mines or projects outside Africa were done by competent persons as defined by the JORC Code.

The Belfast project mining right was granted and executed. An application for a mining right over the Glisa South project area was submitted during the reporting period, depicting the successful conclusion of various high-standard technical studies. The Glisa South project area is adjacent to the Glisa (North Block Complex) reserve and is an extension of this operation. The mining right application for the Grootegeluk West project area, submitted in 2012, is progressing well.

Comprehensive exploration drilling programmes at the Matla, Arnot and North Block Complex coal operations contributed to a better understanding of a number of geological and structural complexities and will enhance future extraction of coal reserves. Drilling and trenching at the Mayoko iron ore project in the Republic of the Congo increased the geological level of confidence of both the hematite and magnetite ore. Resource, geotechnical and hydro-geological drilling will proceed in 2014 to further define the resource base.

Exxaro is currently disinvesting from the New Clydesdale coal mine based on a review which concluded that the mine was not strategically aligned to the group strategy. Tshikondeni is in a process of mine closure and will, during the next reporting period, downscale its mining activities.

The person in Exxaro designated to take corporate responsibility for mineral resources, JH Lingenfelder, the undersigned, has reviewed and endorsed the reported estimates.

JH Lingenfelder
BSc Geology (hons)
Pr Sci Nat (400038/11)
Group manager geoscience

The person in Exxaro designated to take corporate responsibility for ore reserves, J Hager, the undersigned, has reviewed and endorsed the reported estimates.

J Hager
B Mining (hons)
ECSA 20050209
Group manager mining processes

COAL

Coal resources

The table details total inclusive coal resources estimated as at 31 December 2013.

				2013		2012		
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3,5]	Grade[4]	Tonnes (million)[3,5]	Grade[4]	% change
Coal Mpumalanga	Arnot mine[6] (UG/OC) (captive market)	100	Measured	166,0	Raw coal[4]	187,8	Raw coal[4]	
			Indicated	37,6	Raw coal[4]	42,8	Raw coal[4]	
			Inferred	27,1	Raw coal[4]	29,6	Raw coal[4]	
			Total	230,7	Raw coal[4]	260,2	Raw coal[4]	(11,3)
	Resources inside life-of-mine plan (LoMP)			83,2				
	Matla mine (>18MJ/kg, 26% DAV) (UG)	100	Measured	365,4	Raw coal[4]	344,1	Raw coal[4]	
			Indicated	257,6	Raw coal[4]	253,3	Raw coal[4]	
			Inferred	198,6	Raw coal[4]	192,1	Raw coal[4]	
			Total	821,5	Raw coal[4]	789,5	Raw coal[4]	4,1
	Matla mine (Low CV 15-18MJ/kg, 30% ash) (UG)	100	Measured	55,1	Raw coal[4]	53,1	Raw coal[4]	
			Indicated	47,3	Raw coal[4]	40,4	Raw coal[4]	
			Inferred	93,7	Raw coal[4]	98,3	Raw coal[4]	
			Total	196,1	Raw coal[4]	191,7	Raw coal[4]	2,3
	Matla mine total (UG) (captive market)	100	Measured	420,5	Raw coal[4]	397,2	Raw coal[4]	
			Indicated	304,9	Raw coal[4]	293,6	Raw coal[4]	
			Inferred	292,3	Raw coal[4]	290,4	Raw coal[4]	
			Total	1 017,6	Raw coal[4]	981,2	Raw coal[4]	3,7
	Resources inside life-of-mine plan (LoMP)			473,8				
	Inyanda mine[7] (OC)	100	Measured	3,40	Raw coal[4]	5,71	Raw coal[4]	
			Indicated					
			Inferred					
			Total	3,40	Raw coal[4]	5,71	Raw coal[4]	(40,5)
	Resources inside life-of-mine plan (LoMP)			3,40				
	Leeuwpan mine (OC)	100	Measured	151,6	Raw coal[4]	150,4	Raw coal[4]	
			Indicated					
			Inferred					
			Total	151,6	Raw coal[4]	150,4	Raw coal[4]	0,8
	Resources inside life-of-mine plan (LoMP)			127,4				
	Mafube mine[8] (OC)	50	Measured	174,8	Raw coal[4]	116,5	Raw coal[4]	
			Indicated	13,0	Raw coal[4]	38,4	Raw coal[4]	
			Inferred	2,1	Raw coal[4]	37,5	Raw coal[4]	
			Total	189,9	Raw coal[4]	192,5	Raw coal[4]	(1,3)
	Resources inside life-of-mine plan (LoMP)			130,5				
	NBC mine[9] (OC) (North Block Complex)	100	Measured	31,9	Raw coal[4]	34,4	Raw coal[4]	
			Indicated					
			Inferred			1,3	Raw coal[4]	
			Total	31,9	Raw coal[4]	35,7	Raw coal[4]	(10,5)
	Resources inside life-of-mine plan (LoMP)			19,2				
	NCC mine[10] (OC/UG) (New Clydesdale)	100	Measured	30,6	Raw coal[4]	31,2	Raw coal[4]	
			Indicated	23,3	Raw coal[4]	23,3	Raw coal[4]	
			Inferred					
			Total	53,9	Raw coal[4]	54,5	Raw coal[4]	(1,1)
	Resources inside life-of-mine plan (LoMP)			5,1				
	Glisa South project[11] (OC) (prospecting)	100	Measured	20,0	Raw coal[4]	20,0	Raw coal[4]	
			Indicated	47,1	Raw coal[4]	47,1	Raw coal[4]	
			Inferred	9,4	Raw coal[4]	9,4	Raw coal[4]	
			Total	76,5	Raw coal[4]	76,5	Raw coal[4]	0,0
	Belfast project[12] (OC) (prospecting)	100	Measured	83,2	Raw coal[4]	83,2	Raw coal[4]	
			Indicated	24,2	Raw coal[4]	24,2	Raw coal[4]	
			Inferred	25,9	Raw coal[4]	25,9	Raw coal[4]	
			Total	133,3	Raw coal[4]	133,3	Raw coal[4]	0,0
	Resources inside life of mine plan (LoMP)			60,1				

				2013		2012		
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3,5]	Grade[4]	Tonnes (million)[3,5]	Grade[4]	% change
Coal Limpopo	Grootegeluk mine (OC)	100	Measured	2 442	Raw coal[4]	2 476	Raw coal[4]	
			Indicated	1 582	Raw coal[4]	1 585	Raw coal[4]	
			Inferred	735	Raw coal[4]	735	Raw coal[4]	
			Total	4 758	Raw coal[4]	4 795	Raw coal[4]	(0,8)
	Resources inside life-of-mine plan (LoMP)			3 667				
	Grootegeluk West project (OC) (prospecting)	100	Measured					
			Indicated	2 579	Raw coal[4]	2 579	Raw coal[4]	
			Inferred	2 249	Raw coal[4]	2 249	Raw coal[4]	
			Total	4 828	Raw coal[4]	4 828	Raw coal[4]	0,0
	Waterberg North project (OC) (prospecting)	100	Measured					
			Indicated					
			Inferred	2 253	Raw coal[4]	2 253	Raw coal[4]	
			Total	2 253	Raw coal[4]	2 253	Raw coal[4]	0,0
	Waterberg South project (OC) (prospecting)	100	Measured					
			Indicated					
			Inferred	895	Raw coal[4]	895	Raw coal[4]	
			Total	895	Raw coal[4]	895	Raw coal[4]	0,0
	Tshikondeni mine (UG/OC) (captive market)	100	Measured	4,1	Raw coal[4]	5,3	Raw coal[4]	
			Indicated	25,1	Raw coal[4]	25,1	Raw coal[4]	
			Inferred					
			Total	29,2	Raw coal[4]	30,4	Raw coal[4]	(4,0)
	Resources inside life-of-mine plan (LoMP)			0,7				
Coal Australia	Moranbah South project[13] (UG) (prospecting)	50	Measured	487,1	Raw coal[4]	349,6	Raw coal[4]	
			Indicated	208,1	Raw coal[4]	302,3	Raw coal[4]	
			Inferred	30,3	Raw coal[4]	50,8	Raw coal[4]	
			Total	725,6	Raw coal[4]	702,6	Raw coal[4]	3,3

Rounding-off of figures may cause computational discrepancies.

All changes more than 10% (significant) are explained.

1 Mining method: OC – open-cut, UG – underground.

2 Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.

3 Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt. Coal resources are quoted on a mineable tonnage in-situ (MTIS) and on an air-dried basis.

4 Coal qualities are reported in Table 1 and quoted on a mineable tonnage in situ (MTIS) and on an air-dried basis.

5 Coal resources are quoted inclusive of coal resources that have been modified to coal reserves unless otherwise stated.

6 The decrease is the result of mining, update of the geological model (~15Mt), exclusion based on eventual economic extraction (infrastructure, ~4,5Mt) and the change in cut-off parameters for opencast areas (0,7m to 1m, ~5Mt). (UG=178,2Mt, OC=52,5Mt).

7 The decrease of 2,31Mt is the result of mining depletion (2,34Mt) and model refinement (+0,03Mt).

8 Estimates are received from Anglo American Thermal Coal and were not audited by Exxaro.

9 NBC include the resource areas of Glisa, Strathrae and Eerstelingsfontein. The increase due to the implementation of a new seam definition was offset by model refinement (~-4,8Mt) and mining depletion (~3,6Mt). Eerstelingsfontein resources decreased as a result of model refinement (~0,8Mt).

10 UG= 51,1Mt, OC= 2,8Mt.

11 The project is adjacent to the current Glisa (NBC) resource area and will be an extension of the current operation.

12 Mine right was granted and executed.

13 Estimates are received from Anglo American Metallurgical Coal Pty Ltd and not audited by Exxaro.

Coal resource qualities

Table 1 – 2013

		Measured resource				
Operation	Seam/Layer/Formation	Tonnes (Mt)[1]	CV MJ/Kg	% VM	% Ash	% S
Arnot mine	Seam 2	163,7	23,9	24,6	20,4	1,4
	Seam 1	2,3	25,4	29,8	19,3	2,0
Matla mine	Seam 2	119,2	23,8	24,2	20,1	0,9
	Seam 4	246,2	19,8	22,1	30,3	1,2
	Low CV Seam 2	3,8	18,2	20,0	33,6	0,9
	Low CV Seam 4	51,4	17,0	19,8	38,0	1,00
Inyanda mine	Inyanda Reserve: Seam 2	1,11	26,3	23,6	18,0	1,2
	Inyanda Reserve: Seam 1	1,21	24,5	23,9	23,6	1,1
	Pegasus South: Seam 2	0,50	21,9	21,9	24,1	1,6
	Pegasus South: Seam 1	0,59	22,6	21,5	23,8	1,6
Leeuwpan mine	TC[2]	92,7	15,8	17,5	38,5	1,1
	BC[2]	58,9	22,0	20,6	22,5	0,7
Mafube mine	Seam 4	11,0	19,2	20,9	32,1	0,9
	Seam 2	129,0	23,1	23,0	22,3	1,0
	Seam 1	34,9	20,3	22,5	30,7	0,9
NBC mine	Glisa: Total seams	28,7	20,0	21,8	29,6	1,0
	Strathrae East: Seam 2	0,5	24,7	22,9	19,0	0,8
	Eerstelingsfontein: Seam 2	2,8	25,9	22,1	16,4	0,8
Glisa South project	Seam 2	20,0	19,0	20,3	32,0	0,9
NCC mine	Total seams	30,6	24,3	22,7	23,1	1,4
Belfast project	Seam 4	2,2	15,9	20,9	40,2	1,3
	Seam 3	6,3	21,5	23,0	27,9	1,1
	Seam 2	74,7	24,8	23,1	18,3	1,1
Grootegeluk mine	Volksrust Formation	1 747	12,4	19,4	55,5	1,0
	Vryheid Formation	695	22,9	22,0	28,2	2,1
Grootegeluk West project	Volksrust Formation Vryheid Formation					
Waterberg North project	Volksrust Formation Vryheid Formation					
Waterberg South project	Volksrust Formation Vryheid Formation					
Tshikondeni mine		4,1	30,6	21,9	24,6	0,7
Moranbah South project	Goonyella Middle Seam (GM)	487,1	26,8	18,5	23,9	0,6

VM – volatile matter, S – sulphur, CV – calorific value.
Rounding-off of figures may cause computational discrepancies.
Coal qualities are quoted on a mineable tonnage in-situ (MTIS) and on an air-dried basis.

1 The tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.

2 TC – top coal, BC – bottom coal.

Indicated resource					Inferred resource				
Tonnes (Mt)[1]	CV MJ/Kg	% VM	% Ash	% S	Tonnes (Mt)[1]	CV MJ/Kg	% VM	% Ash	% S
37,6	23,6	24,5	20,8	1,4	26,4	24,5	24,5	18,8	1,3
0,0	24,9	29,1	20,7	1,8	0,7	23,5	27,6	24,4	1,5
99,3	23,0	23,8	21,5	0,3	118,0	21,9	22,8	24,7	1,4
158,3	20,1	22,3	28,7	1,0	80,6	19,9	22,2	29,3	0,9
12,6	17,1	18,8	34,3		38,7	17,9	19,2	31,3	0,6
34,7	17,0	19,4	36,7		55,0	17,6	19,3	35,2	0,9
3,5	17,5	19,2	36,0	0,7	0,9	16,9	19,3	38,8	0,4
6,6	19,4	20,1	19,6	0,9					
2,9	19,2	21,4	30,9	0,8	1,2	21,7	24,7	23,5	0,9
47,1	19,0	20,9	31,8	1,0	9,4	21,0	21,6	27,6	1,0
23,3	22,7	20,7	28,4	0,9					
1,0	13,5	19,1	47,8	1,1	2,3	12,8	19,2	50,1	0,9
1,8	21,1	22,8	28,6	1,6	1,1	20,7	22,8	29,3	1,1
21,3	24,1	22,8	19,9	1,1	22,5	22,9	21,9	22,7	1,1
1 314	13,1	19,8	54,3	1,1	560	13,0	19,1	55,3	1,2
267	22,0	22,2	28,4	2,2	174	23,1	21,2	29,1	2,00
2 150	11,1	19,3	56,9	0,9	1 800	10,1	18,7	58,8	0,9
430	20,4	21,9	32,1	2,2	448	19,5	21,6	34,2	2,1
					1 468	10,8	19,0	56,8	0,9
					785	18,1	21,7	36,2	1,8
					354	14,1	23,2	44,9	1,1
					541	17,1	21,6	36,1	2,1
25,1	30,8	22,0	24,0	0,7					
208,1	27,5	17,8	21,3	0,5	30,3	28,8	16,9	18,3	0,5

COAL

Coal reserves

Table 1 – 2013 (continued)

The table details total coal reserves estimated as at 31 December 2013.

				2013			
Commodity	Operation[1]	% attributable to Exxaro[5]	Reserve category	ROM (Mt)[2,3]	Saleable product (Mt)[2,4]		
					Coking	Thermal	Metallurgical
Coal Mpumalanga	Arnot mine[7] (OC/UG) (captive market)	100	Proved	17,5	N/A	17,5	N/A
			Probable	37,0	N/A	36,1	N/A
			Total	54,5	N/A	53,6	N/A
		Inferred Resources in LoMP[6]		0,6			
	Matla mine (UG) (captive market)	100	Proved	133,9	N/A	132,2	N/A
			Probable	92,6	N/A	92,1	N/A
			Total	226,5	N/A	224,3	N/A
		Inferred Resources in LoMP[6]		67,7			
					A-grade export steam coal		
	Inyanda mine[8] (OC)	100	Proved	2,04		1,54	
			Probable	0,97		0,59	
			Total	3,01		2,13	
		Inferred Resources in LoMP[6]		–			
					Export	Thermal	Metallurgical
	Leeuwpan mine[9] (OC)	100	Proved	35,5	1,6	15,9	5,1
			Probable	80,5	1,6	7,4	27,9
			Total	116,0	3,2	23,3	33,0
		Inferred Resources in LoMP[6]		–			
					Export	Thermal	Metallurgical
	Mafube mine[10] (OC)	50	Proved	10,2	5,3	2,6	N/A
			Probable	113,0	48,4	21,1	N/A
			Total	123,2	53,7	23,7	N/A
		Inferred Resources in LoMP[6]		0,9			
	NBC mine (OC) (North Block Complex)	100	Proved	15,1	N/A	9,8	N/A
			Probable	3,1	N/A	2,0	N/A
			Total	18,2	N/A	11,8	N/A
		Inferred Resources in LoMP[6]		–			
	NCC mine[11] (UG/OC) (New Clydesdale)	100	Proved	2,7	N/A	1,8	N/A
			Probable				
			Total	2,7	N/A	1,8	N/A
		Inferred Resources in LoMP[6]		–			
	Belfast project[12] (UG/OC) (prospecting)	100	Proved	45,7	35,3	8,1	N/A
			Probable	11,5	5,4	3,6	N/A
			Total	57,2	40,7	11,7	N/A
		Inferred Resources in LoMP[6]		0,5			

2012					
ROM (Mt)[2,3]	Saleable product (Mt)[2,4]			% change	Life-of-mine plan (LoMP) (years)
	Coking	Thermal	Metallurgical		
17,0	N/A	38,5	N/A		
24,9	N/A	3,7	N/A		
41,9	N/A	42,2	N/A	30,1	19
0,5					
145,3	N/A	144,6	N/A		
96,7	N/A	96,2	N/A		
242,0	N/A	240,8	N/A	(6,4)	23,3
39,8					
	A-grade export steam coal				
4,29		2,93			
0,96		0,69			
5,25		3,62		(42,7)	1,3
–					
	Export	Thermal	Metallurgical		
65,7	3,0	19,4	12,4		
76,7	2,0	21,4	20,3		
142,4	5,0	40,8	32,7	(18,6)	16
–					
	Export	Thermal	Metallurgical		
12,1	5,8	2,4	N/A		
70,7	24,2	21,2	N/A		
82,8	30,0	23,6	N/A	48,7	18
7,2					
14,3	N/A	8,6	N/A		
3,2	N/A	3,2	N/A		
17,5	N/A	11,8	N/A	3,7	4,6
–					
3,5	N/A	2,2	N/A		
3,5	N/A	2,2	N/A	(22,5)	2,5
–					
67,3	35,4	21,6	N/A		
67,3	35,4	21,6	N/A	(15,0)	19
0,8					

COAL (continued)

Coal reserves (continued)

Table 1 – 2013 (continued)

The table details total coal reserves estimated as at 31 December 2013.

				2013			
Commodity	Operation[1]	% attributable to Exxaro[5]	Reserve category	ROM (Mt)[2,3]	Saleable product (Mt)[2,4]		
					Coking	Thermal	Metallurgical
Coal Limpopo	Grootegeluk mine (OC)	100	Proved	2 050	82	965	74
			Probable	996	61	419	21
			Total	3 046	143	1 384	95
	Inferred Resources in LoMP[6]			390			
	Tshikondeni mine[13] (UG/OC) (captive market)	100	Proved	0,43	0,19	N/A	N/A
			Probable				
			Total	0,43	0,19	N/A	N/A
	Inferred Resources in LoMP[6]			–			

Rounding-off of figures may cause computational discrepancies.

All changes more than 10% (significant) are explained.

1 *Mining method: OC – open-cut, UG – underground.*

2 *Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.*

3 *Coal reserves are quoted on a run-of-mine (ROM) reserve tonnage basis which represents tonnages delivered to the plant at an applicable moisture and quality basis.*

4 *Saleable reserve tonnage represents the product tonnes of coal available for sale on an applicable moisture basis. Qualities of saleable products are provided in table 2.*

5 *Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.*

6 *Inferred resources in life-of-mine plan (LoMP) refer to inferred resources considered for the life-of-mine plan.*

7 *Mooifontein and Grootpan OC areas are reported as probable based on pending environmental authorisations. Exxaro Coal has a reasonable expectation that applications will be timeously approved.*

8 *The decrease is the result of mining (2,24Mt). Pegasus South is classified as probable due to pending environmental authorisations.*

9 *The net decrease is primarily the result of mining (5,8Mt), changes in the mineral resource (~5Mt), removal of reserves in the buffer areas of planned infrastructure and legal and environmental boundaries at reserve block OWM as well as the exclusion of reserves at block OJ due to pending environmental authorisations. Measured resources (reserves blocks OJ, OL, UB and OI) were converted to probable reserves based on ongoing environmental and technical studies.*

10 *Estimates are received from Anglo American Thermal Coal and were not audited by Exxaro. The change is primarily the result of the inclusion of seam 4, previously excluded, following the conclusion of a feasibility study as well as an increase of the mining footprint of seam 1 and seam 2 due to mine plan optimisation at the Nooitgedacht reserve area.*

11 *The operation was placed under care and maintenance and the small decrease is the result of downscaling mining activities at the Diepspruit reserve area (~0,8Mt).*

12 *The revision of economic assumptions resulted in a decrease (~10Mt). Mine right was granted and executed in 2013.*

13 *A decrease of 0,8Mt is the result of mining. Mine closure will begin in 2014.*

2012					
ROM (Mt)[2,3]	Saleable product (Mt)[2,4]			% change	Life-of-mine plan (LoMP) (years)
	Coking	Thermal	Metallurgical		
2 083	83	979	76		
999	61	419	21		
3 082	145	1 398	97	(1,2)	30+
390					
1,2	0,6	N/A	N/A		
1,2	0,6	N/A	N/A	(65,0)	1
–					

Coal reserve qualities

Table 2 – 2013

Operation	Seam/layer	Thermal saleable (proved + probable)				
		Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S
Arnot mine	Seam 2	53,4	22,1	22,6	25,4	0,9
	Seam 1	0,2	24,3	28,6	21,7	0,9
Matla mine	Seam 4	143,6	18,5	20,9	31,4	0,9
	Seam 2	82,9	22,5	22,6	20,4	1,0
Inyanda mine	Inyanda reserve: Seam 2 and Seam 1	1,54	27,5	24,5	15,0	0,7
	Pegasus South: Seam 2 and Seam 1	0,59	27,5	26,4	15,0	0,5
Leeuwpan mine	TC[2]	17,4	23,2	21,6	23,0	0,4
	BC[2]	5,9	24,0	21,2	21,0	0,4
Mafube mine	Middlings	23,7	22,6	22,6	22,5	0,5
	Export	53,7	26,6	26,4	13,0	0,5
NBC	Glisa: Total seams	9,8	21,4	21,4	26,2	0,6
	Strathrae East: Seam 2	0,3	24,7	22,9	19,0	0,8
	Eerstelingsfontein: Seam 2	1,7	25,9	22,6	18,3	0,7
NCC mine	Seam 2	1,75	26,6	28,9	15,1	0,6
Belfast project	Thermal	8,1	21,9	22,4	26,6	1,8
	Export	35,3	26,9	24,1	13,7	0,5
Grootegeluk mine	Volksrust Formation	898	21,5	27,4	31,2	0,9
	Vryheid Formation	486	22,7	22,0	28,4	2,0
Tshikondeni mine	Total seams					

Saleable reserve tonnage represents the product tonnes of coal available for sale on an applicable moisture and air-dried quality basis.
VM – volatile matter, S – sulphur, CV – calorific value.
Rounding-off of figures may cause computational discrepancies.
1 Saleable product tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.
2 TC – top coal BC – bottom coal.

Metallurgical saleable (proved + probable)					Coking saleable (proved + probable)				
Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S	Tonnes (Mt)[1]	CV MJ/kg	% VM	% Ash	% S
9,2	24,7	19,5	15,4	1,4					
27,0	25,2	23,1	15,3	0,6					
					143	29,5	35,9	9,9	1,1
95	22,1	23,0	14,4	0,6					
					0,19	30,8	22,0	13,0	0,7

MINERAL SANDS

Mineral sands resources

The table details total inclusive mineral sands resources estimated as at 31 December 2013.

				2013		
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3]	Grade	
					% Ilmenite	
Mineral sands KwaZulu-Natal	Hillendale Mine + Braeburn + Braeburn Extension[4] (OC)	59,04	Measured	12,2	2,9	
			Indicated			
			Inferred			
			Total	12,2	2,9	
	Fairbreeze A+B+C+C Ext +D (OC)	59,04	Measured	156,1	4,3	
			Indicated	55,7	2,6	
			Inferred	9,0	1,9	
			Total	220,9	3,8	
	Block P (OC) (mining right)	59,04	Measured			
			Indicated	40,6	3,1	
			Inferred			
			Total	40,6	3,1	
	Port Durnford project (OC) (prospecting)	59,04	Measured	142,5	3,0	
			Indicated	340,1	2,8	
			Inferred	466,0	2,5	
			Total	948,6	2,7	
Mineral sands Eastern Cape	Eastern Cape project[5] (OC) (Nombanjana, Ngcizele, Sandy Point old and recent)	59,04	Measured	Applied for closure		
			Indicated			
			Inferred			
			Total			
Mineral sands Limpopo	Gravelotte sand (OC) (mining right)	100	Measured			
			Indicated	74,9	9,9	
			Inferred			
			Total	74,9	9,9	
	Gravelotte rock (OC) (mining right)	100	Measured			
			Indicated	9,7	23,1	
			Inferred	113,9	18,2	
			Total	123,6	18,6	
					% Ilmenite	% Zircon
Mineral sands Western Cape	Namakwa Sands mine[6] (OC)	59,09	Measured	417,0	3,1	0,7
			Indicated	353,8	2,6	0,7
			Inferred	121,3	2,2	0,5
			Total	892,1	2,8	0,7

	2012		
	Tonnes (million)[3]	Grade	% change
		% Ilmenite	
	14,6	2,9	
	14,6	2,9	(16,9)
	156,1	4,3	
	55,7	2,6	
	9,0	1,9	
	220,9	3,8	0,0
	40,6	3,1	
	40,6	3,1	0,0
	142,5	3,0	
	340,1	2,8	
	466,0	2,5	
	948,6	2,7	0,0
	226,2	4,6	
	9,9	3,3	
	19,8	3,9	
	255,9	4,5	(100,0)
	74,9	9,9	
	74,9	9,9	0,0
	9,7	23,1	
	113,9	18,2	
	123,6	18,6	0,0
		% Ilmenite	% Zircon
	509,6	3,1	0,8
	257,4	2,6	0,6
	142,3	2,4	0,6
	909,3	2,8	0,7 (1,9)

MINERAL RESOURCES AND RESERVES
continued

				2013	
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3]	Grade
					% THM
Mineral sands Australia	Tiwest Cooljarloo mine (OC)	44,65	Measured	182,1	2,0
			Indicated	161,1	1,9
			Inferred		
			Total	343,2	2,0
					% THM
	Tiwest Cooljarloo west project (OC) (prospecting)	44,65	Measured		
			Indicated	104,5	2,0
			Inferred		
			Total	104,5	2,0
	Cooljarloo north west project[7] (OC) (prospecting)	44,65	Measured		
			Indicated		
			Inferred	106,4	2,2
			Total	106,4	2,2
	Jurien project (OC) (mining right)	44,65	Measured		
			Indicated	25,6	6,0
			Inferred		
			Total	25,6	6,0
	Dongara project (OC) (prospecting)	44,65	Measured	105,9	4,0
			Indicated	12,8	4,5
			Inferred	37,8	2,7
			Total	156,4	3,7

Estimates are received from Tronox and not audited by Exxaro.
% THM – percent total heavy minerals.
Mineral sands resources are quoted inclusive of mineral sands resources that have been modified to mineral sands reserves unless otherwise stated.
Rounding-off of figures may cause computational discrepancies.
All changes more than 10% (significant) are explained.
1 Mining method: OC – open-cut, UG – underground.
2 Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.
3 The tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.
4 Mining operations ceased at the end of December 2013.
5 Applied for closure.
6 Movement between resource categories is a result of revised resource classification and update of the resource model.
7 The increase is primarily the result of new drilling information and update of the resource model.

	2012		
	Tonnes (million)[3]	Grade	% change
		% THM	
	170,8	2,1	
	196,8	1,9	
	367,6	2,0	(6,6)
		% THM	
	65,1	2,1	
	34,0	2,0	
	99,1	2,1	5,5
	79,5	1,8	
	79,5	1,8	33,8
	25,6	6,0	
	25,6		0,0
	106,3	4,0	
	12,8	4,5	
	37,9	3,9	
	157,0	4,0	(0,4)

MINERAL SANDS

Mineral sands reserves

The table details total mineral sands reserves estimated as at 31 December 2013.

				2013	
Commodity	Operation[1]	% attributable to Exxaro[2]	Reserve category	ROM (Mt)[3]	Grade % THM
Mineral sands KwaZulu-Natal	Hillendale mine[5] (OC)	59,04	Proved Probable	Mining operations ceased at the end of December 2013	
			Total		
			Inferred Resources in LoMP[4]		
	Fairbreeze A+B+C+C ext.+D[6] (OC) (mining right)	59,04	Proved Probable	139,0 45,3	7,1 4,6
			Total	184,3	6,5
			Inferred resources in LoMP[4]	6,8	
Mineral sands Western Cape	Namakwa Sands mine[7] (OC)	59,04	Proved Probable	385,8 300,3	7,9 6,4
			Total	686,0	7,2
			Inferred resources in LoMP[4]	103,0	
Mineral sands Australia	Northern operations – Cooljarloo mine[8] (OC)	44,65	Proved Probable	182,1 21,6	2,1 2,6
			Total	203,7	2,1
			Inferred resources in LoMP[4]	–	
	– Jurien project (OC) (mining right)	44,65	Proved Probable		
			Total		
			Inferred resources in LoMP[4]	–	
	– Dongara project (OC) (prospecting)	44,65	Proved Probable	64,6	5,2
			Total	64,6	5,2
			Inferred resources in LoMP[4]	–	

Estimates are received from Tronox and not audited by Exxaro.
% THM – percent total heavy minerals.
Rounding-off of figures may cause computational discrepancies.
All changes more than 10% (significant) are explained.

1 *Mining method: OC – open-cut, UG – underground.*
2 *Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.*
3 *Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.*
4 *Inferred resources in life-of-mine plan (LoMP) refer to inferred resources considered for the life-of-mine plan.*
5 *Mining (~2,05Mt) was executed in line with mine closure requirements.*
6 *The increase (~44,6Mt) is due to a review of the mine plan and implementation of a 1,5% ilmenite cut-off grade. Early-phase construction is under way and full-scale construction depends on the outcome of an appeal on the granted water use licence.*
7 *Mining depletion (~17Mt) was offset by the substantial inclusion of the East Mine orange feldspathic material (EOFSM).*
8 *A decrease of (~11%) is mainly due to mining depletion and edge trimming, about (~36Mt) moved from probable to proved ore reserves.*

2013						2012					
Total heavy mineral (THM) composition				ROM (Mt)[3]	Grade	Total heavy mineral (THM) composition				% change	Life-of-mine plan (LoMP) (years)
% Ilmenite	% Rutile	% Zircon	% Leucoxene		% THM	% Ilmenite	% Rutile	% Zircon	% Leucoxene		
				2,9	5,3	61,3	4,0	7,6	2,0		
				2,9	5,3	61,3	4,0	7,6	2,0	(76,5)	–
				–							
62,1	3,5	8,4	1,7	114,3	7,7	62,7	3,5	8,5	1,7		
53,2	3,2	7,3	1,8	25,4	5,0	56,2	3,3	7,8	1,5		
60,5	3,4	8,2	1,7	139,6	7,2	61,9	3,4	8,4	1,7	32,0	13
				3,0							
39,5	2,5	9,4	5,8	271,9	9,7	33,8	2,4	9,4	5,2		
40,4	2,6	10,2	5,8	160,3	7,1	34,7	2,7	8,1	6,0		
39,9	2,7	9,7	5,8	432,2	8,7	34,1	2,5	9,0	5,4	58,7	30+
				49,6							
61,0	5,0	9,4	2,7	170,8	2,2	60,1	4,9	9,4	2,7		
62,9	5,5	12,9	2,3	57,9	2,1	63,1	5,1	10,6	2,9		
61,2	5,1	9,9	2,6	228,7	2,2	60,8	5,0	9,7	2,7	(10,9)	13
				–							
				15,7	7,9	53,6	6,8	10,4	2,3		
				15,7	7,9	53,6	6,8	10,4	2,3	(100,0)	–
				–							
49,2	6,2	11,1	2,7	64,6	5,1	48,9	6,1	11,2	2,8	(0,1)	
49,2	6,2	11,1	2,7	64,6	5,1	48,9	6,1	11,2	2,8	(0,1)	15
				–							

BASE METALS

Base metal resources

The table details total inclusive base metal resources estimated as at 31 December 2013

				2013				
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3]	Grade			
					Zn %	Pb %	Cu %	Ag g/t
Base metals Northern Cape	Black Mountain Mining[4] Deeps mine[5, 6] (UG) (zinc, lead, copper and silver)	26	Measured	5,6	3,1	3,8	0,4	41,8
			Indicated	7,9	2,6	2,9	0,6	36,8
			Inferred					
			Total	13,5	2,8	3,3	0,5	38,9
	Swartberg mine[7] (UG) (zinc, lead, copper and silver)	26	Measured					
			Indicated	10,4	0,9	3,8	0,7	44,3
			Inferred	23,0	1,0	3,7	0,6	46,7
			Total	33,4	1,0	3,7	0,6	45,9
						Zn %		
	Gamsberg North mine (OC) (zinc)	26	Measured	43,2		7,1		
			Indicated	57,5		6,5		
			Inferred	53,3		5,4		
			Total	154,0		6,3		
	Gamsberg East[8] (project) (zinc)	26	Measured					
			Indicated					
			Inferred	32,3		9,8		
			Total	32,3		9,8		

%Zn – percent zinc, %Cu – percent copper, %Pb – percent lead, Ag g/t – grams per tonne silver.
Rounding-off of figures may cause computational discrepancies.
All changes more than 10% (significant) are explained.

1 *Mining method: OC – open-cut, UG – underground.*
2 *Figures are reported at 100% irrespective of percentage attributable to Exxaro.*
3 *The tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.*
4 *Estimates are received from Vedanta Resources plc as at 31 March 2013 and not audited by Exxaro.*
5 *Resources are quoted in addition to those converted to ore reserves.*
6 *Losses due to mining, sterilisation and economical assumptions are offset by a tonnage gain (2,5Mt) realised through underground drilling.*
7 *The decrease in tonnes is due to a higher economical cut-off used.*
8 *Reserves will be reported on the finalisation of a feasibility study in June 2014.*

2012

Tonnes (million)[3]	Grade				% change
	Zn %	Pb %	Cu %	Ag g/t	
7,2	2,7	3,6	0,3	40,4	
6,2	2,1	3,4	0,4	46,0	
4,8	2,1	2,3	0,7	20,6	
18,2	2,3	3,2	0,4	37,1	(25,9)
15,5	0,7	3,0	0,6	35,9	
30,1	0,7	2,8	0,7	32,2	
45,7	0,7	2,9	0,7	33,5	(27)
		Zn %			
43,2		7,1			
57,5		6,5			
53,3		5,4			
154,0		6,3			0,0
32,3		9,8			
32,3		9,8			0,0

BASE METALS

Base metal reserve

Table below details the total inclusive base metal reserves estimated as at 31 December 2013.

				2013				
Commodity	Operation[1]	% attributable to Exxaro[2]	Reserve category	ROM (Mt)[3]	Grade			
	Black Mountain Mining				% Zn	% Pb	% Cu	Ag g/t
Base metals (zinc, lead, copper and silver)	Deeps[5] (UG)	26	Proved	3,3	3,2	4,0	0,4	42,9
			Probable	7,2	2,7	2,5	0,7	30,2
			Total	10,4	2,9	3,0	0,6	34,1
			Inferred resources in LoMP[4]	–				

%Zn – percent zinc, %Cu – percent copper, %Pb – percent lead, Ag g/t – grams per tonne silver.

Rounding-off of figures may cause computational discrepancies.

All changes more than 10% (significant) are explained.

1 *Mining method: OC – open-cut, UG – underground.*

2 *Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.*

3 *The tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.*

4 *Inferred Resources in life-of-mine plan (LoMP) refer to Inferred Resources considered for the life-of-mine plan.*

5 *Figures received from Vedanta Resources plc as at 31 March 2013 and not audited by Exxaro. Losses due to mining and economical assumptions (higher cut-off used) are offset by a tonnage gain (~4,2Mt) realised through underground drilling.*

2013										2012						
Contained metal				ROM (Mt)[3]	Grade					Contained metal				% change	Life-of-mine plan (LoMP) (years)	
zinc metal (x1 000t)	lead metal (x1 000t)	copper metal (x1 000t)	silver metal (x1 000t)		% Zn	% Pb	% Cu	Ag g/t		zinc metal (x1 000t)	lead metal (x1 000t)	copper metal (x1 000t)	silver metal (x1 000t)			
105,1	128,7	11,3	0,14	3,2	2,9	3,2	0,4	37,0		91,7	101,4	11,6	0,12			
192,2	181,6	48,4	0,22	4,2	2,1	2,4	0,4	41,9		89,9	100,4	17,2	0,18			
297,3	310,4	59,7	0,36	7,4	2,4	2,7	0,4	39,8		181,6	201,8	28,8	0,29	40,6	6	
				4,8												

IRON ORE

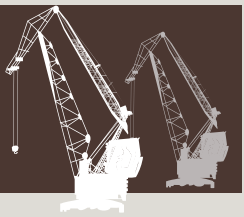
Iron ore resources

The table details total inclusive iron ore resources estimated as at 31 December 2013.

				2013		2012		
Commodity	Operation[1]	% attributable to Exxaro[2]	Resource category	Tonnes (million)[3]	Grade Fe %	Tonnes (million)[3]	Grade Fe %	% change
Iron ore Republic of the Congo (RoC)	Mayoko mine[4] (OC)	100	Measured	36	48,1	40	45,7	
			Indicated	293	35,1	245	34,3	
			Inferred	424	29,5	400	32,7	
			Total	753	33,6	685	34,0	9,8%

Fe % refers to in-situ Fe content, % Fe – percent iron.
Rounding-off of figures may cause computational discrepancies.
All changes more than 10% (significant) are explained.
1 Mining method: OC, lithological boundary used, no cut-off grade applied.
2 Figures are reported at 100% irrespective of percentage attributable to Exxaro and refer to 2013 only.
3 Tonnages are quoted in metric tonnes and million tonnes is abbreviated as Mt.
4 The net increase of ~67Mt is primarily the result of new drilling information and update of the resource model.

Governance



04

We strive to meet the legitimate interests and expectations of our stakeholders through actions that are socially and environmentally responsible.

APPLICATION OF KING III

Exxaro is committed to applying the principles and practices in the King report on governance for South Africa 2009 (King III). We have significantly expanded our King III application disclosure in this report for a complete view of our governance frameworks, policies, activities and performance.

As indicated in the 2012 integrated report, this year's report contains only the information on King III chapter 2 (boards and directors), with the remainder of the information available on our website or cross referenced elsewhere in this report.

King III assurance review

As promised in the 2012 report, Exxaro had an independent assurance review performed by Ithemba Governance and Statutory Solutions Proprietary Limited on our King III application, based on the Institute of Directors' assessment tool. Our overall score was AAA (the highest application).

READ MORE>
Governance section

Status	Category	Score
◉	Board composition	AAA
◉	Remuneration	AAA
◉	Governance office bearers	AAA
◉	Board role and duties	AAA
◉	Accountability	AAA
◉	Performance assessment	BB
◉	Board committees	AAA
◉	Group boards	AAA

AAA – highest application.
AA – high application.
BB – notable application.
B – moderate application.
C – application to be improved.
L – low application.

	Principle	Indicator	Comment
Ethical leadership and corporate citizenship			
1.1	The board should provide effective leadership based on an ethical foundation		Refer principle 2.3 under boards and directors
1.2	The board should ensure that the company is and is seen to be a responsible corporate citizen		Refer principle 2.4 under boards and directors
1.3	The board should ensure that the company's ethics are managed effectively		Refer principle 2.5 under boards and directors
Boards and directors			
2.1	The board should act as the focal point for and custodian of corporate governance		The board operates in accordance with a detailed charter, based on King III, and, inter alia, deals specifically with the roles, responsibilities and accountabilities of the board. It meets at least four times a year and corporate governance best practice, trends and developments are standing items on the agenda. In addition, the board is informed of governance matters through ongoing development interventions and sessions – refer principle 2.20 for further details. A detailed annual plan ensures the board executes all its responsibilities and complies with its charter. The board, as custodian of corporate governance, has made the office of the group company secretary responsible for implementing and monitoring compliance to associated best practices across the group. Our group company secretary, Carina Wessels, is a member of the executive committee (Exco); she reports directly to the CEO and has direct access to the chairman. She works closely with internal audit, the compliance and risk management functions, chief audit executive and our outsourced legal advisers to promote a culture of good governance and compliance in the group.
2.2	The board should appreciate that strategy, risk, performance and sustainability are inseparable		The board charter specifically emphasises the fact that the board acknowledges that strategy, risk, performance and sustainability are inseparable and the board gives effect to this philosophy by: • Contributing to and approving the strategy annually, at which point past performance, key risks and sustainability matters are also debated • Testing the strategy against the company's long-term vision, values, business principles, ie the capitals framework and stakeholder expectations • Satisfying itself that strategy and business plans do not result in risks that have not been thoroughly assessed and addressed by management and captured through the comprehensive enterprise risk management process • Identifying key performance and risk areas • Ensuring the strategy will produce sustainable outcomes • Considering sustainability as a business opportunity that guides strategy formulation. The discussion of our strategic objectives remains a method to further highlight the integration and importance of strategy, risk, performance and sustainability to stakeholders. The board and SRC committee also monitor key performance indicators (KPIs) for material issues, as well as a broader range of sustainability, risk and compliance KPIs and interrogate the results of trend reporting.
2.3	The board should provide effective leadership based on an ethical foundation		We are driven by our desire to always operate as a responsible corporate citizen and recognise that an ethical culture underpins corporate governance and contributes to our licence to operate. Exxaro and its board of directors are committed to ensuring ethical and sustainable business practices, guided by our values. Our values are captured in our ethics and related policies, which are approved by the social and ethics committee on behalf of the board.

Applied.

	Principle	Indicator	Comment
2.4	The board should ensure that the company is and is seen to be a responsible corporate citizen		The board and management subscribe to the philosophy that corporate governance – built on an ethical and values-based foundation that considers the expectations of all stakeholders – permeates all business activities and enables us to achieve our short– and medium-term strategic objectives, while contributing to reaching Exxaro's vision. The board provides strategic guidance to Exxaro and ensures that all decisions consider the immediate and long-term impact these have on the environment, the communities in which we operate, internal and external stakeholders and business sustainability in general. Individual directors are very aware of their duties and adherence to these, as well as to the principles of responsibility, accountability, fairness and transparency, which are tested through the annual board evaluation process – refer principle 2.22 under boards and directors for more information. The board supports the group's brand and communications strategy which strives to effectively communicate its corporate citizenship. During the reporting period, R57 million (2012: R50 million) was spent through the chairman's fund and foundation on social and labour plans, uplifting and supporting the communities in which we operate, as well as charitable projects and initiatives. Refer principle 2.11 for more information on stakeholder engagement. In 2013, the group received several awards, detailed on page 36. Exxaro has a board-approved political donations policy, which acknowledges that the primary purpose of these donations is to strengthen and consolidate democracy by ensuring political parties are able to function effectively. Sustaining a number of political parties that reflect a variety of political views and opinions is necessary to consolidate democratic transformation in South Africa. The company believes the principle of multiparty democracy, as contained in the founding provisions of the Constitution of the Republic of South Africa 1996, deserves support by corporate South Africa. In support of the 2014 elections, the company made the following political donations: • African National Congress: R10 million • Democratic Alliance: R2,6 million • The Congress of the People: R1 million • Inkatha Freedom Party: R1 million • Freedom Front Plus: R500 000 • United Democratic Movement: R500 000.
2.5	The board should ensure that the company's ethics are managed effectively		Exxaro remains committed to the highest standards of honesty, integrity and fairness. Ethics processes and policies are managed either by the general manager: governance, risk and compliance or the group company secretary. Established policies, on which employees are regularly trained and which are frequently reviewed, include: • Code of ethics • Whistleblowing • Conflicts of interest • Fraud investigation • Fraud prevention • Fraud response • Gifts and benefits from suppliers. Refer the social and ethics committee report for more information.

Applied.

	Principle	Indicator	Comment
2.6	The board should ensure the company has an effective and independent audit committee Section 3.84(d) of the Listings Requirements		Shareholders elect members of the audit committee, which consists only of independent non-executive directors, annually. The committee operates under detailed terms of reference, reviewed and approved by the board annually. The committee meets at least four times a year and meets with internal and external auditors independently of management at the first and third meetings of the year, to align with the review of the annual and interim financial statements. Refer the audit committee report and chapter 3 on audit committees for more information (web).
2.7	The board should be responsible for the governance of risk		Although the board has delegated responsibility for the enterprise risk management framework and executing risk management initiatives and interventions to the SRC committee and management respectively, it retains accountability for risk governance, as expressly indicated in the board charter. The enterprise risk management framework, which considers the interrelationship between strategy, risk, performance and sustainability, guides the approach and was approved by the board in November 2011. Refer the risk management section for more information on the framework and operational process. Detailed risk reporting is presented to the SRC committee at least bi-annually and the committee reports verbally and via committee minutes to the board at each meeting. Risks are also discussed in detail during the annual board strategy session. Based on this information, as well as the annual internal audit review of the effectiveness of the risk management process, the board is comfortable with the efficacy and effectiveness of the enterprise risk management system and process. Refer chapter 4 on the governance of risk for more information (web).
2.8	The board should be responsible for information technology (IT) governance		As reported in 2012, the board initially retained accountability for IT governance. An information management steering committee was established to assist the board in discharging its responsibilities on the effective and efficient management of IT resources and the integrity of information to achieve corporate objectives. In August 2013, detailed information was again presented to the board, when it was decided to delegate this responsibility to the audit committee. The board-approved information and communications technology governance framework remains in force and future reporting to the audit committee will occur in terms of this framework. The independent external auditors, as part of their annual audit, provide assurance on, inter alia, the effectiveness of IT internal controls. In addition, assurance activities performed by our independent internal auditors showed significant improvement in IT governance and controls from 2012 to 2013. Refer chapter 5 on the governance of IT for more information (web).

Applied.

	Principle	Indicator	Comment
2.9	The board should ensure the company complies with all applicable laws and considers adherence to non-binding rules, codes and standards		The board has adopted a compliance policy that sets out our compliance framework, which is in line with the standards of the Compliance Institute of South Africa. The compliance process is fully integrated in the enterprise risk management process. This ensures compliance risks are addressed with the same rigour as other categories of risk. The SRC committee is charged, under its terms of reference, to review the compliance framework, process and all compliance risks as part of the enterprise risk management process. The risk impact matrix, adopted by the board, specifically refers to compliance impacts that would prevent Exxaro from achieving its strategic objectives. To ensure the best overall risk coverage, standardisation and discharging the accountability of risk owners, the implementation of all mitigation techniques is coordinated centrally. Our combined assurance process is risk-based and, in 2013, specific emphasis was placed on assurance activities covering our most important compliance controls relating to 'licence to operate'. The following compliance assurance activities have been concluded and findings reported: • Compliance to mining charter, issued in terms of the Mineral and Petroleum Resources Development Act No 28 of 2002 (MPRDA) • Compliance to social and labour plans, which form part of every mining right • Compliance to environmental legislation including MPRDA, National Water Act No 36 of 1998 and National Environmental Management Act No 107 of 1998. Compliance KPIs, and the overall efficacy of the process, are reported to the SRC committee which, in turn, reports to the board verbally and by submitting minutes at each of its meetings. Extensive compliance training was conducted at strategic, tactical and operational level during the year, covering the following topics: • MPRDA Amendment Bill 2013 • Protection of Personal Information Act No 4 of 2013 • Compliance reporting requirements in terms of all licence-to-operate conditions. In addition to management training, the board receives legislative and best-practice updates at each meeting, as well as during the bi-annual governance session – refer principle 2.20 under boards and directors for more information. Compliance is not only a legal imperative, but a moral and ethical imperative. Therefore we have specifically decided to implement many of the best practices (based on legislation and non-binding rules, codes and standards) applicable in South Africa to our project in the Republic of the Congo, where such legislation does not necessarily exist and where we do not have a legal obligation to do so. The company received no material fines or penalties for non-compliance in 2013. Refer chapter 6 on compliance with laws, rules, codes and standards for more information (web).
2.10	The board should ensure there is an effective risk-based internal audit		The internal audit function is outsourced to Ernst & Young (EY). Its responsibilities are set out in an internal audit charter approved by the audit committee and reviewed annually. The charter, inter alia, entrenches the risk-based audit approach, reporting lines to the chief audit executive, unrestricted access to the information and resources of the company, chairmen of the audit committee and board, as well as adherence to the standards for the professional practice of internal auditing and the code of ethics of the Institute of Internal Auditors. EY liaises regularly with the general manager: governance, risk and compliance, who is also the chief audit executive, and discusses the risk profile of the group and those of its business units to ensure a link between internal audit activities and risk profiles. Refer chapter 7 on internal audit for more information (web).

Applied.

	Principle	Indicator	Comment
2.11	The board should appreciate that stakeholders' perceptions affect the company's reputation		The board keenly understands the link between stakeholder perceptions and Exxaro's reputation. Stakeholder engagement is therefore a critical part of our business as it influences both stakeholder perceptions and our reputation. Stakeholder relations can be affected by several of Exxaro's identified top risks. Our stakeholders set the context within which we operate and we therefore strive for effective stakeholder engagement to operate a sustainable business. The aim is to promote two-way engagement so that Exxaro and stakeholders understand one another. From 2013, the company has focused more closely on stakeholder engagement, including the appointment of an executive responsible for coordinating this function. To date, Exxaro has engaged with its full range of stakeholders. To ensure best practice and consistency, in 2014, we intend to adopt the AccountAbility 1000SES stakeholder engagement standard – the acknowledged benchmark for quality engagement – which will guide the process of mapping stakeholders, linking material issues to relevant stakeholders, and more. Refer the section on stakeholders and chapter 8 on governing stakeholder relationships for more information (web).
2.12	The board should ensure the integrity of the company's integrated report		Functional owners are accountable to ensure the integrity of data and general information in the integrated report under the guidance and coordination of an editorial committee. PricewaterhouseCoopers Incorporated (PwC) assures key performance indicators and summarised financial information disclosed in the integrated report. The board reviews and finally approves the content of the integrated report prior to publication and circulation. Refer chapter 9 on integrated reporting and disclosure for more information (web).
2.13	The board should report on the effectiveness of the company's system of internal controls		As noted in the audit committee report, there has been a marked improvement in the pervasive control environment since 2012 after challenges with implementing a new operating model and associated technological enabler. The independent external auditors were able to rely on a number of processes due to the improved control environment while still applying appropriate substantive procedures in instances where control reliance was not justified to mitigate potential risks. The chief audit executive and audit committee continue to regularly monitor progress and maturity improvement in the internal control environment. The board is satisfied with progress to date and mitigating actions, and will continue to receive feedback on progress from the audit committee.
2.14	The board and its directors should act in the best interests of the company		The board strictly adheres to its fiduciary duties and duty of care and skill codified in the Companies Act. These are mirrored in the conflicts of interest policy, which also applies to directors. Directors are permitted to obtain independent advice in connection with their duties and liabilities. Conflicts are declared at each board meeting and conservatively interpreted: all conflicts (even those broader than the definition of personal financial interests) are treated in line with section 75 of the Companies Act. The securities dealing and information policy, which includes the process required for dealing in securities by directors, was updated in 2013.

Applied.

	Principle	Indicator	Comment
2.15	The board should consider business rescue proceedings or other turnaround mechanisms as soon as the company is financially distressed as defined in the Act		The audit committee reviews financial information in detail and recommends specific action to the board if required. The committee regularly reviews the solvency and liquidity of the group, as well as the going-concern statement. In addition, when considering and reviewing the provision of financial assistance to related and inter-related parties, as well as considering dividends payable, the board considers the solvency and liquidity of the group. During the year, the company met the solvency and liquidity test each time it was performed.
2.16	The board should elect a chairman who is an independent non-executive director. The CEO should not also fulfil the role of chairman of the board		The roles of the CEO and chairman are separate; Dr Len Konar is an independent non-executive director and the CEO is Sipho Nkosi. Based on an evaluation of his performance and ability to add value, the chairman is re-elected by the board annually. The role and responsibilities of the chairman are articulated in the board charter and further entrenched in the division of responsibilities policy.
2.17	The board should appoint the chief executive officer and establish a framework for delegation of authority		The board appointed Sipho Nkosi as CEO on 1 September 2007. His role and responsibilities are articulated in the board charter and further entrenched in the division of responsibilities policy. A detailed delegation of authority policy and framework indicate matters reserved for the board and those delegated to management. Remco provides input on senior management succession planning.
2.18	The board should comprise a balance of power, with a majority of non-executive directors. The majority of non-executive directors should be independent Sections 3.84(b), (f) and (g) of the Listings Requirements		In line with the recommendations of King III, Exxaro has a unitary board structure, comprising: • Eight independent non-executive directors • Three non-executive directors • Two executive directors. A new process was introduced in 2013 to assess the status of directors who were accordingly reclassified: all directors (other than those nominated by a shareholder with the clear and unambiguous ability to control or significantly influence management or the board, namely Messrs NB Mbazima, VZ Mntambo and Dr MF Randera) were required to complete a questionnaire based on the principles contained in King III and the Listings Requirements to assist Remco in assessing their independence. The group company secretary maintains a board skills and experience matrix to ensure breadth and depth of skills and experience to support and enable the company's vision and strategy: new board nominations are assessed against gaps identified in the matrix. One third of non-executive directors retire by rotation annually. The memorandum of incorporation does not restrict the board's ability to remove a director without shareholder approval.
2.19	Directors should be appointed through a formal process. Sections 3.84(a) and (e) of the Listings Requirements		In line with the board charter, Remco is responsible for identifying suitable candidates and vetting nominee directors to be proposed to shareholders for approval. Summarised résumés are included in the integrated report to assist shareholders in the election process. New directors receive a detailed letter of appointment and undergo induction as discussed in principle 2.20.

Applied.

	Principle	Indicator	Comment
2.20	The induction and ongoing training and development of directors should be conducted through formal processes		The formal board induction programme is managed by the group company secretary: new directors are informed of their duties and responsibilities, and information on the company is provided through extensive induction material, discussions and visits to material business units. All have access to key management members for information on Exxaro's operations. The formal ongoing directors' development programme involves two full-day sessions during the year, visits to key business units, and the opportunity to attend outsourced training interventions as required. Topics for the 2013 full-day sessions included: • An overview of the governance, risk and compliance journey, implementation status and successes, including a discussion on risk tolerance levels • Information and required action in terms of the Protection of Personal Information Bill 9 of 2009 • Feedback from an information management security assessment • Legal context and status of the mining charter and social and labour plans • Investor relations processes and principles • The failings of Barings Bank and related risk control lessons • Global trends in the mining industry • Transnet freight and rail operational plan • Amendments to the MPRDA • Directors' and officers' liability insurance overview. In addition to formal sessions, directors receive group and industry news articles daily, as well as regular analyst reports. During the year, R780 000 (2012: R1,2 million) was spent on director development and support activities, information sharing and corporate governance initiatives. The primary reason for the reduction related to the 2013 board assessment process being handled internally. Visits to operational businesses for all directors are part of the annual board programme and, due to its strategic importance, the 2013 visit was to the Mayoko project in the Republic of the Congo.
2.21	The board should be assisted by a competent, suitably qualified and experienced company secretary Sections 3.84(i) and (j) of the Listings Requirements		The board selects and appoints the group company secretary and recognises this person's pivotal role in entrenching good corporate governance. All directors have access to the advice and services of the group company secretary. The board has an established procedure for directors to obtain independent professional advice at the group's cost. The group company secretary assists directors, board committees and their members in obtaining professional advice. Carina Wessels was appointed group company secretary on 1 July 2011. As stipulated by the Listings Requirements, a detailed assessment was conducted by the board to consider and satisfy itself of the competence, qualifications and experience of the company secretary. This was performed by: • A review of her qualifications and experience: Carina holds LLB and LLM degrees, a certificate in advanced labour law, is an admitted advocate of the High Court of South Africa, has completed a programme for management development and is a fellow and past president of Chartered Secretaries Southern Africa (CSSA). In 2013 she was vice-president of the Corporate Secretaries International Association, a global federation of corporate secretaries representing 70 000 members worldwide, and on 1 January 2014 succeeded as president. She is a member of the Computershare issuer forum board, as well as the JSE company secretary forum. During the year, she delivered presentations at a number of local and international corporate governance conferences and exceeded her continuing professional development requirements stipulated by CSSA. • Completing an assessment detailing all the legislative and King III requirements by each director. This indicated that directors mostly strongly agreed that all requirements had been met, including competence, qualifications and experience requirements. She does not serve as a director of the board and the assessment confirmed her arm's-length relationship with the board.

Applied.

	Principle	Indicator	Comment
2.22	The evaluation of the board, its committees and the individual directors should be performed every year		Independent board evaluations are conducted every third year, with evaluations performed by the group company secretary during the other years. In 2013, evaluations of the board and committees were conducted by the group company secretary. Results achieved and areas requiring some improvement (average score of below 2,5) were: **Board:** 3,54 out of 4 • Mentorship programmes for inexperienced directors **Audit committee:** 3,57 out of 4 **Remuneration and nomination committee:** 3,39 out of 4 • Consideration of committee budget and business plan, key performance indicators and other factors determining its performance • Non-executive director fees not comprising a base fee and attendance fee per meeting • Lack of detailed long-term succession plan for directors – especially the risk to board composition from possible changes in 2016. **Social and ethics committee:** 3,34 out of 4 **SRC committee:** 3,4 out of 4 • Committee members are given and take the opportunity to meet separately without executives being present. Action will be taken in 2014 to address these areas of improvement. Our external auditors have performed certain agreed-upon procedures on our annual board evaluation process, and have reported their findings to the company.
2.23	The board should delegate certain functions to well-structured committees but without abdicating its own responsibilities Section 3.84(d) of the Listings Requirements		Board committees assist the board in executing its duties, powers and authorities. The board delegates to each committee the required authority to enable them to fulfil their respective functions through formal board-approved terms of reference, which are reviewed annually. Delegating authority to board committees or management does not mitigate or discharge the board and its directors of their duties and responsibilities. All committees consist of a majority of independent non-executive directors. The board has established the following committees: **Audit committee** Apart from the statutory duties of the audit committee as set out in the Companies Act, and the provisions of the Listings Requirements and King III, the ambit of this committee has been expanded to include financial risk management, financial compliance and aspects of integrated reporting. The purpose of the committee is to: • Examine and review the group's financial statements and report on interim and final results, the accompanying message to stakeholders and any other announcements on the company's results or other financial information to be made public • Oversee cooperation between internal and external auditors, and serve as a link between the board and these functions • Oversee the external audit function and approve audit fees • Evaluate the qualification, appropriateness, eligibility and independence of the external auditor • Approve the appointment of the internal auditors, the internal audit plan, charter and fees • Evaluate the scope and effectiveness of the internal audit function • Ensure effective internal financial controls are in place • Review the integrity of financial risk control systems and policies • Evaluate the competency of the finance director and finance function • Appoint the chief audit executive • Oversee the effectiveness of the combined assurance plan and outcome. More information appears in the audit committee report.

Applied.

	Principle	Indicator	Comment
2.23	The board should delegate certain functions to well-structured committees but without abdicating its own responsibilities. Section 3.84(d) of the Listings Requirements		**Remuneration and nomination committee (Remco)** The purpose of this committee is to: • Make recommendations on remuneration policies and practices, including the company's employee share schemes, for executive directors, senior management and employees • Review compliance with all statutory and best-practice requirements on labour and industrial relations management in collaboration with the SRC committee. Although this is a combined committee, a process is in place to ensure the following responsibilities for the nomination element are carried out: • Provide recommendations on the composition of the board and board committees, and ensure the board comprises individuals equipped to fulfil their role as directors of the company, aligned with the policy detailing procedures for appointments to the board • Provide comments and suggestions on committee structures of the board, committee operations, member qualifications and member appointment. More information appears in the remuneration report. The board chairman chairs the meeting when discussing nomination matters. **Sustainability, risk and compliance (SRC) committee** The purpose of the committee is to: • Provide oversight on three important aspects influencing strategy and the long-term viability of the company, being sustainability, risk and compliance • Oversee and coordinate all risk and compliance activities (although the audit committee remains accountable for financial risk and compliance) • Review significant SRC incidents, performance indicators and compliance • Ensure the company reports annually through an integrated report on relevant SRC issues. **Social and ethics committee** The purpose of the committee is to monitor the group's activities, taking account of relevant legislation, other legal requirements or prevailing codes of best practice on: • Social and economic development • Good corporate citizenship • The environment, health and public safety, including the impact of the group's activities and its products or services • Consumer relationships, including the group's advertising, public relations and compliance with consumer protection laws • Labour and employment • The effective management of the group's ethics processes. More information appears in the social and ethics committee report. Apart from the social and ethics committee which meets bi-annually, all other board committees meet quarterly.

Applied.

	Principle	Indicator	Comment
2.23	The board should delegate certain functions to well-structured committees but without abdicating its own responsibilities. Section 3.84(d) of the Listings Requirements		The following key management committees support the board and chief executive officer (CEO) in the day-to-day management of the company (more details appear on the web): **Executive committee (Exco)** Exco is constituted to assist the CEO in managing the group. It assists the CEO in guiding and controlling the overall direction of the company and acts as a medium of communication and coordination between business units, corporate office, subsidiary companies and the board. All Exco members are prescribed officers in terms of the Companies Act. The committee formally meets around nine times each year and, informally, each week. **Information management (IM) steering committee** The IM steering committee is constituted as a management committee to assist the audit committee in executing its responsibility for IT governance. The committee meets four times a year. **Investment review committee** The investment review committee is constituted as a management committee to assist the CEO with the investment and capital expenditure management processes of the group. The committee meets around nine times a year. **Offshore review committee** The offshore review committee is constituted as a management committee to assist the CEO and finance director in managing Exxaro's portfolio of offshore investments and interests. The committee meets at least twice a year. **Portfolio review committee** The portfolio review committee is constituted as a strategy management committee to assist the CEO with portfolio management. The committee meets around nine times a year.
2.24	A governance framework should be agreed between the group and its subsidiary boards		All Exxaro subsidiaries adopt and comply with the detailed delegation of authority framework and policy, which stipulates the governance framework.
2.25	Companies should remunerate directors and executives fairly and responsibly		Refer the extensive remuneration report for full details.
2.26	Companies should disclose the remuneration of each individual director and certain senior executives		Refer the extensive remuneration report for full details.
2.27	Shareholders should approve the company's remuneration policy		At the 2013 annual general meeting, 93% of shareholders voted in favour of the remuneration policy by means of a non-binding advisory vote. This resolution has again been incorporated into the notice for the 2014 annual general meeting.

Applied.

	Principle	Indicator	Comment
Audit committees			
3.1	The board should ensure that the company has an effective and independent audit committee.		Refer principle 2.6 under boards and directors.
3.2	Audit committee members should be suitably skilled and experienced independent non-executive directors.		All four members are independent non-executive directors and the chairman of the board is not a committee member. The committee meets the academic qualifications and experience requirements stipulated in regulation 42 of the Companies Regulations, 2011. The chairman, Mr J van Rooyen, is a chartered accountant. Changes in international financial reporting standards and related developments are submitted to the committee at each meeting. As is the case with all directors, the committee is entitled to consult applicable specialists as required.
3.3	The audit committee should be chaired by an independent non-executive director.		The chairman, Jeff van Rooyen, is an independent non-executive director and is elected by the board annually. He is always present at the annual general meeting of the company.
3.4	The audit committee should oversee integrated reporting.		As detailed in its terms of reference, the board has specifically assigned this responsibility to the committee. The committee reviews the report, including any summarised information, prior to submission to the board. The committee functions as a reporting oversight body in support of the SRC committee, which has a wider mandate to govern company performance on risk and sustainability in general. PwC provides assurance over key performance indicators disclosed in the integrated report, as well as on summarised financial information. The company issues reviewed interim financial statements.
3.5	The audit committee should ensure that a combined assurance model is applied to provide a coordinated approach to all assurance activities.		The combined assurance framework, with its underlying model, was approved in 2012. Significant progress was made in 2013 to ensure better coordination of assurance activities. A combined assurance forum was established, which forum consists of the chief audit executive, acting as chairman, and relevant functional representatives, as well as invitees from the major assurance service providers in the group. The forum ensures that assurance activities are performed in the execution of a specific regulatory requirement or can be linked to a material risk exposure. A combined assurance map, linking assurance to risks, assist in this process. To ensure all findings are tracked, reported and closed out, Exxaro uses a single assurance tracking platform, called ITM. This allows management a single point of entry to manage assurance findings, regardless of which service provider conducted the audit or review. Refer the section on combined assurance for more information.
3.6	The audit committee should satisfy itself of the expertise, resources and experience of the company's finance function. Section 3.84(h) of the Listings Requirements		The committee reviewed and satisfied itself of the expertise, resources and experience of the company's finance function and the competence of the finance director at its meeting on 3 March 2014. The group company secretary facilitated the completion of a questionnaire within the finance department to enable the committee's review: the majority of responses were positive with respect to the function and the finance director.

Applied.

	Principle	Indicator	Comment
3.7	The audit committee should be responsible for overseeing internal audit.		The audit committee is responsible for the appointment of the chief audit executive and he has unfettered access to the chairman of the committee and the chairman of the board. The audit committee approves the risk-based internal audit plan annually. The independent internal auditor submits detailed reports to each meeting, the chairman meets independently with internal audit and the committee meets with the internal and external auditors independently of management at the first and third meetings of the year, to align with the review of the annual and interim financial statements.
3.8	The audit committee should be an integral component of the risk management process.		Although the coordination of enterprise risk management has been delegated to the SRC committee, the audit committee remains involved to express a view on the system of internal control and risk management, the assurance provided on material risks, and specifically retains accountability for financial and information technology risk.
3.9	The audit committee is responsible for recommending the appointment of the external auditor and overseeing the external audit process.		At the first committee meeting of each year, the committee assesses the suitability of the independent external auditor for re-appointment, based on the criteria stipulated in the Companies Act, and the Listings Requirements and makes such recommendation to the shareholders at the annual general meeting. The committee approves the terms of engagement and remuneration of the independent external auditor and also assesses the quality and effectiveness of the external audit process. The independent external auditor submits detailed reports to each meeting, which would include any reportable irregularities. As noted in the audit committee report, the company has an approved policy to regulate the use of non-audit services by the independent auditor. The policy differentiates between permitted and prohibited non-audit services and specifies a monetary threshold by which the committee considers approvals. The chairman meets independently with external audit and the committee meets with internal and external auditors independently of management at the first and third meetings of the year, to align with the review of the annual and interim financial statements.
3.10	The audit committee should report to the board and shareholders on how it has discharged its duties.		As discussed under principle 2.23 under board and directors, all board committees report to the board through verbal feedback and the submission of minutes at each board meeting. An audit committee report is included in the integrated report and the audit committee chairman is present at the annual general meeting to respond to any questions.
The governance of risk			
4.1	The board should be responsible for the governance of risk.		Refer principle 2.7 under boards and directors.
4.2	The board should determine the levels of risk tolerance.		This area received significant focus in 2013, with detailed sessions facilitated by an expert external consultant. Exco has considered appropriate tolerance levels and will shortly recommend their approval to the board. These tolerance levels will be incorporated in the strategic focus areas to ensure that neither too little nor too much risk is taken in pursuing Exxaro's strategy. Despite this still being in process, the board intuitively operates according to risk tolerance levels by, for example, not having approved any additional capital expenditure for the Mayoko project above an acceptable threshold prior to concluding the mining convention and related agreements or by setting an LTIFR or zero harm tolerance level in respect of safety. This intuitive ability stems from the breadth and depth of the board's skills and experience.
4.3	The risk committee or audit committee should assist the board in carrying out its risk responsibilities.		The board has formally delegated the responsibility for risk management to the SRC committee, with assistance from the audit committee.

Applied.
Partially applied.

	Principle	Indicator	Comment
4.4	The board should delegate to management the responsibility to design, implement and monitor the risk management plan.		Execution of risk management has been delegated to the governance, risk and compliance department. Refer principle 2.7 under boards and directors on the SRC process. The SRC committee consists of five independent non-executive directors. It meets four times per annum and its performance forms part of the annual board and committee evaluation. Risk champions at all business units and service functions oversee entrenchment of the process. This includes ensuring risk owners continuously identify, assess, mitigate and manage risks within the existing and ever-changing risk profile of their operating environment. In addition, risk champions coordinate risk management forums at business units and service functions which, in turn, escalate risks against defined parameters to similar forums at a consolidated commodity and group level. The risk and compliance manager is responsible for reporting to the SRC committee and to the audit committee on financial and information technology risks. Exxaro operates under a world-class information management system which ensures true transparency and accountability in managing risks and reporting on the effectiveness of mitigation techniques to ensure strategic objectives are achieved.
4.5	The board should ensure that risk assessments are performed on a continual basis.		Formal risk assessments are conducted at least quarterly at all business units and service functions in line with the detailed enterprise risk management framework. Refer principle 4.4 and the risk and compliance section in the integrated report.
4.6	The board should ensure that frameworks and methodologies are implemented to increase the probability of anticipating unpredictable risks.		The enterprise risk management framework, as far as reasonably possible, includes processes to prompt the identification of unpredictable risks, including events with high impacts and low probability that would cause severe business disruptions. Exco and the board have access to risk reports compiled by thought leaders in the area of risk management and mining, and these are incorporated in the strategic risk register of the group. These risks are linked to specific strategic objectives and risk owners on executive level, coupled with relevant risk strategies to ensure flexibility of the strategy in the changing environment within which Exxaro operates.
4.7	The board should ensure that management considers and implements appropriate risk responses.		Although the board has delegated the responsibility for risk management, it reviews the top enterprise risks, including the risk responses, annually, which would include a review of the responses to exploit potential upside risk.
4.8	The board should ensure continual risk monitoring by management.		The risk profile of every business unit is discussed at its monthly meetings. Operational risks are reported quarterly to Exco for noting. Commodity and regional risk profiles are also compiled, taking into account the strategic objectives of the commodity and region.
4.9	The board should receive assurance regarding the effectiveness of the risk management process.		The risk and compliance manager, through reporting to the SRC committee, assures the board that risk management is being entrenched in the operational activities of the company. In addition, the independent internal auditor provides assurance to the board on the effectiveness of the risk management process annually.
4.10	The board should ensure there are processes in place enabling complete, timely, relevant, accurate and accessible risk disclosure to stakeholders.		The top enterprise risks are disclosed in the integrated report. Significant issues are disclosed in media reports and on JSE Securities Exchange News Service (SENS) throughout the year, as deemed appropriate. Internal audit has reported to the audit committee on the effectiveness of the risk management process and the committee in turn expressed a view on the process on behalf of the board.

Applied.

	Principle	Indicator	Comment
The governance of information technology			
5.1	The board should be responsible for information technology (IT) governance.		Refer principle 2.8 under boards and directors.
5.2	IT should be aligned with the performance and sustainability objectives of the company.		The IT strategy has as its overarching objective the alignment and integration of all underlying systems to support truly integrated strategy, governance, risk, compliance, performance and sustainability. Achievement of these aims is monitored by the IM steering committee. Areas of non-alignment received attention in 2013, but actions will continue in 2014.
5.3	The board should delegate to management the responsibility for the implementation of an IT governance framework.		The implementation of the governance framework has been delegated to the information management department, with oversight by the IM steering committee. Ian Brown is the chief information officer and reports to the audit committee and board on IT matters in line with annual plans or as specifically required.
5.4	The board should monitor and evaluate significant IT investments and expenditure.		Information and communication technology acquisitions fall within the same capital approval parameters as other projects and would thus, based on value, be elevated to the board. The IM steering committee vets potential projects and initiatives prior to decisions being taken or these being recommended to the investment review committee and subsequent levels, ie the board, in line with the capital expenditure parameters. Please note that a number of ICT projects are undertaken due to strategic fit and a quantifiable return on investment may not be clearly visible. Assurance activities performed by our independent internal auditors showed significant improvement in governance and controls from 2012 to 2013.
5.5	IT should form an integral part of the company's risk management.		The enterprise risk management framework includes assessment and management of all ICT risks, and the risk impact matrix makes specific reference to IT related impacts, which from part of any risk assessment. Exxaro operates under a world-class information management system which ensures true transparency and accountability in managing risks and reporting on the effectiveness of mitigation techniques to ensure strategic objectives are achieved. A disaster recovery policy and procedures are in place and tests are performed monthly: all tests in 2013 were successful. The IM steering committee is responsible for monitoring and ensuring compliance with ICT-related legislation and best practice. The approved ICT governance framework is based on COBIT.
5.6	The board should ensure that information assets are managed effectively.		All electronic information assets are managed effectively. Employee access to relevant information is strictly controlled through an effective authorisation process. All electronic information is backed-up daily in accordance with a backup policy and procedures and stored off-site. A detailed security framework, based on international best practice and which will be aligned with the ICT framework, is currently being compiled. The company is preparing itself for the impending commencement date of the Protection of Personal Information Act 4 of 2013.
5.7	A risk committee and audit committee should assist the board in carrying out its IT responsibilities.		The audit committee, through reporting by the IM steering committee, considers ICT risks and mitigating actions, which are managed in line with the overall enterprise risk management framework. A number of IT systems are used to improve audit efficiency, inter alia, as discussed in principle 3.5 under audit committees, Exxaro uses a single assurance tracking platform, called ITM. This allows management a single point of entry to manage assurance findings, regardless of the service provider that conducted the audit or review.

Applied.
Partially applied.

	Principle	Indicator	Comment
Compliance with laws, rules, codes and standards			
6.1	The board should ensure that the company complies with applicable laws and considers adherence to non-binding rules, codes and standards.		Refer principle 2.9 under boards and directors.
6.2	The board and each individual director should have a working understanding of the effect of the applicable laws, rules, codes and standards on the company and its business.		Information on laws, rules, codes and standards are shared with the directors regularly through documentation and governance sessions – refer principle 2.20 under boards and directors.
6.3	Compliance risk should form an integral part of the company's risk management process.		Refer principle 2.9 under boards and directors and 6.4 under compliance with laws, rules, codes and standards.
6.4	The board should delegate to management the implementation of an effective compliance framework and processes.		Implementation has been delegated to the governance, risk and compliance department. All management teams at business units have received training on the enterprise risk management process, which includes compliance risk management. Compliance risks form part of the risk registers of all operations, including those of regional management, Exco and the board. Combined assurance mapping has also been completed on all material compliance risks at every business unit and results form part of their management action plans, as well as the risk-based internal audit plan. Compliance forms part of the ethics and related policies. Compliance key performance indicators are reported to the SRC committee quarterly. During the reporting period there were no instances of material non-compliance by the company or its directors. The risk and compliance manager is Saret van Loggerenberg and her qualifications include a BLC, LLB and LLM (Eur). She is also a CSSA graduate. She is supported by a team of three members and reports to the general manager: governance, risk and compliance who is a standing invitee on the Exco, SRC, audit and social and ethics committees.
Internal audit			
7.1	The board should ensure that there is an effective risk-based internal audit.		Refer principle 2.10 under boards and directors.
7.2	Internal audit should follow a risk-based approach to its plan.		Refer principle 2.10 under boards and directors.

Applied.

	Principle	Indicator	Comment
7.3	Internal audit should provide a written assessment of the effectiveness of the company's system of internal control and risk management.		Refer principle 2.13 under boards and directors.
7.4	The audit committee should be responsible for overseeing internal audit.		Refer principle 3.7 under audit committees.
7.5	Internal audit should be strategically positioned to achieve its objectives.		Internal audit reports to the chief audit executive, who is a standing invitee to the Exco, audit, SRC and social and ethics committees.
Governing stakeholder relationships			
8.1	The board should appreciate that stakeholders' perceptions affect a company's reputation.		Refer principle 2.11 under boards and directors.
8.2	The board should delegate to management to proactively deal with stakeholder relationships.		The primary management of stakeholders has been delegated to the executive head: strategy and corporate affairs, with support from all executive committee members and management in general. To date the company has actively engaged with its range of stakeholders, however, to bring best practice and consistency to this arena, in 2014 it intends to adopt the AccountAbility 1000SES stakeholder engagement standard which serves as a benchmark for good quality engagement. The standard uses the principles of inclusivity, materiality and responsiveness and guides the process of mapping stakeholders, linking material issues to relevant stakeholders, among other items. A stakeholder engagement policy and framework with supporting engagement plans have been drafted and will be finalised following the adoption of AA1000SES. The group strives to engage openly and proactively with stakeholders, and issues and requests from stakeholders are responded to as part of ongoing engagement programmes implemented across the group. Details of stakeholder interactions are contained in the stakeholders section of the integrated report.
8.3	The board should strive to achieve the appropriate balance between its various stakeholder groupings, in the best interests of the company.		The group has identified its stakeholder groups (refer section on stakeholders in the integrated report) and appropriate management from the various functions in the group are assigned to manage relationships with stakeholders. The intention is to promote two-way engagement so that the group and stakeholders understand one another, and a communication strategy provides support and offers opportunities in this regard.

Applied.

	Principle	Indicator	Comment
8.4	Companies should ensure equitable treatment of shareholders.		Exxaro fully complies with the Listings Requirements on disclosure of information to shareholders. A detailed securities-dealing and information policy sets out the very strict rules around material price-sensitive information and its disclosure. Any material price-sensitive information and other relevant information is published on SENS in accordance with the Listings Requirements. All queries from shareholders are either handled by the group company secretary or investor relations and only information available in the public domain is disclosed.
8.5	Transparent and effective communication with stakeholders is essential for building and maintaining their trust and confidence.		The board supports the group's communications strategy, which is guided by principles including being approachable, genuine and principled. The group strives for honest and clear communication and uses various communication channels such as media relations, advertising, integrated reporting and its website to reach stakeholders timeously and effectively. The following requests were received in terms of the Promotion of Access to Information Act, 2000 and handled as follows: • Follow-up requests from a request about Leeuwpan's water licence originally received in 2012 – all requested information was provided. • Requests for the Grootegeluk and Leeuwpan mines' social and labour plans, as well as the annual social and labour plan compliance reports – these requests were refused as the documentation did not detail the specific purpose for the request, did not provide the context of research to be conducted and did not specify the exact person or community on whose behalf or for whose benefit the information was requested. • A request in relation to Cennergi Proprietary Limited, which was submitted to its information officer for resolution.
8.6	The board should ensure that disputes are resolved as effectively, efficiently and expeditiously as possible.		Dispute resolution clauses are contained in all Exxaro's general contract conditions and based on the principle of internal resolution between the parties as a first means of addressing disputes, after which arbitration would be used if the matter remains unresolved. The board considers serious disputes and considers the company's position and best legal recourse.
Integrated reporting and disclosure			
9.1	The board should ensure the integrity of the company's integrated report.		Refer principle 2.12 under boards and directors.
9.2	Sustainability reporting and disclosure should be integrated with the company's financial reporting.		Although the process of integrated reporting is still maturing, the company has integrated its sustainability and financial reporting. Continuous efforts will be made to incorporate reporting best practice and improve the level of integration. The board has included commentary on the company's financial results and going-concern status in the annual financial statements.
9.3	Sustainability reporting and disclosure should be independently assured.		Refer principle 3.4 under audit committees.

Applied.

GLOSSARY

Indicator	Definition
Number of fatalities	A fatality includes all work-related incidents that resulted in a fatality
Number of lost-time injuries (LTI) - employees and contractors	An LTI is a work-related injury resulting in the employee/contractor being unable to attend work or to perform the full duties of his/her regular work, on the next calendar day. Restricted work cases are therefore counted as LTIs
Lost-time injury frequency rate (LTIFR)	Rate per 200 000 hours of LTIs due to all causes for both employees and contractors
Total number of people participating in HIV/Aids voluntary counselling and testing (VCT)	Total number of employees who have received counselling and have been tested for HIV
Number of employees tested for HIV (prevalence)	Number of employees who have tested positive for HIV/number of people participating in the ACT (awareness, counselling and testing) programme
Number of reported and accepted cases of pneumoconiosis	Number of reported and accepted cases of pneumoconiosis during the reporting period. An occurrence of pneumoconiosis which is reported to MBOD (Medical Bureau for Occupational Disease) and DMR
Number of reported and accepted cases of occupational tuberculosis (TB)	Number of reported and accepted cases of occupational tuberculosis during the reporting period. An occurrence of occupational TB which is reported to MBOD and DMR
Number of reported and accepted cases of noise-induced hearing loss (NIHL)	Number of reported and accepted cases of NIHL during the reporting period. An occurrence of NIHL which is reported to RMA (Rand Mutual Assurance) and DMR
Total diesel used (GJ)	Direct energy consumption by diesel used
Total electricity used (GJ)	Direct energy consumption by electricity used
Electricity efficiency (kWh/tonne)	Total electricity used, measured in kilowatt-hours (kWh), divided by total tonnes mined (TTM) measured in metric tonnes
Scope 1 emissions (CO_2 tonnes)	Total scope 1 emissions include total litres of diesel oil used for primary production activities, fugitive emissions from mining activities and limestone emissions created through mining activities converted to tonnes CO_2e
Scope 2 emissions (CO_2 tonnes)	Total electricity purchased converted to tonnes CO_2e
Scope 3 emissions (CO_2 tonnes)	Total scope 3 emissions from use of sold products, upstream transportation and distribution, purchased goods and services, employee commuting, business travel and waste generated in operations
Number of integrated water use licence (IWUL) applications approved	An approved IWUL is a licence (document) that has been signed by the Department of Water Affairs director-general acting under authority of the powers delegated to him/her by the Minister of Water and Environmental Affairs. An approved/signed licence authorises water uses applied for under section 21 of the National Water Act, 1998
Number of integrated water use license (IWUL) pending	An integrated water use licence application lodged with the Department of Water Affairs (DWA) for processing and awaiting decision by the department
Number of level 2 and 3 environmental incidents	• Level 2 – number of reportable environmental incidents with reversible on-site and immediate surrounding impacts, will involve longer than 48hrs clean-up activities and a negative impact on shareholder value of R50 000-500 000 worth of damage has definitely occurred • Level 3 – number of reportable environmental incidents with irreversible on-site, immediate and remote areas impacts, will involve long-term clean-up activities and a negative impact on shareholder value of >R500 001 worth of damage has definitely occurred

Indicator	Definition
Total potable water use	Total invoiced potable water (municipal and Eskom) and metered potable water (Grootegeluk only) (m^3)
Environmental fallout dust: number of sites (single bucket points)	The number of sites where fallout dust is monitored with one bucket Fallout dust includes any airborne matter composed of particles small enough to pass through a 1mm screen and large enough to settle by virtue of their weight into the container from the ambient air
Environmental fallout dust: number of months exceeding 600mg/m^2/day	The number of sites where a value of 600mg/m^2/day, measured with the use of a single bucket, was exceeded for that reporting month only
Environmental fallout dust: number of months exceeding 1 200mg/m^2/day	The number of sites where a value of 1 200mg/m^2/day, measured with a single bucket, was exceeded for that reporting month only
Disturbances versus land rehabilitation (hectares)	Land disturbed (unit of measurement: hectare): footprint of disturbed area. Includes all buildings, roads and mining area that need to be rehabilitated according to EMPR Land final rehabilitated (unit of measurement: hectare): area rehabilitated up to required standard of EMPR and final land use plan, only maintenance and monitoring needed
Hazardous waste to landfill	Hazardous waste disposed of to legal landfill during the reporting period
Mining charter: procurement spend from BEE entities (R value per capital goods, consumables and services)	The support of BEE (black economic empowerment) suppliers in accordance with the Exxaro preferential procurement policy and mining charter requirements for the period under review
Mining charter: employment equity	Employment equity as per mining charter requirements for the period under review

COMPARABILITY OF RESULTS

Performance analysis comments are based on a comparison of the summarised group annual financial statements as well as unreviewed production and sales volumes information for the years ended 31 December 2013 and 2012, respectively. These results are not comparable due to:

- The net pre-tax impairment of the carrying value of property, plant and equipment at New Clydesdale Colliery (NCC) of R143 million in 2013;
- R98 million partial impairment reversal of the carrying value of property, plant and equipment at Zincor refinery in 2013 as well as the R964 million profit realised on the subsequent sale of this asset;
- A loss on dilution of the shareholding in Tronox of R12 million in 2013;
- The mineral sands and Rosh Pinah businesses' financial results effectively being included in 2012 annual results for five-and-a-half and five months, respectively;
- The profits realised on the sale of mineral sands and Rosh Pinah businesses of R3 451 million and R544 million, respectively, as well as other non-core assets of R42 million in 2012; and
- The partial impairment reversal of the carrying value of property, plant and equipment at KZN Sands of R103 million in 2012.

Where relevant, comments exclude transactions, which make the results under review not comparable.

OPERATIONAL AND FINANCIAL EXCELLENCE

Group financial results

Group consolidated revenue decreased by 16% to R13 568 million, mainly as a result of the exclusion of the mineral sands and Rosh Pinah businesses in the 2013 results. These businesses were sold in 2012 and were included for five-and-a-half and five months, respectively, in the 2012 financial year. This was partially offset by an 11% revenue increase from the coal operations.

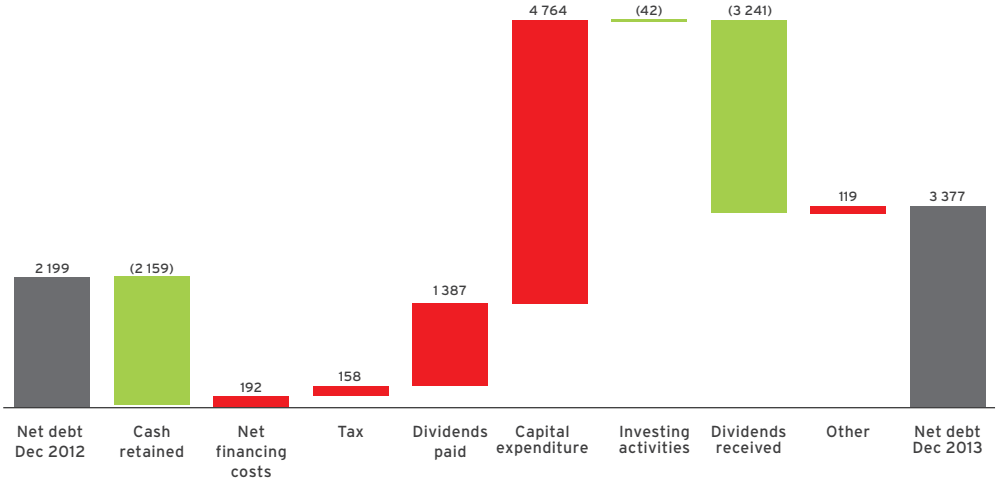
Group consolidated net operating profit was R759 million lower at R2 658 million after excluding items noted in the 'comparability of results' section above, mainly as a result of the exclusion of the discontinued operations in the 2013 results. This was partially offset by a 32% increase in coal's net operating profit as well as R157 million lower costs across the group.

Attributable earnings, including Exxaro's equity-accounted investment in associates, were R6 217 million or 1 751 cents per share, down 36% from 2012 mainly due to non-recurring profits on the sale of discontinued subsidiaries and other non-core assets in 2012.

Headline earnings, which exclude the impact of the impairment and partial impairment reversal as well as profits realised on the sale of discontinued subsidiaries and other non-core assets, were R5 194 million or 1 463 cents per share, representing a 4% increase on 2012 headline earnings per share. This was mainly due to the 32% increase in the coal business net operating profit.

Cash generated from operations was R2 159 million for the group. This was primarily used to fund net financing charges of R192 million, taxation payments of R158 million and pay dividends of R1 387 million. A total of R4 764 million was spent on acquiring property, plant and equipment (capital expenditure), of which R3 507 million was invested in new capacity (expansion capital), with R1 257 million applied to sustaining and environmental capital. Of the funds spent on new capacity, R1 812 million was for the GMEP and R1 613 million for the Mayoko project.

Net debt variance analysis (Rm)



After the receipt of dividends, primarily from Sishen Iron Ore Company Proprietary Limited (R2 664 million) and Tronox (R507 million), as well as the outflow associated with capital expenditure, the group had a net cash outflow before financing activities of R1 058 million for the year under review. Net debt at 31 December 2013 increased to R3 377 million, reflecting a net debt to equity ratio of 10%.

Coal operational and financial results

Revenue and net operating profit

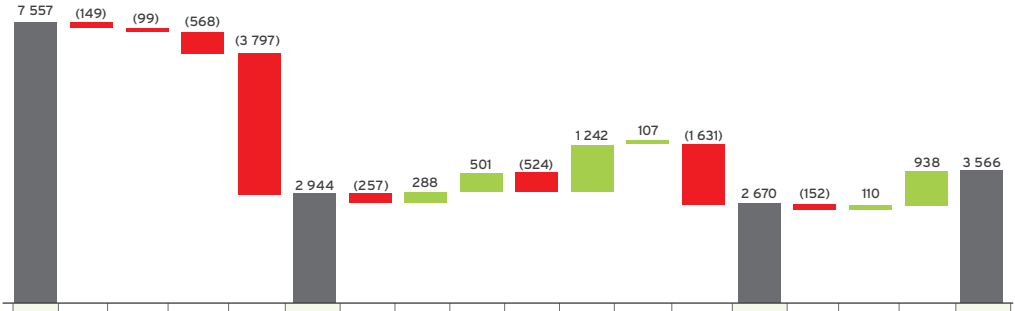
Coal revenue of R13 362 million was 11% higher than that reported in 2012. This was mainly on higher revenue from commercial mines due to higher export sales and a weaker ZAR:US$ exchange rate (R420 million), partly offset by lower local steam and power station coal sales volumes, albeit at higher prices.

Net operating profit increased by 32% to R2 769 million (at an operating margin of 21%) in 2013 compared to 2012, mainly as a result of higher revenue recorded, higher shortfall income received from Eskom (R1 242 million), higher export volumes (R262 million) and various cost saving initiatives, partly offset by the net pre-tax impairment of NCC (R143 million), inflationary pressures (R484 million), lower sales prices (R271 million) and higher corporate service fee allocated (R236 million).

Further to the previous announcement of terminating production at NCC in the second half of 2013, Exxaro received offers from interested parties on selling this previously impaired operation. Accounting convention requires that such an asset be classified as a non-current asset held-for-sale when certain requirements are met.

This triggered a R149 million partial reversal of the impairment recorded during the first half of 2013, resulting in a net impairment of R143 million for the year ended 31 December 2013.

Net operating profit analysis (Rm)



	IFRS FY12	Coal*	Mineral sands*	Base metals*	Other*	Core FY12	Price	Volume	Ex-change	Inflation	GMEP shortfall	Cost	Discon-tinued#	Core FY14	Coal*	Base metals*	Other*	IFRS FY13
Coal	2 105	(149)				1 956	(271)	261	419	(484)	1 242	(202)		2 921	(152)			2 769
Ferrous	(31)					(31)	14		7	(2)		(128)		(140)				(140)
Mineral sands	1 925		(99)			1 826							(1 826)					
Base metals	422			(568)		(146)							195	49		110	964	1 123
Other	3 136				(3 797)	(661)		27	75	(38)		437		(160)			(26)	(186)
Total	7 557	(149)	(99)	(568)	(3 797)	2 944	(257)	288	501	(524)	1 242	107	(1 631)	2 670	(152)	110	938	3 566

* *Non-core.* # *Mineral sands and Rosh Pinah operations sold in 1H12 and Zincor sold in 2H13.*

Production and sales volumes

The coal commodity business's overall production volumes (excluding buy-ins) were 3% (1 155kt) lower than in 2012. A 15% increase in export volumes was recorded at a realised average export price of US$82/t compared to US$94/t in 2012. Demand for steam coal in the domestic market improved slightly from 2012, while demand for metallurgical and power station coal decreased, resulting in lower sales.

Metallurgical coal

Grootegeluk's production was 119kt (5%) lower due to a cutback in production as a result of lower rail allocations to Richards Bay Coal Terminal (RBCT) up to the third quarter of 2013 and lower ArcellorMittal South Africa Limited (AMSA) demand. Tshikondeni's production, however, increased marginally mainly on better yields.

Sales decreased by 111kt (7%) mainly due to lower export volumes (124kt) and lower offtake by AMSA due to production difficulties and maintenance on the rail line to the Waterberg, Tshikondeni sales to AMSA increased by 52kt.

Thermal coal

Power station coal production from the tied mines was 1 263kt (10%) lower than 2012. This was mainly as a result of lower production from Matla and Arnot (815kt and 448kt respectively) following unprotected industrial action in March 2013 as well as difficult geological conditions and management of safety risks at the underground operations.

The commercial mines' power station coal production increased by 373kt (2%) compared to 2012, mainly at Grootegeluk (347kt) due to higher demand from Matimba and the higher demand from the Mpumalanga power stations. Leeuwpan production increased by 75kt on improved yields, while North Block Complex (NBC) production was lower (49kt) in line with the contractual agreement with Eskom. Sales were 672kt higher mainly due to higher demand and availability of stock.

Steam coal

Steam coal production was 198kt (4%) lower mainly due to the NCC mine closure (298kt) and the unprotected industrial action at Leeuwpan (115kt) and the longer-than-planned shut of the plant at Leeuwpan. Inyanda production increased (147kt) following higher plant feed and better yields due to geology, while Grootegeluk also increased (68kt) due to improved performance of the GG 4 and GG 5 plants. Domestic steam sales decreased by 176kt (5%) mainly due to lower sales at Leeuwpan after replacing an inland contract with an export contract. Lower sales were recorded at NCC and Inyanda due to the mine closure and prioritising export demand respectively, partly offset by higher sales at Grootegeluk on the back of higher demand. Steam coal export sales were 688kt (22%) higher mainly due to higher exports from most mines as well as higher buy-ins from Mafube.

Production and sales volumes (000 tonnes)

	Production		Sales	
Year ended 31 December	2013	2012 (Restated)	2013	2012 (Restated)
Production				
Thermal	36 553	37 641	37 859	37 929
– Tied[1]	11 766	13 029	11 768	13 022
– Commercial	24 787	24 612	22 204	21 708
– Export			3 887	3 199
Metallurgical	2 251	2 366	2 215	2 326
– Tied	343	339	335	282
– Commercial	1 908	2 027	1 308	1 348
– Export			572	696
Reductants (semi coke)	91	43	97	62
Total (excluding buy-ins)	38 895	40 050	40 171	40 317
Thermal buy-ins	1 470	1 111		
Total production and sales (including buy-ins)	40 365	41 161	40 171	40 317

1 Tied operations refer to mines that supply their entire production to either Eskom or AMSA in terms of contractual agreements.

Reductants

The semi-coke plant production was 112% higher mainly due to new markets developed in 2013 against the downturn in the ferrochrome industry in 2012, when production was deliberately reduced to match demand.

Ferrous operational and financial results

Revenue and net operating loss

FerroAlloys increased revenue by 12% to R120 million compared to 2012 due to higher demand from Kumba Iron Ore Limited and a realised average price increase of 6%.

The net operating loss increased to R141 million compared to 2012 mainly due to corporate costs allocated (these were not allocated previously) as well as costs of the furnace refurbishment at AlloyStream.

Production and sales volumes

Changes in the product mix at FerroAlloys in 2013 resulted in an overall decrease in production from 2012. Sales volumes decreased by 4% compared to 2012 as a result of the drop in production.

Equity-accounted investments financial contribution

Overall equity-accounted investment income remained stable. Equity-accounted income from Exxaro's 19,98% shareholding in SIOC increased by 30% largely reflecting an increase in export iron ore prices and a weaker ZAR/US$ exchange rate, partially offset by lower production from Sishen mine.

Exxaro's share in Tronox's profits of 2012 turned into a loss of R638 million for the year ended 31 December 2013, mainly as a result of purchase price accounting adjustments processed in 2013, lower mineral sands and pigment prices in 2013 and a R470 million non-recurring bargain purchase recorded in 2012, partially offset by higher volumes in 2013.

Black Mountain's equity-accounted income declined by 24% mainly due to a 10% reduction in selling prices, coupled with a decline in sales volumes.

Mafube recorded 9% lower profits in 2013 compared to 2012 mainly due to accelerated depreciation of assets and environmental rehabilitation scope changes which resulted in higher costs in the statement of comprehensive income.

Cennergi's two wind projects reached financial close in the second quarter of 2013, resulting in increased once-off legal, consulting and other costs.

Equity-accounted income

Year ended 31 December	2013 Rm	2012 Rm
Sishen Iron Ore Company[1] (SIOC)	4 166	3 202
Tronox[1]	(638)	220
Black Mountain	77	101
Mafube	131	144
Cennergi	(103)	(65)
SDCT	(2)	
Total equity income	3 631	3 602

1 *Includes Exxaro's effective shareholding in SIOC and Tronox's restatement of R71 million and R27 million, respectively, which were fully accounted for in 2013 as the amount was not material to restate Exxaro 2012 numbers.*

CAPITAL PROJECT PIPELINE

The capital expenditure project pipeline is forecast as follows:

Year	Coal	Ferrous	Energy	Other
2014	• Belfast BFS[1] • GMEP ramp-up continues • Tshikondeni closure • Thabametsi phase 1 BFS • Semi-coke BFS for two retorts	• Mining convention, port MOU[2] and rail framework agreements signed • Conclude port and rail agreements	• UCG[3] concept study • CSA[4] with GDF SUEZ • Cennergi to start constructing two wind projects	• Tronox investment assessment
2015	• Belfast construction • Inyanda closure • Thabametsi phase 2 PFS[5] • GG backfill phase 2 commence • Semi-coke retorts five and six construction		• UCG PFS	• Tronox three-year standstill period expiry • Tronox investment decision
2016	• Semi-coke commissioning • Thabametsi phase 1 construction • Thabametsi phase 2 BFS • Moranbah South investment decision • Semi-coke retorts five and six commissioning		• Wind farms commissioning at Cennergi • UCG pilot plant construction	• Chifeng divestment
2017	• GG backfill phase 2 commissioning • Belfast commissioning			

1 Bankable feasibility study.
2 Memorandum of understanding.
3 Underground coal gasification.
4 Coal supply agreement.
5 Prefeasibility study.

KEY PERFORMANCE INDICATORS

		2013[1]	2012[2]	2011[2]	2010	2009[3]	2008[4]	2007[4]
Selected ratios								
Net financing cost cover (times): EBITDA	Times	10	11	22	9	7	9	6
Return on equity (ROE): attributable income	%	16	19	36	34	19	32	14
Return on capital employed (ROCE)	%	19	27	44	38	25	34	20
Return on total assets	%	19	27	43	42	28	39	24
Operating margin	%	19	43	20	15	2	19	14
Net debt/(cash): Equity	%	20	18	(1)	13	29	18	31
Share statistics								
Total shares in issue	Million	358	358	354	358	357	355	353
• Mpower	Million	3	3		11	11	11	11
• Ordinary	Million	355	355	354	347	346	344	342
Weighted average number of shares (WANOS)	Million	355	354	348	347	345	343	341
Diluted WANOS	Million	356	355	353	361	358	361	355
Share price as at 31 December	ZAR	146,46	169,00	168,00	136,24	104,50	71,90	103,45
Market capitalisation at 31 December 2013	Rb	52	60	60	49	37	26	37
Net asset value per share	Rb	102	81	68	50	37	38	29
Dividend cover	Times	3,18	5,47	2,75	3,00	1,48	2,65	2,62
Dividend cover (core)	Times	2,63	2,61	2,62	3,00	3,56	2,65	2,62
Dividend per share	Cents	550	500	800	500	200	375	160
• Interim	Cents	235	350	300	200	100	175	60
• Final	Cents	315	150	500	300	100	200	100
Other financial information								
Capital commitments								
• Authorised and contracted	Rm	4 204	6 283	8 029	6 475	3 550	889	450
• Authorised but not yet contracted	Rm	2 826	4 208	2 413	2 490	1 420	2 711	1 278
• Operating lease commitments	Rm	212	18	59	132	92	77	126
Guarantees and contingent liabilities	Rm	2 066	1 055	1 197	1 007	717	587	201
Finance lease commitments	Rm			189	268	260	254	244
Share based payments expenses	Rm	313	131	165	145	91	84	105
• Mpower/MPower 2012	Rm	222	87	138	115	61	72	59
• SARS, LTIP, DBP etc.	Rm	91	44	27	30	30	12	46
Directors' remuneration	Rm	43	28	31	27	19	34	31

1 2013 ratios exclude the profit on sale of Zincor of R964 million and the group net impairment charge of R45 million where applicable.

2 2012 and 2011 Actual ratios exclude the impact of impairments and other non-recurring transactions.

3 Exclude the impact of the R1 435 million impairment of the KZN Sands assets in 2009.

4 2007 and 2008 have been restated for comparable purposes to include Namakwa Sands as well as the equity-accounted 26% interest in Black Mountain Mining Proprietary Limited as if effective from 1 January 2007.

GROUP CASH VALUE ADDED STATEMENT

for the year ended 31 December

The value added statements show the wealth the group has created through mining, beneficiation, trading and investing operations. Exxaro generates and creates value as follows:

- Employees receive salaries/wages, share-based payments as well as bonuses (where certain performance conditions are met)
- The governments of the countries where Exxaro has operations receive tax and royalty payments
- Suppliers and contractors are supported through the procurement of consumables, services and capital goods.
- Shareholders receive a return on their investment through dividends and growth on the share price
- Exxaro has corporate social investment initiatives which benefit surrounding communities
- To ensure sustainability and expansion continuous reinvestment into the group is necessary.

The statement below summarises the total cash wealth created and how it was disbursed among the group's stakeholders. The retained amount was reinvested in the group for the replacement of assets and further development of operations.

	Group	
	2013 Rm	2012 Rm
Direct economic value generated	6 798	8 984
Gross revenue from the sale of products and services (including value added tax (VAT))	16 432	18 529
Income from investments and interest received	3 244	4 022
Operating costs	(12 878)	(13 567)
Economic value distributed	6 375	8 441
Employee wages and benefits (excluding employees taxes)	3 045	2 731
Employees' tax (PAYE) deducted from remuneration paid	706	941
PAYE deducted from Mpower payments		291
Payments to government	918	759
Interest paid and loan cost	262	671
Cash dividend paid, excluding Mpower dividend to employees	1 371	3 014
Cash dividend paid to Mpower 2012 employee beneficiaries	16	10
Volunteerism	1	
Community investments (including donations)	56	24
Net economic value retained in the group to maintain and develop operations	423	543
Included above are:		
Payments to Government: taxation contribution	918	759
Direct taxes per country (excluding deferred tax)	158	278
Republic of South Africa	129	272
Netherlands	9	7
Australia	20	(1)
VAT	612	86
VAT levied on purchases of goods and services	(1 940)	(2 182)
VAT and other duties charged on turnover	2 552	2 268
Additional amounts collected by the group on behalf of government: Unemployment Insurance Fund	24	30
Levies paid to government	124	365
Rates and taxes paid to local authorities	4	23
Royalties paid to government	60	262
Workers' Compensation Fund	6	10
Unemployment Insurance Fund	24	30
Skills Development Levy	30	40
Interest capitalised on qualifying assets (Grootegeluk Medupi Expansion Project (GMEP); Mayoko and GG backfill projects)	338	330
Community investments per region	56	24
Gauteng and corporate projects	14	12
KwaZulu-Natal	3	
Limpopo	12	7
Mpumalanga	25	5
Western Cape	2	

ADMINISTRATION

Group company secretary and registered office
CH Wessels
Exxaro Resources Limited
Roger Dyason Road
Pretoria West, 0183
(PO Box 9229, Pretoria, 0001)
South Africa
Telephone +27 12 307 5000

Company registration number: 2000/011076/06
JSE share code: EXX
ISIN code: ZAE000084992

Auditors
PricewaterhouseCoopers Incorporated
2 Eglin Road
Sunninghill, 2157

Commercial Bankers
Absa Bank Limited

Corporate law advisers
EOH Legal Services Proprietary Limited
Roger Dyason Road
Pretoria West
0183

United States ADR Depository
The Bank of New York
101 Barclay Street
New York NY 10286
United States of America

Sponsor
Deutsche Securities (SA) Proprietary Limited
3 Exchange Square
87 Maude Street
Sandton, 2196

Registrars
Computershare Investor Services Proprietary Limited
Ground floor, 70 Marshall Street
Johannesburg
2001
(PO Box 61051, Marshalltown, 2107)

SHAREHOLDER DIARY

Financial year-end	31 December
Annual general meeting	May
Reports and accounts published	Published
Announcement of annual results	March
Annual report	April
Interim report for the half-year ending 30 June	August
Distributions	
Final dividend declaration	March
Payment	April
Interim dividend declaration	August
Payment	September/October

HKLM
5622