

20  
16

SUSTAINABILITY REPORT



ILUKA



COMMITMENT

INTEGRITY

RESPONSIBILITY



Total Recordable Injury Frequency Rate

decreased from  
**6.7** to **4.4**

Senior Female representation

SENIOR MANAGEMENT  
**18%**

BOARD REPRESENTATION  
**33%**



Successfully achieved the **relinquishment of two mining tenements** in the South West of Western Australia.



**Product stewardship**  
approach defined and risk assessments commenced.



**Tax Transparency REPORT**

First Voluntary Tax Transparency Report published and support of the Extractive Industries Transparency Initiative.



**Reduction**  
in number of employees exposed to noise above the occupational exposure limit.



**Fourth consecutive year**

of reducing “open” area via land rehabilitation activities.

**Exceeded**

**Aboriginal representation targets at Jacinth-Ambrosia**

Continued to exceed Aboriginal employment target level of 20 per cent at Jacinth-Ambrosia, maintaining 26 per cent during the idling period.



**FROM THE MANAGING DIRECTOR**

4



**ABOUT THIS REPORT**

6

Scope and boundary	6
Report approach	8
Materiality assessment	8
Performance improvement targets	11



**ABOUT ILUKA**

12

Production settings	13
Mineral sands market	14
Sierra Rutile acquisition	16



**ECONOMIC RESPONSIBILITY**

18

Tax transparency	19
Contribution to local and regional economies	19



**GOVERNANCE**

20

Board of directors	20
Sustainability governance	20
Ethics and conduct	22



**PEOPLE**

24

Diversity	25
Attracting, developing and retaining employees	28



**HEALTH AND SAFETY**

30

Fatality-free	30
Exposure to health hazards	31



**SOCIAL PERFORMANCE**

34

Stakeholder engagement	34
Indigenous relations and cultural heritage	34
Human rights	35
Grievance management	35
Social investment	35



**ENVIRONMENT**

38

Biodiversity	39
Land rehabilitation and closure	40
Mineral waste management	44
Product stewardship	45
Energy and greenhouse gas emissions	46
Water use	48
Environmental incidents	49

**PERFORMANCE DATA**

50





Iluka is a company committed to achieving high levels of sustainability performance through our values of Commitment, Integrity and Responsibility.

Sustainability at Iluka means integrating economic, environmental and social considerations into business practice, and ensuring safe and responsible conduct underpins everything we do.

Welcome to Iluka's first online annual Sustainability Report. This year we have decided to separate the sustainability content from the Iluka Review to enable more detailed reporting as part of Iluka's progressive alignment with the International Council of Mining and Metals (ICMM) sustainable development principles and the Global Reporting Initiative framework. This has also provided the opportunity to introduce a set of public sustainability targets into the report to track Iluka's performance across material issues.

2016 was a challenging year for Iluka with the continuation of low-cycle market conditions and disappointing financial performance. Notwithstanding, we have maintained our commitment to high levels of sustainability performance across our operations.

On 7 December 2016, Iluka acquired Sierra Rutile Limited (Sierra Rutile) and its mining operation in Sierra Leone. Sierra Rutile is a large, long-life, rutile deposit and provides Iluka with a significant addition to its strong position in the high grade titanium dioxide products. The acquisition of an operating mine in West Africa has changed Iluka's risk profile, given the company has previously operated primarily in Australia and the United States. Iluka recognises the risks of operating in a new jurisdiction in areas such as human rights, bribery and corruption risk, health, safety and security. Integration priorities include the introduction of Iluka's safety and risk mitigation frameworks, as well as its Code of Conduct, to ensure alignment and integration of group level procedures and processes.

During 2016, Iluka published its first voluntary Tax Transparency Report. Iluka is committed to ensuring compliance with tax law and practice in all of the jurisdictions in which it operates.

The safety of our people will remain a priority focus for the company. It was pleasing to see a reduction in the number of recordable injuries during the year, which resulted in a 34 per cent decrease in the Total Recordable Injury Frequency Rate (TRIFR).

Iluka's expanded operational, exploration and resource development footprint requires the company to be proactive in identifying and addressing a broad range of social risks. During 2016 Iluka established

more robust social performance standards and procedures and commenced a human rights review to examine potential human rights risks and impacts relating to Iluka's operations, projects and logistics activities.

Iluka employed over 700 employees, predominately in Australia in 2016. This dynamic changed in December 2016 with the addition of more than 1,600 Sierra Rutile employees to the global Iluka workforce. We welcome these employees to the Iluka group and will report integrated people statistics and programs in the 2017 report.

During the course of the year we made the difficult decision to make approximately 120 positions redundant as a result of the idling of the Jacinth-Ambrosia mining operation, a progressive transition to rehabilitation for the United States operations and a review of the company's support functions.

The reduction in employee numbers also had an impact on our gender diversity in Australia with a reduction from 29 per cent to 27 per cent female representation. Iluka maintained its Aboriginal participation in the Australian workforce at 5 per cent, and exceeded our target at Jacinth-Ambrosia with 26 per cent Aboriginal representation.

Iluka's approach to environmental management is based on understanding and minimising the potential impacts of its operations on the environment. Despite challenging financial conditions, we continued to invest in rehabilitation activities and achieved the fourth consecutive year of reducing "open" area via land rehabilitation activities, with over 800 hectares of land rehabilitated.

Few mine sites in Australia have succeeded in having environmental obligations relinquished by regulators and rehabilitated land "signed off". In 2016, Iluka successfully relinquished its environmental obligations for two mining tenements in the South West of Western Australia under the Western Australian *Mining Act 1978*. This was a significant milestone.

In 2016 Iluka made considerable progress towards aligning the company's activities with the International Council of Mining and Metals Framework for Sustainable Development. We have set public performance targets for 2017 and 2018 and we aim to strengthen our sustainability framework allowing appropriate management and mitigation of risks leading to improved performance.

**Tom O'Leary**  
Managing Director and Chief Executive Officer



COMMITMENT

We understand our role, the company, our industry and do our best.

INTEGRITY

We expect and show honesty, openness and fairness.

RESPONSIBILITY

We take responsibility for our actions and care for others and the environment.

Iluka Resources Limited’s (Iluka) Sustainability Report has been prepared for its stakeholders to share information on the company’s sustainability approach, performance of material issues and 2017 focus areas.

The report applies to the period 1 January 2016 to 31 December 2016. It has been prepared to align with the core option of the Global Reporting Initiative (GRI) Standards and the related Mining and Metals Sector Disclosure Guidelines. There are no material re-statements of the 2015 Annual Report or Iluka Review data or content.

The previous year’s reporting data can be found on the Iluka website [www.iluka.com](http://www.iluka.com) and contained within the 2015 Iluka Review.

This report is reviewed by Iluka’s executive team and Board of directors.

SCOPE AND BOUNDARY

Iluka is headquartered in Perth, Western Australia. This report covers Iluka’s operations globally, comprising exploration, project development, mining, processing and rehabilitation activities and, save where it is specifically referenced, it excludes Sierra Rutile and its operations and people.

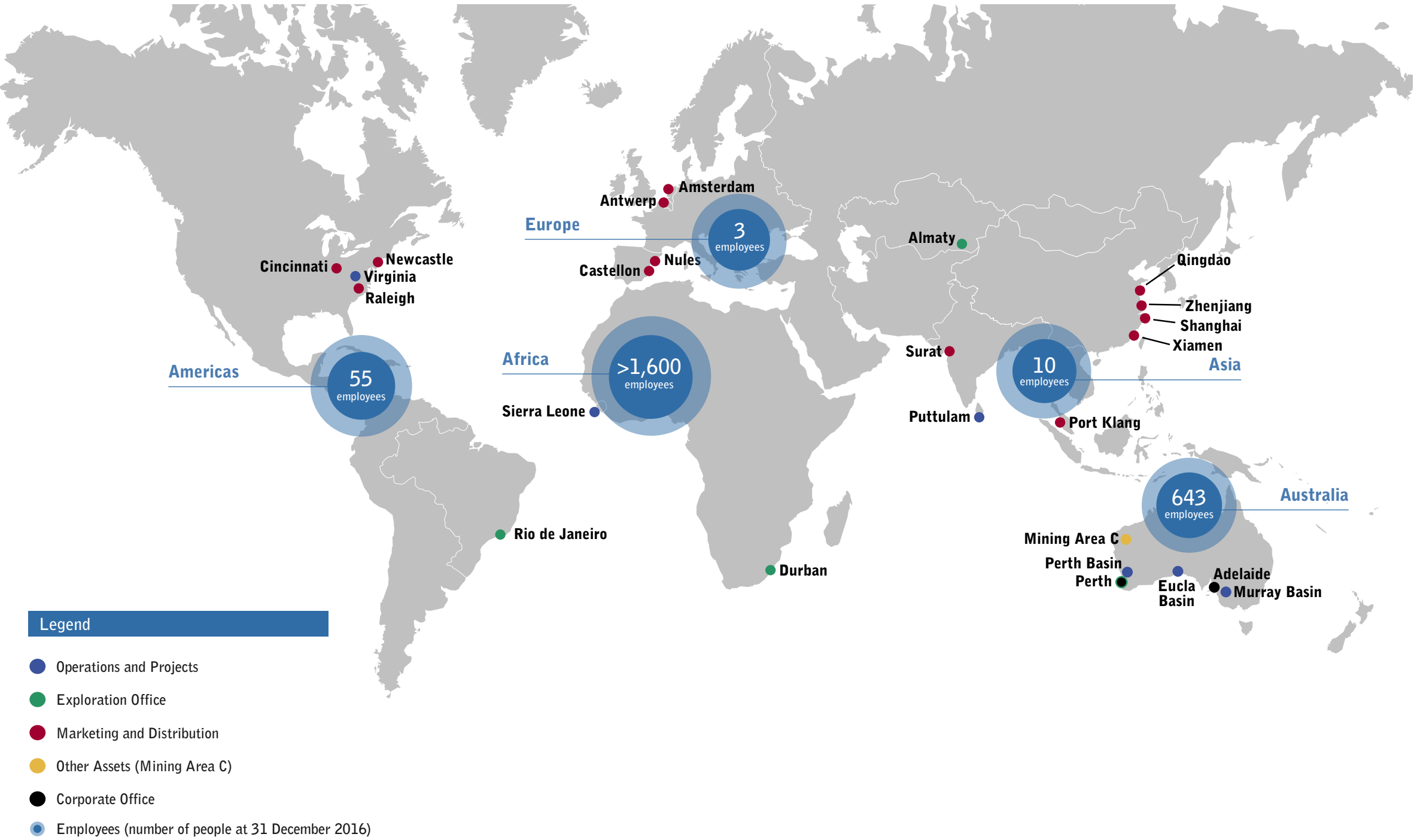
At the end of 2016, Iluka employed more than 700 people (excluding Sierra Rutile), with the majority working in Australia and the United States. Accordingly, the performance data presented in this report has focussed on activity which is predominantly in OECD jurisdictions.

On 7 December 2016, Iluka acquired Sierra Rutile, located in Sierra Leone. As noted, the 2016 sustainability performance information for this operation is excluded from the scope of this report; however Iluka’s management approach to the integration of Sierra Rutile operation and its sustainability performance is detailed on page 16. The Sierra Rutile workforce comprises more than 1,600 employees. The 2017 sustainability report will include Sierra Rutile performance data.

Further information on the acquisition can be found on Iluka’s website and in the 2016 Sierra Rutile Review at [www.sierra-rutile.com](http://www.sierra-rutile.com).

Iluka and the companies which it directly and indirectly owns are separate and distinct entities. For the purpose of this publication, the collective expressions “Iluka”, “Iluka Group”, “we”, “our” are used where reference is made in general to those companies.

Iluka’s locations and employee distribution





REPORT APPROACH

In accordance with GRI guidance, the content of this report has been determined by analysing the company’s material sustainability issues and identifying those which can have the most impact on the business and its stakeholders. The issues measured as ‘most important’ are the focus of this report.

Material issues were identified by considering both internal and external factors, including a review of current and emerging sustainability topics impacting the industry, risk assessments, internal policy, peer benchmarking and stakeholder engagement.

These issues were considered within the boundary of the company value chain and production settings, as described on page 13.

In total, 36 material issues grouped by six elements were identified for assessment. These elements are outlined below.

Each issue was assessed and prioritised based on the significance of the potential impact it may have on the business and the influence it may have on stakeholder assessments and decisions. The ranking of each issue has been reviewed and approved by senior personnel at Iluka.

This process allows Iluka to determine the focus of this sustainability report, reflecting those issues of the highest importance. This year, 12 issues were identified as ‘most important’. Additional sustainability areas have also been included to meet the expectations of stakeholders and other reporting requirements.

MATERIALITY PROCESS



MATERIALITY ASSESSMENT

To understand the sustainability issues that are most important to the business and its stakeholders, Iluka conducted a materiality assessment. This is an annual process, which consists of the four key steps of issue identification, prioritisation, validation and reporting. This systematic process complies with the GRI guidance on materiality and completeness.

This year Iluka engaged an independent consultant to support the materiality analysis and provide an external viewpoint on the identification of material issues.



ILUKA GOVERNS ITS SUSTAINABILITY APPROACH THROUGH A SERIES OF POLICES AND MANAGEMENT SYSTEMS THAT SPAN ACROSS SIX KEY ELEMENTS.

**ECONOMIC RESPONSIBILITY**

Iluka is committed to sustainable economic outcomes allowing us to share economic benefits with the communities in which we operate, whilst creating and delivering value to shareholders.

**GOVERNANCE**

Iluka is committed to conducting its business in accordance with the highest standards of corporate governance.

**PEOPLE**

Iluka seeks to attract and retain the best people while building and maintaining a diverse, inclusive and high-achieving workforce.

**HEALTH AND SAFETY**

Iluka is committed to achieving a fatality-free workplace, eliminating injuries and protecting the health and wellbeing of its people.

**SOCIAL PERFORMANCE**

Iluka respects human rights, engages meaningfully with stakeholders and seeks to make a positive difference to the social and economic development of the areas in which it operates.

**ENVIRONMENT**

Iluka seeks to manage its impact on the environment, use resources efficiently and leave positive rehabilitation and closure outcomes.



## MATERIAL ISSUES AND BOUNDARIES

Reported Issues		Description	Boundaries		Page
			Internal	External	
Economic responsibility					
● Contribution to local and regional economies	MI	Economic benefits delivered through jobs created, taxes and royalties paid, public infrastructure built and local procurement spend.	✓	✓	19
● Tax transparency	MI	Public transparency of taxes paid.		✓	19
Governance					
● Ethics and conduct	MI	Corporate governance, ethics and conduct.	✓	✓	22
People					
● Diversity	MI	Diverse and inclusive workforce.	✓		25
● Attracting, developing and retaining employees	MI	Talent attraction and retention, human capital development (including competency and training) and succession planning.	✓		28
Health and safety					
● Fatality-free	MI	Focus on activities that have the potential to result in a fatality or permanent disabling injury.	✓		30
● Exposure to health hazards	MI	Protection of the workforce from occupational exposures.	✓		31
Social performance					
● Stakeholder engagement	MI	Community engagement, maintain a social licence to operate and grievance management.	✓	✓	34
● Human rights	MI	Uphold fundamental human rights and respect cultures, customs and values.	✓	✓	35
● Indigenous relations and cultural heritage	MI	Cultural heritage and Indigenous engagement.	✓	✓	34
● Social investment		Community investments, partnerships and sponsorships.		✓	35
Environment					
● Land rehabilitation and closure	MI	Process of planning for and undertaking rehabilitation and closure activities including land use design and planning, provisioning, rehabilitation execution and land relinquishment.	✓	✓	40
● Mineral waste management	MI	Materials removed from the mine void and separated from the valuable minerals over various process stages.	✓	✓	44
● Biodiversity		Protection and enhancement of biodiversity.	✓	✓	39
● Product stewardship		Responsible product design, use, re-use, recycling and disposal of products.	✓	✓	45
● Energy efficiency and greenhouse gas emissions		Energy consumption and efficiency, and greenhouse gas emissions contributing to climate change impacts.	✓	✓	46
● Water use		Water supply, use, management and discharge.	✓	✓	48
● Environmental incidents		Uncontrolled impacts on the environment.	✓	✓	49

MI = material issue, of most importance to stakeholders and Iluka as defined on page 8.

## PERFORMANCE IMPROVEMENT TARGETS

Commencing 2017, Iluka has set Group level performance targets against each of its material sustainability challenges. These targets enable common understanding, both internally and externally, of Iluka's sustainable development goals and performance.

Progress against these targets will be reviewed by the Board quarterly and performance reported externally on an annual basis.

**ECONOMIC RESPONSIBILITY**

- Integrate Sierra Rutile into Iluka's annual Tax Transparency Report (published 2018) and ensure reporting requirements are met under the Extractive Industries Transparency Initiative in relevant jurisdictions.

**GOVERNANCE**

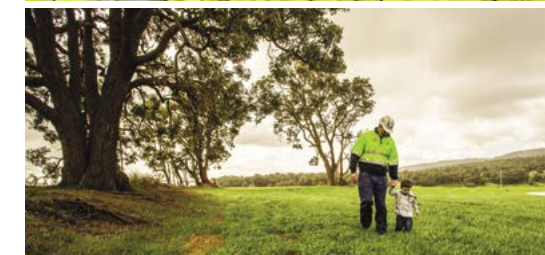
- Targeted training on Anti-Bribery and Corruption for employees working in higher risk areas, is maintained at greater than 90 per cent.
- Alignment to the ICMM sustainable development principles is completed by 2020, including reporting in accordance with the GRI framework.

**PEOPLE**

- Continue to improve female and Indigenous participation in the Australian workforce to meet diversity targets of 30 per cent female and 8 per cent Indigenous participation by 2018.

**HEALTH AND SAFETY**

- Zero fatalities and total permanent disabling injuries across the Iluka Group.
- A year on year reduction in annual Total Recordable Injury Frequency Rate (TRIFR) at Australian, United States and exploration sites.
- Drive an improvement in reporting culture at Sierra Rutile targeting a 5 per cent month on month increase in new hazards reported.
- A reduction in potential occupational exposure to noise and airborne contaminants at Australian sites relative to baseline.

**SOCIAL PERFORMANCE**

- Implement new Iluka standard for Social Performance and develop alignment plans at all sites and projects.
- Local-level grievance mechanism established for all sites and projects by 2018, that enables effective capture and resolution of complaints.
- Develop and implement an Iluka human rights work program by 2018.

**ENVIRONMENT**

- All sites to have closure plans in accordance with Iluka Group standard and legislative requirements by 2018.
- All sites have up to date surface water management plans and site water balances by 2018.
- Drive an improvement in reporting culture at Sierra Rutile targeting a 5 per cent month on month increase in new environmental incidents reported.



Iluka is a major global producer of zircon and high grade titanium dioxide products with over 60 years' experience in mineral sands exploration, project development, operations, marketing and rehabilitation.



Iluka has mineral sands mining, concentrating and processing operations in Australia and Sierra Leone. Iluka's mining and processing operations in Virginia, United States, were closed with a transition to rehabilitation status in January 2017.

Iluka is the largest global producer of zircon and the second largest producer of high grade chloride titanium dioxide feedstocks, with a significant presence in the market for high grade products of rutile and synthetic rutile. These products are used in a diverse range of applications from consumer, industrial and manufacturing applications.

The company also has a royalty associated with BHP Billiton's Mining Area C iron ore operations in Western Australia.

Iluka's objective is to create and deliver value for shareholders. This objective is supported by values centred on Commitment, Integrity and Responsibility. In practice, this means proactive consideration for all environmental, social and economic implications prior to, throughout and following the closure of operations.

PRODUCTION SETTINGS

The following chart conveys Iluka's production settings in 2016 and the expected 2017 production settings.

Operational settings exclude Sierra Rutile given the recent transaction and current integration activities.

	2016	2017
Jacinth-Ambrosia mining South Australia	Mining and concentrating activities suspended from April for a period of 18 – 24 months; Jacinth-Ambrosia concentrate continued to be processed at Hamilton and Narngulu mineral separation plants. Refer ASX Release 16 February 2016	Mining and concentrating idle. Concentrate to be processed at the Hamilton and/or Narngulu mineral separation plants
Murray Basin mining Victoria	Concentrate continued to be processed	Continue to process existing concentrate until stocks are exhausted in October 2017
Tutunup South mining, South West, Western Australia	100% utilisation	100% utilisation Tutunup South is a principal source of ilmenite feed for the SR kiln 2 at Capel
Hamilton mineral separation plant (MSP) Victoria	60% utilisation Murray Basin and Jacinth-Ambrosia concentrate feed	To be idled in October 2017
Narngulu MSP, Western Australia	50% utilisation	Utilisation levels based on market demand and inventory considerations
SR kiln 2	100% utilisation Ilmenite feed source from Tutunup South, Jacinth-Ambrosia, Murray Basin and an external source	100% utilisation
SR kiln 1	Idle	Idle
US mining Virginia, USA	Idle Mining and processing operations were idled at the end of 2015	Closed 31 December 2016
Stony Creek MSP Virginia	Idle	Closed 31 December 2016

Iluka suspended mining and concentrating activities at the Jacinth-Ambrosia operation in April 2016 in order to draw down concentrate inventory held at site. During 2016, Iluka processed 967 thousand tonnes of heavy mineral concentrate overall, compared with concentrate production of 395 thousand tonnes.



MINERAL SANDS MARKET

From everyday applications in the home and workplace, to medical, lifestyle and industrial applications, the unique properties of titanium dioxide and zircon are utilised in a vast and increasing array of products and applications.

Iluka is an established global supplier of zircon and titanium minerals, providing a range of high grade titanium dioxide feedstocks as well as zircon products for end markets.

Through its sales and marketing network, the company supplies over 50 products to more than 250 direct customers with sales in more than 40 countries. The company is committed to product quality, reliable supply and offers technical support to its customers. In 2016, Iluka consolidated warehouses by repositioning distribution points to better align with the company’s customer base. This has resulted in reductions to working capital.

<p>AUTOMOTIVE</p> <p>Brake linings/pads, car parking sensors, automotive paint, catalytic converters, automotive electrics, rubber products</p>	<p>SPORTING GOODS/RECREATION</p> <p>Golf clubs, tennis racquets, bicycle frames (titanium)</p>	<p>HEALTHCARE/MEDICINE</p> <p>Dental implants, hip and bone replacements, heart pacemakers, kidney dialysis</p>	<p>AIRCRAFT/INDUSTRY</p> <p>Titanium metal, desalination plants, zirconia-nuclear medicine, zirconium metal, corrosion resistant coatings</p>	<p>ROOF/BUILDING/CONSTRUCTION</p> <p>Solar panels, electrical insulators, bricks/cement, fibre optics, exterior and interior paint, tiles/anti-pollution coatings</p>	<p>HOME/OFFICE</p> <p>Mobile phones, plastic, printer inks, paper, packaging</p>	<p>BATHROOM/LIFESTYLE</p> <p>Ceramics, sanitary and toilet basins, glass, cosmetics, pharmaceutical products, toothpaste, anti-perspirants, sunscreens</p>	<p>KITCHEN/UTILITIES</p> <p>Light bulbs, dishes, glasses, clock parts, food colouring, ceramic knives, pans</p>
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SIERRA RUTILE ACQUISITION

On 7 December 2016 Iluka completed the acquisition of Sierra Rutile for a total transaction cost of \$390 million, including the final consideration for Sierra Rutile equity of \$375 million and \$14 million of transaction costs. Sierra Rutile’s net debt of \$80 million was assumed on completion.



Sierra Rutile Limited



The acquisition provides Iluka with a large, long life rutile operation, and complements the company’s position as a producer of synthetic rutile, as well as zircon. The Sierra Rutile operation provides Iluka with a production source to continue to service the high grade titanium dioxide feedstock market, and enables the company to undertake material expansion options from existing production levels.

OPERATIONS

Sierra Rutile is located in the Bonthe and Moyamba districts of the Southern Province of Sierra Leone. Currently, both dredge and dry mining activities are being undertaken. The operation has three wet concentration plants, a mineral separation plant and port facilities, as well as other supporting infrastructure, including a residential camp and health clinic. The operation produces rutile, ilmenite and a smaller quantity of zircon in concentrate. Rutile production in 2016 was 148 thousand tonnes.

Sierra Rutile and its predecessors have operated in Sierra Leone since 1967, following exploration activities in the early 1960s. The Sierra Rutile operation plays a major role in the national and regional economies of Sierra Leone and currently accounts for approximately 2.4 per cent of gross domestic product<sup>1</sup>. With a total workforce of more than 1,600 personnel (over 95 per cent of which is Sierra Leonean), the company is a significant national employer.



<sup>1</sup> GDP in 2015 was US \$4.4 billion, SRL revenue was US\$106 million.

COUNTRY SETTING



Capital	Freetown
Population	6.4 million
Politics	Democratic republic with two main political parties
Language	English (official), Krio (lingua franca)
Economy	GDP US\$4.4 billion (2015) GDP per capita US\$696 (2015)
Recent events	1991 – 2002 civil war <ul style="list-style-type: none"><li>• Two peaceful elections held post the civil war, including a change of governing party and president</li><li>• Now ranked one of the most peaceful countries in Africa<sup>1</sup></li></ul> 2014 – 2015 Ebola outbreak <ul style="list-style-type: none"><li>• Economic growth significantly affected</li><li>• Sierra Rutile mine continued operations</li></ul>

<sup>1</sup> The Institute for Economics and Peace produces the Global Peace Index, which ranks 163 states according to their level of peacefulness (level of conflict, societal safety and militarisation). Sierra Leone ranks 43 overall and by this measure is the fifth most peaceful country in Africa. [www.visionofhumanity.org](http://www.visionofhumanity.org)

SUSTAINABILITY

Iluka undertook extensive country risk analysis as part of its due diligence prior to the acquisition and is cognisant of risk factors related to Sierra Leone’s political, regulatory and social environment. Iluka is committed to maintaining its high level of sustainability performance and extending this across the Sierra Rutile operation.

Iluka recognises and respects the cultural norms and traditions of Sierra Leone and the significance of the Sierra Rutile operation to its employees and the country. Iluka will seek to maximise local content, invest in the training and development of local personnel and develop community and government relationships that are mutually beneficial.

The Sierra Rutile operation will continue to support sustainable community projects with an emphasis on healthcare, education and agriculture.

INTEGRATION PRIORITIES

The integration priorities include working together with Sierra Rutile employees and other key stakeholders to ensure the continuity of operations; providing training and development opportunities for employees; and the introduction of Iluka’s safety and risk mitigation frameworks, as well as its Code of Conduct, to ensure alignment and integration of Group level procedures and processes.

Iluka expects to spend approximately US\$60 million over the next two years on operational and safety performance improvement measures. Upgrading of safety systems will be the initial focus.

It will take time to align with Iluka’s incident reporting system and safety culture and to achieve the same level of reporting as for existing operations. As such, 2017 will be a baseline reporting year for Sierra Rutile with the focus on ensuring all incidents are identified, reported and classified in accordance with the Iluka standard.

The 2017 public performance targets are aimed at strengthening the safety culture with a focus on increasing the number of hazards and environmental incidents reported, rather than focussing on a reduction in incident frequency rates.





## ECONOMIC RESPONSIBILITY

Iluka's objective is to create and deliver value for shareholders.



For 2016, Iluka recorded a loss after tax for the year of \$224.0 million, compared with a profit of \$53.5 million for the previous corresponding period. The 2016 loss is inclusive of non-recurring adjustments including an impairment charge of \$140.7 million after tax and an increase in rehabilitation provision for closed sites of \$42.1 million after tax. The underlying result before adjustments was also influenced by lower mineral sands revenues, mainly attributable to lower received product prices and a lower contribution from the Mining Area C iron ore royalty. Iluka generated modest free cash flow of \$47 million. After the assumption of Sierra Rutile net debt of \$80 million, Iluka ended the year with net debt of \$506 million.

Further information on Iluka's financial results and economic performance can be found in the Iluka 2016 Annual Report, available on the Iluka website [www.iluka.com](http://www.iluka.com). The results in the 2016 Annual Report include Sierra Rutile's contribution from the acquisition date of 7 December 2016, reflecting 24 days of ownership in 2016.

### FINANCIAL RESULTS SUMMARY

	2016	2015	2014	2013	2012
1. Mineral sands revenue	726.3	819.8	724.9	763.1	1,069.8
2. Underlying mineral sands EBITDA <sup>1</sup>	103.0	231.8	189.2	204.1	603.7
EBITDA margin %	14.2	28.3	32.9	32.6	67.9
3. Mining Area C EBITDA	47.5	61.6	66.8	88.3	72.7
4. Underlying Group EBITDA <sup>1</sup>	150.5	293.4	256.0	292.4	676.4
5. Net profit (loss) after tax	(224.0)	53.5	(62.5)	18.5	363.2
6. Operating cash flow	137.3	222.2	254.8	124.0	368.7
Free cash flow	47.3	155.0	196.3	(27.5)	81.2
7. Net (debt) cash	(506.3)	6.0	(59.0)	(206.6)	(95.9)
Gearing %	31.5	n.a	3.9	11.8	5.8
8. Return on equity	(17.1)	3.8	(4.1)	1.2	23.2
Return on capital	(18.3)	6.8	(2.0)	2.2	31.3

<sup>1</sup> Underlying Group EBITDA excludes non-recurring adjustments including impairments, Sierra Rutile Limited transaction costs, changes to rehabilitation provisions for closed sites. Underlying EBITDA also excludes Iluka's share of MetalYSIS Ltd's losses, which are non-cash in nature.

### TAX TRANSPARENCY MI

Tax governance is an essential and important element of Iluka's corporate governance standards. Iluka's Tax Policy – approved by its Board of directors – operates within the company's broader governance and risk management framework.

Iluka complies with tax law and practice in all of the jurisdictions it operates. This means paying the appropriate amount of tax; disclosing all relevant facts and circumstances to taxation authorities; and claiming reliefs and incentives where applicable.

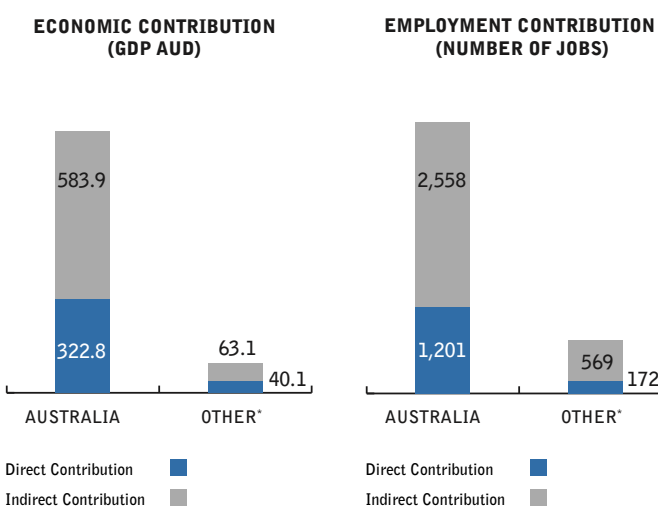
The company is committed to compliance with all of its statutory obligations and supports the Australian Government's adoption of the Extractive Industries Transparency Initiative (EITI).

Consistent with Iluka's commitment to the highest standards of corporate governance and transparent interaction with stakeholders, Iluka adopted the Australian Board of Tax "Voluntary Tax Transparency Code" (the Code) and published its first Tax Transparency Report for the 2015 income year in September 2016. The report reflects the disclosure recommendations in the Code. Iluka's 2016 Tax Transparency Report will be made available on Iluka's website in the third quarter of 2017.

### CONTRIBUTION TO LOCAL AND REGIONAL ECONOMIES MI

Iluka's activities create direct and indirect economic benefits to the countries and communities in which it operates. These include:

- employment opportunities;
- investment in community infrastructure and services;
- local procurement supporting community businesses wherever practicable; and
- support of community lifestyle through sponsorships and partnerships.



\* Includes United States, China, Sri Lanka, Kazakhstan and Brazil

\* Includes United States, China, Sri Lanka, Kazakhstan and Brazil

Iluka undertakes an annual economic contributions study to determine the direct and indirect employment and gross domestic product (GDP) contribution of Iluka's activities globally. The study, conducted by Ernst & Young, found the following for 2016:

- Australian activities contributed to 3,759 jobs, \$907 million in GDP and \$756,000 in social contributions.
- US activities contributed to 121 direct jobs and 429 indirect jobs, US \$90 million of GDP and US \$29,000 in direct social contributions.
- Chinese employment and warehousing activities contributed US \$ 7.6 million of GDP to the Chinese economy.
- Exploration activities in South America employed the equivalent of 9 direct jobs, 69 indirect jobs and a GDP contribution to the Brazilian economy of US \$4 million.
- Sri Lanka activities employed the equivalent of 17 direct jobs, 38 indirect jobs and a GDP contribution of US \$770,000.
- Kazakhstan exploration activities contributed to 4 direct jobs, 8 indirect jobs and a GDP contribution of US \$340,000.



Iluka's economic contributions relating to employment and contracting numbers decreased compared to previous years, reflecting the completion or idling of a number of operations in Australia and the United States.

Social contributions, in the form of donations, sponsorships and other community development initiatives remained stable, totalling \$844,000 in 2016 (\$850,000 in 2015). Additional information is provided in the Social Performance section of this report and in the performance data tables on Page 50.



GOVERNANCE

Iluka is committed to conducting business in accordance with the highest standards of corporate governance.

BOARD OF DIRECTORS

The Board, currently comprised of five independent, non-executive directors and one executive director (the Managing Director) has established a corporate governance framework which complies with the Australian Securities Exchange Corporate Governance Council Principles and Recommendations. This encompasses policies, procedures and charters that support this commitment. The framework is reviewed regularly and revised in response to changes in law, developments in corporate governance and changes to Iluka’s business. It is available on Iluka’s website.

The Board has a commitment to ongoing improvement of its governance practices. In 2016, a range of changes and improvements to the Board’s work, composition and effectiveness were implemented, including:

- succession planning of the Board;
- a further review of the directors’ skills matrix;
- the recruitment and appointment of a new Managing Director and Chief Executive Officer; and
- the appointment of a new non-executive director, and retirement of an existing director.

Profiles of the directors and executives can be found on Iluka’s website.

The Board is responsible for the overall corporate governance of Iluka, including approving and overseeing Iluka’s strategic direction, strategies and financial objectives, assessing the performance of management and reporting on performance.

The Board has three established committees: Audit and Risk Committee; Nominations Committee; and People and Performance Committee.

SUSTAINABILITY GOVERNANCE

Iluka’s Board has oversight of sustainability management and performance. Monthly Sustainability Performance Reports are provided to the Board and sustainability is a standing agenda item for all meetings. In addition, the Board reviews this annual Sustainability Report including Iluka’s material issues and targets.

Iluka maintains an Executive Sustainability Forum chaired by the Manager Sustainability. This forum met biannually in 2016 to consider sustainability initiatives and direction. Group health, safety, environment and community performance is also reviewed monthly by the executive team.

10 per cent of short term incentive payments for eligible employees are linked to sustainability related objectives. In 2016 these objectives were targeted at a reduction in the Total Recordable Injury Frequency Rate (TRIFR) and the number of moderate and above environmental incidents, as shown on page 53 and in the remuneration section of the Iluka Annual Report.



Greg Martin   Tom O’Leary   Jennifer Seabrook   James (Hutch) Ranck   Gavin Rezos (retired)   Marcelo Bastos   Xiaoling Liu

SUSTAINABILITY FRAMEWORK

In 2015, to advance Iluka’s sustainability framework, Iluka undertook to progressively align the company’s sustainability practices with the International Council on Mining and Metals (ICMM) Framework for Sustainable Development. As illustrated in the targets, Iluka plans to achieve alignment with the ICMM framework by 2020.

Progress against alignment with the ICMM principles is shown in the table.

ICMM Principles		2016 Alignment Progress	
1	Apply <b>ethical business practices</b> and sound systems of corporate governance and transparency to support sustainable development.		<ul style="list-style-type: none"><li>• The Code of Conduct, Anti-bribery and Corruption Policy and Whistleblower Procedure govern Iluka’s ethical business practice.</li><li>• Tax Transparency Report published in 2016. Public support of the Extractive Industries Transparency Initiative.</li></ul>
2	<b>Integrate sustainable development</b> considerations within the corporate decision-making process.		<ul style="list-style-type: none"><li>• Sustainable development principles are integrated through corporate policy and decision-making processes.</li></ul>
3	Respect <b>human rights</b> and the interest, cultures, customs and values of employees and communities affected by it’s activities.		<ul style="list-style-type: none"><li>• New material aspect for Iluka in 2016 based on future operating profile.</li><li>• No known human rights issues.</li><li>• Human rights review commenced.</li></ul>
4	Implement effective <b>risk management</b> strategies and systems based on sound science and which account for stakeholder perceptions of risks.		<ul style="list-style-type: none"><li>• Risk management framework, is aligned with International Standard for risk management ISO 31000.</li><li>• Social Performance Standard to be implemented in 2017 to strengthen social risk assessments.</li></ul>
5	Pursue continual improvement in <b>health and safety</b> performance with the ultimate goal of zero harm.		<ul style="list-style-type: none"><li>• A commitment to continual improvement is embedded in the EHS policy.</li></ul>
6	Pursue continual improvement in <b>environmental performance</b> issues, such as water stewardship, energy use and climate change.		<ul style="list-style-type: none"><li>• A commitment to continual improvement is embedded in the EHS policy.</li></ul>
7	Contribute to conservation of <b>biodiversity</b> and integrated approaches to land use planning.		<ul style="list-style-type: none"><li>• Biodiversity research partnerships have been maintained and research progressed.</li></ul>
8	Facilitate and support the knowledge-base and systems for <b>responsible product</b> design, use, re-use, recycling and disposal of products containing metals and minerals.		<ul style="list-style-type: none"><li>• Product stewardship approach was defined in 2016 and product risk assessments commenced.</li></ul>
9	Pursue continual improvement in <b>social performance</b> and contribute to the social, economic and institutional development of host countries and communities.		<ul style="list-style-type: none"><li>• Social performance requires more robust processes that address a global footprint.</li><li>• Social Performance Standard and Procedure has been updated in 2016 and will be implemented in 2017.</li></ul>
10	Proactively <b>engage key stakeholders</b> on sustainable development challenges and opportunities in an open and transparent manner. <b>Effectively report</b> and independently verify progress and performance.		<ul style="list-style-type: none"><li>• Stakeholder Relations Policy provides commitment and directive for transparent and meaningful stakeholder engagement.</li><li>• Publication of external Sustainability Report aligned to GRI (this report).</li></ul>



GOVERNANCE

ETHICS AND CONDUCT MI

Code of conduct

Iluka is committed to high standards of conduct and has adopted a Code of Conduct, underpinned by Iluka’s values of Commitment, Integrity and Responsibility, that identifies the standard of behaviour and business practice expected of all Iluka employees and contractors. In addition, the Board has adopted a Directors’ Code of Conduct which establishes standards for the professional conduct for directors.

Iluka treats actual or suspected breaches of its Code of Conduct and policies seriously and has adopted mechanisms to ensure that suspected breaches are reported and acted upon fairly and effectively. The Whistleblower Procedure supports the Code of Conduct and is in place to enable the reporting of suspected misconduct confidentially (including via an independent hotline) without fear of discriminatory treatment, recrimination or reprisal.

Copies of the Code of Conduct, Directors’ Code of Conduct and the Whistleblower Procedure can be found in the governance section of the Iluka website.

Bribery and corruption

Iluka has zero tolerance for bribery or corruption in its business.

The company expects that its directors, officers, employees, agents, contractors and any other party representing Iluka, wherever they are in the world, will act fairly, honestly, with integrity and in compliance with the law.

This commitment is detailed in the company’s Code of Conduct, as well as specific bribery and corruption aspects, in the Anti-bribery and Corruption Policy and Anti-bribery and Corruption Procedure. The policy can be found in the governance section of the Iluka website.

The policy and procedure have been communicated to Iluka employees, contractors and suppliers by appropriate methods depending on their assessed risk exposure. A training and compliance program has been put in place for employees. Compliance with the policy is monitored and any breaches or incidents are reported to management and the Board’s Audit and Risk Committee. In 2016 Iluka engaged an external firm to conduct an Internal Audit of its Anti-bribery and Corruption Compliance Program including progress on recommendations from a 2014 review. The report found significant progress and no material findings. Iluka’s review of the relevant risks and controls within Sierra Rutile commenced in December 2016.

Iluka is implementing a process to declare actual or perceived conflicts of interest, and maintains Gift Registers for employees to document the giving or receiving of entertainment or gifts.

In 2016 there were no recorded breaches of the Iluka Anti-bribery and Corruption Policy.

SUSTAINABILITY APPROACH

Iluka's sustainability framework is underpinned by a series of policies that influence behaviour and business practice within the company	
Code of Conduct	Iluka is committed to a high standard of conduct, underpinned by its values of commitment, integrity and responsibility.
Anti-bribery and Corruption Policy	Iluka has zero tolerance for bribery or corruption in its business.
Risk Policy	Iluka’s risk management framework, aligned with the International Standard for risk management ISO 31000, sets out structured and systematic processes for the identification and management of risks in areas such as environment, injury, illness, reputation, stakeholder relations, compliance and finance.
People Policy	Iluka fosters employee accountability, commerciality and engagement by recruiting, developing and retaining a high achieving diverse workforce.
Environment, Health and Safety Policy	Iluka pursues industry leading practice in the areas of environment, health and safety.
Stakeholder Relations Policy	Iluka strives to establish and maintain mutually beneficial relationships with stakeholders.





## PEOPLE

Iluka fosters employee accountability, commerciality and engagement by recruiting, developing and retaining a high achieving diverse workforce.

Iluka's People Policy establishes the company's approach to recruiting, developing and retaining a high performing workforce to achieve Iluka's objectives. Iluka also maintains fair work policies, including an Equal Employment Opportunity and Bullying and Harassment Procedure.

Iluka encourages employee achievement through the principles of accountability, commerciality and engagement, and strives to maintain a work culture that reflects its values of commitment, integrity and responsibility. This includes a high standard of health and safety behaviour and the development of individuals, leaders and teams to achieve extraordinary performance.

Through the acquisition of Sierra Rutile, Iluka's workforce has now increased by more than 1,600 employees, with over 95 per cent of those being Sierra Leonean. Iluka will seek to maximise local content at Sierra Rutile, as guided by the Sierra Rutile Local Content Policy; and invest in training and development of local personnel during 2017.

DIVERSITY MI

Iluka's People Policy underpins the company's approach to diversity. The company respects and encourages workplace diversity and aims to create a flexible and inclusive workplace environment which assists employees to balance their responsibilities. In 2016, the Diversity Committee, continued to promote awareness of diversity and inclusion and integrate those principles into company activities, including recruitment, training and employment policies.

During 2016, Iluka's People and Performance Committee set measurable objectives for Iluka's workforce diversity of 30 per cent female and 8 per cent Indigenous employee participation to be achieved by 2018. In 2016, the company's female employment participation in Australia decreased to 27 per cent, however its female participation at senior management level increased to 18 per cent (from 17 per cent in 2015) and Board female representation to more than 30 per cent.

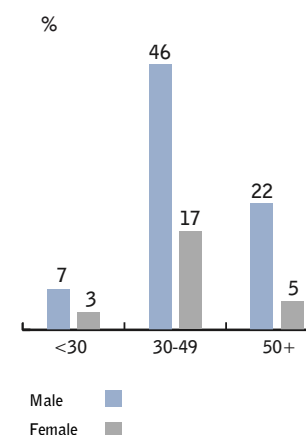
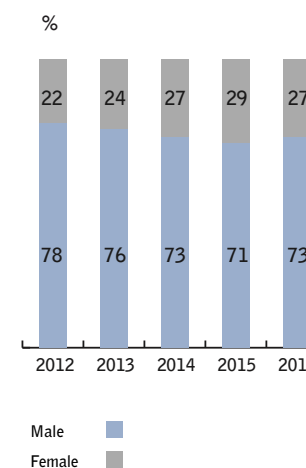
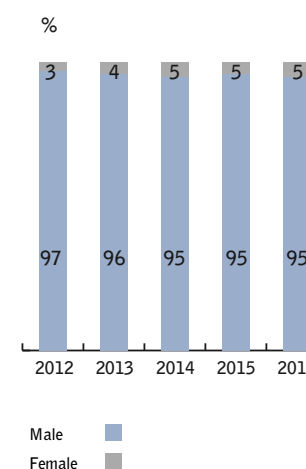
The number of Indigenous employees remained steady at 5 per cent, with the majority based at the Jacinth-Ambrosia operation in South Australia. The operation maintained its Aboriginal participation, despite idling in April 2016, by redeploying employees to rehabilitation roles. Partnership programs with the Clontarf Foundation and SHINE continued in 2016 and focussed on creating employment pathways for Aboriginal youth.

## 2016 SUMMARY WORKFORCE PROFILE

- >700 direct employees globally, predominantly in Australia
- During the course of the year, Iluka has hired 78 new employees. However, as a result of the idling of the Jacinth-Ambrosia mining operation, a progressive transition to rehabilitation in the United States and a review of the company's support functions, the company decreased its workforce by approximately 120 positions.
- Annual average contractors reduced by 760 to 560 due to the idling of the Jacinth-Ambrosia operation
- 27 per cent female / 73 per cent male<sup>1</sup>
- 5 per cent Australian workforce is Indigenous<sup>2</sup>
- <2 per cent recognised disability<sup>2</sup>
- 8 per cent of employees have flexible work arrangements
- 11 per cent employee initiated turnover

<sup>1</sup> Percentage reflects Australian workforce participation

<sup>2</sup> Iluka respects employee privacy, data is identified employees only

AGE DIVERSITY  
(AUSTRALIA)GENDER DIVERSITY  
(AUSTRALIA)INDIGENOUS DIVERSITY  
(AUSTRALIA)



PEOPLE

DIVERSITY ACHIEVEMENTS

Area of Focus	Objectives	Progress
Promote awareness of diversity	Employees and stakeholders have access to meaningful diversity information	<ul style="list-style-type: none"><li>Iluka’s People Policy and Diversity Standard is accessible to employees online and at Iluka locations.</li><li>Three Diversity Committee meetings were held during 2016.</li><li>Diversity initiatives and outcomes were reported to the executive and the People and Performance Committee of the Board.</li><li>Iluka hosted a Women in Mining Western Australia event.</li></ul>
Integrate workplace diversity principles into company activities	People management practices implemented to reflect diversity and inclusion	<ul style="list-style-type: none"><li>Behavioural expectation (Code of Conduct and Equal Employment Opportunity) training continued during the year.</li><li>Gender pay equity review completed.</li><li>Workplace Gender Equality Agency Report submitted for 2015-2016.</li></ul>
Attract, develop and retain employees across age ranges, people with a disability, women and Indigenous people	<p>Achieve 30 per cent gender diversity by 2018*</p> <p>Achieve 8 per cent Indigenous diversity by 2018*</p> <p>Provide sustainable employment opportunities for people with disabilities*</p>	<ul style="list-style-type: none"><li>27 per cent female representation in Australia.</li><li>Sponsorship partnership with Clontarf Foundation and SHINE in Western Australia.</li><li>Indigenous employment remained steady at 5 per cent.</li><li>Employment of &lt;2 per cent with a recognised disability, increasing from 2015 with the appointment of four employees in the Perth office.</li></ul>
Create a flexible workplace culture which assists employees to balance their responsibilities	Flexible employment arrangements supported	<ul style="list-style-type: none"><li>8 per cent employees on flexible work arrangements, including part-time, working from home, and modified start and finish times.</li></ul>

\*Objectives and strategies are currently Australian-based

WORKFORCE PROFILE

Workforce Profile from the 2015-2016 Workplace Gender Equality Agency Report (excluding Sierra Rutile)*									
	Female			Male			Total	%	
	Full time	Part time	Casual	Full time	Part time	Casual		Female	Male
Managing Director	-	-	-	1	-	-	1	-	100
Key management personnel	-	-	-	3	-	-	3	-	100
Executives/general managers	1	-	-	6	-	-	7	14	86
Senior managers	3	-	-	18	-	-	21	14	86
Other managers	4	5	-	31	-	-	40	23	78
Professionals	67	30	4	167	7	1	276	37	63
Technicians and trade	25	2	-	102	2	-	131	21	79
Clerical and administrative	45	15	-	8	3	-	71	85	15
Machinery operators and drivers	15	1	1	188	1	-	206	8	92
Other	-	-	-	-	-	-	-	-	-
Total	160	53	5	524	13	1	756	29	71

\*Workplace Gender Equality Agency numbers for Australian operations as at 31 March 2016





## PEOPLE

## ATTRACTING, DEVELOPING AND RETAINING EMPLOYEES MI

Iluka considers employee development important and invests in building employees' capabilities and skills. The development of employees is critical to an engaged and high achieving performance culture that improves team effectiveness increases business effectiveness and delivers Iluka's objective.

Programs include:

- apprenticeships and traineeships;
- employing vacation students and graduates;
- technical and professional development; and
- management and leadership development.

Internal mechanisms are utilised to identify high performing individuals and to facilitate succession planning across all levels of the company. Succession planning is in place for leadership positions, including the Managing Director and his direct reports.



A number of development programs were run throughout 2016. These included:

1. **Mentoring program.** The program matched 13 high potential employees and successors with General Managers and senior leaders. The program aimed to complement Iluka's business strategy by engaging, retaining and developing high potential employees, as well as creating an empowering and supportive culture.
2. **Senior management conference.** A biennial Conference was held for 73 senior managers who convened to explore Iluka's 'Past, Present and Future'. A cross-section of leaders, including the pairing of mentors and mentees, were accountable for preparing and presenting content and facilitating activities.
3. **Supervisor development programs.** The programs are designed to provide leadership skills for supervisors and employees identified as supervisor successors or high potential employees for the future. 15 employees from the South West of Western Australia successfully completed the program in 2016.
4. **Innovation workshops.** The program was designed to increase employee participation in continuous improvement and innovation. 33 innovation 'champions' attended a four day workshop to prepare them for their roles as innovation workshop facilitators, and change agents in the business. The innovation workshops focused on developing understanding and participant skill sets enabling individuals to undertake post-workshop initiatives.

## TRAINING

Iluka invests significant resources in training compliance and ensuring that employees are competent to undertake work activities.

During 2016, there were 7,582 training attendances recorded.

A total of 10,530 hours of training were conducted through face-to-face (9,329 hours) and online training (1,201 hours) activities.

Females made up 27 per cent of all training participants; and received training for a total of 1,684 hours or 16 per cent of all training hours undertaken.

11 per cent of all training completed was through online eLearning modules.





## HEALTH AND SAFETY

Iluka is committed to maintaining a fatality-free workplace, eliminating injuries and protecting the health and wellbeing of its people.



Iluka's health and safety approach focuses on creating a culture which encourages all members of its workforce to be leaders in creating a safe work environment. This is supported by Iluka standards outlining minimum requirements of performance; implementation of targeted programs and facilitated training; and incident investigation processes.

Regular communication about health and safety at all levels of the business is integral to promoting Iluka's safe work environment. Health and safety meetings are routinely held at a departmental level to identify improvement areas and to ensure that concerns are addressed. Field safety visits are regularly performed to ensure operational activities are meeting standard requirements and to identify improvements. Scheduled workplace inspections are carried out as part of maintaining a safe work environment. Investigations are undertaken for serious incidents to ensure the cause is identified, that appropriate steps are taken to avoid repetition of the incident and the key learnings shared.

Protecting the health and wellbeing of employees and contractors is equally as important as their safety. Iluka is committed to identifying and managing occupational exposure risks, minimising occurrences of occupational illness and promoting healthy lifestyles.

### FATALITY-FREE MI

Iluka promotes a culture that aims to minimise the severity and frequency of safety incidents and to be fatality-free.

Safety performance is monitored via a series of indicators, such as the number of safety visits, planned workplace inspections and the identification of near hits and hazards. These statistics are detailed in the data tables section, page 50, and summarised on the next page.

In 2016 Iluka recorded one lost time injury, eight medical treatment injuries and three restricted work cases. Two of these injuries were to employees and the remainder to contractors. All injured persons were male.

Iluka's primary safety measures, in accordance with industry practice, include the Total Recordable Injury Frequency Rate (TRIFR) and the Lost Time Injury Frequency Rate (LTIFR). These measures are calculated per million hours worked by Iluka employees and contractors.

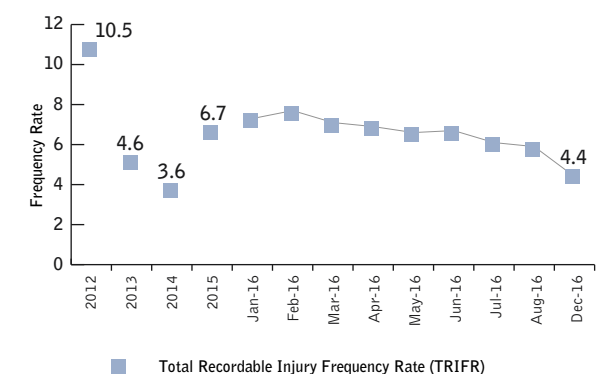
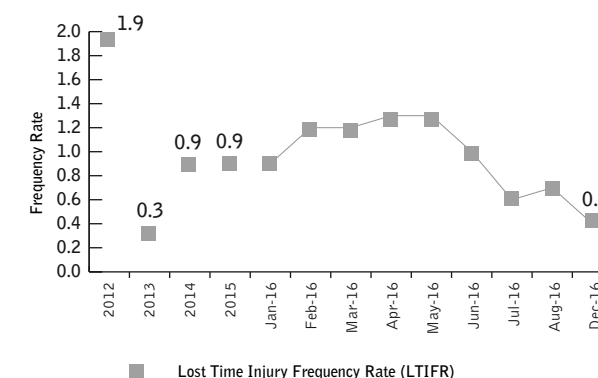
For 2016, the TRIFR decreased from 6.7 in 2015 to 4.4. This is in line with ICMM industry average TRIFR of 4.74 (based on 2015 reporting period). The LTIFR reduced from 0.9 in 2015 to 0.4 in 2016.

The severity of incidents continued to reduce with the single LTI resulting in three days lost during the year.

As a continued focus on preventing fatalities, Serious Potential Incidents (SPI), where there is a potential consequence of a fatality regardless of likelihood, continue to be monitored and investigated.

There were 13 SPIs recorded in 2016 compared to 21 in 2015. The majority of SPIs were related to surface mobile equipment, light vehicles and road haulage.

During the period commencing 7 December when Iluka took control of Sierra Rutile, through to 31 December, there was one LTI and one SPI recorded at Sierra Rutile. Injury reporting systems and practices at Sierra Rutile are currently being reviewed, and Iluka's acquisition of Sierra Rutile comes with a commitment to implement a range of safety improvement measures and achieve the progressive alignment of the operation with the Iluka safety and risk mitigation framework.



### EXPOSURE TO HEALTH HAZARDS MI

Iluka conducts occupational exposure monitoring annually across the business to quantitatively assess potential exposure to identified contaminants, and to assess the effectiveness of risk mitigation strategies. The monitoring programs are based on risk assessments and are guided by Iluka's standards and guidelines.

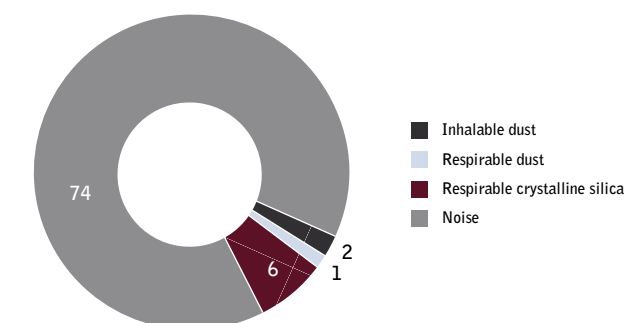
Progress and performance results for each monitoring program are reviewed by the Board quarterly, inclusive of occupational exposure limit (OEL) exceedances.

Based on Iluka's operational risk profile, the programs typically focus on monitoring exposure to airborne contaminants including respirable dust, respirable crystalline silica, inhalable dust, noise and radiation.

Management plans are developed and implemented at a site level for significant occupational hygiene risks and include detail on risk controls, monitoring programs, designated responsibilities, objectives, targets and timeframes.

During 2016, there were 83 exceedances of OELs recorded, with the majority (89 per cent) attributed to noise. Radiation monitoring results and dose assessments for the workforce did not record any employees and contractors above the regulatory annual limit. For more on Iluka's management of naturally occurring radioactive material (NORM), refer to page 44.

### NUMBER OF EXPOSURE EXCEEDANCES ABOVE THE OEL



Noise exposure remains a potential risk across all operational and exploration sites at Iluka. As a result, a focus on reducing exposure has been included in sustainability targets, see page 11.

Iluka's noise induced hearing loss (NIHL) group guidance was revised during the year to align the reporting methodology with ICMM health and safety performance indicators. It is anticipated that this will cause an increase in reported cases of occupational illnesses related to NIHL cases for the 2017 reporting period.

In 2016, there were two cases of occupational illnesses reported. Both were related to insect borne diseases, one in Australia and the other in the United States.



## HEALTH AND SAFETY

### CASE STUDIES

#### RADIATION DOSE REGISTER

The Australian National Radiation Dose Register (ANRDR) is an electronic database designed to collect and store radiation dose information for workers who are occupationally exposed to radiation. The register is managed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and was originally established for the uranium mining and milling industry. The register ensures that records of a worker's radiation doses are maintained in a centralised register regardless of previous employers. Prior to the commencement of the ANRDR, worker doses were generally assessed and recorded by the employer. Whilst this ensured that dose records were maintained, there was no system in place to monitor the cumulative dose received by a worker who moved between different employers, industries or jurisdictions. Further information on the ANRDR can be found on the website [www.arpansa.gov.au](http://www.arpansa.gov.au).

Iluka agreed to participate in the ANRDR's pilot program for the mineral sands industry. The aim of the pilot program is to test ANDRDR's capability to accept data from the mineral sands industry, and to resolve any technical issues.



#### MENTAL HEALTH AWARENESS

Mental health awareness was elevated in 2016 by the Iluka South West operations team. The team identified a unique opportunity to highlight the importance of talking about mental health within the workplace, homes and communities. The initiative aimed to raise awareness, encourage discussion and provide tools and referral options for employees.

Iluka partnered with local Dardanup farmer, Peter Milton, and mental health awareness organisation Black Dog Ride. A steer called Winston was sponsored and taken as a mascot to various events, to increase awareness and raise funds to support mental health organisations such as Lifeline.

Winston was in attendance at the North Capel and Tutunup South R U OK Day events, where mental health awareness tool box topics were presented by members of Black Dog Ride. Winston was awarded the Reserve Champion Extra Heavy Weight at this year's Royal Show and was auctioned for an amount in excess of \$7,000. All proceeds went to Lifeline.



#### TECHNOLOGY REDUCING CONFINED SPACE ENTRY RISK

Confined spaces at Iluka include tanks, wells, pipes, silos, hoppers or other similar enclosed or partially enclosed structures. Entry into these spaces presents the risk of exposure to harmful concentrations of airborne contaminants, engulfment, suffocation and drowning.

To date, there have been limited opportunities to eliminate the requirement for workers to enter a confined space without significant engineering or design changes. During 2016 "GoPro" cameras were trialled in the South West of Western Australia to eliminate the need for persons to enter confined spaces. The cameras were fitted to a rod, or similar device, and the images from inside the confined space were then recorded or streamed directly back to mobile devices positioned outside the space. In cases where entering the confined space could not be eliminated, the camera was worn by the entrant (using a chest harness) and images streamed back to the watch-person for visual monitoring.

Applying the technology to confined spaces has enabled:

- improved pre-task risk assessments by reviewing pre-recorded footage;
- improved effectiveness of confined space training through using site-specific footage; and
- visual sharing of learning's across other Iluka sites.



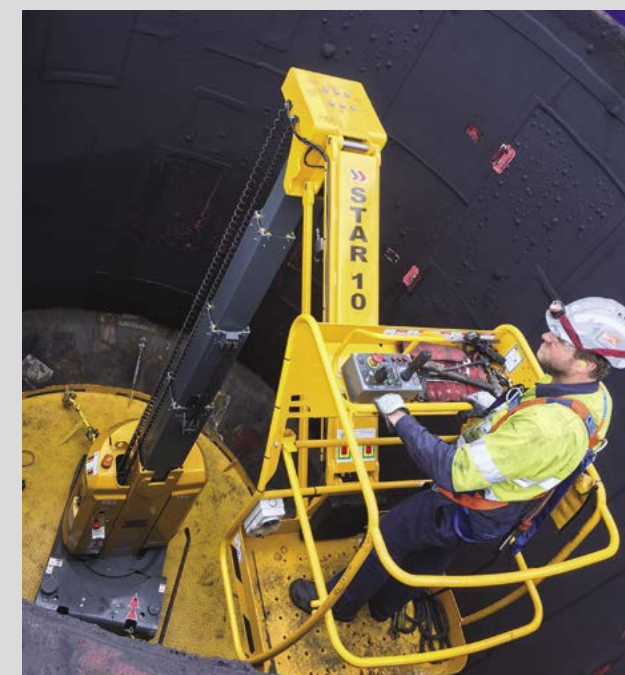
#### SAFETY IMPROVEMENT INITIATIVE

To support Iluka's culture of promoting all members of its workforce to be leaders in creating a safe work environment, the company's South West operations team implemented monthly Sustainability Improvement Project Awards. Employees are encouraged to identify and submit improvements for sustainability practices on site.

Through this initiative, a safety improvement for the approach to relining aeration tanks was implemented.

Aeration tank relines have historically been performed by assembling a large scaffold within each tank. This typically takes several days and the size, configuration and confined space environment of the scaffold presents a number of safety risks in both its construction and usage.

The maintenance team identified that relining could instead be carried out by using elevated work platforms located on a purpose built false-floor. This method takes only a few hours to set up and improves the safety risks associated with working from height and in confined spaces.





## SOCIAL PERFORMANCE

Iluka believes positive social performance is a critical component of the sustainability of Iluka's activities.

In addition to meeting local regulations, all Iluka sites and projects must adhere to a suite of internal social performance requirements. These were updated in 2016 and include:

- the robust identification, management and monitoring of social impacts and risks;
- responsive management of grievances;
- meaningful engagement with stakeholders; and
- where applicable, additional requirements such as human rights impacts assessments, local content plans and cultural heritage management plans are developed.

The expanded global footprint of where Iluka is operating, exploring and developing projects requires the company to be proactive in identifying and addressing a broader range of social issues, risks and impacts.

To enhance Iluka's social performance, during 2016 the company focussed on:

- modifying the Environment, Health and Safety Management System to better govern social performance;
- strengthening internal capability to identify and address social risks to the business;
- identifying and planning for social performance priorities in new jurisdictions; and
- commencing a human rights review.

### STAKEHOLDER ENGAGEMENT MI

Support from host communities in particular is considered vital for the ongoing stability and sustainability of Iluka's activities.

Stakeholder engagement is governed through Iluka's Stakeholder Relations Policy. All sites and projects are required to maintain a Stakeholder Engagement Plan, which includes stakeholder mapping that is regularly reviewed in terms of issues, impact and influence. Iluka sites and projects regularly review and map stakeholders - their issues, influence and how they might be impacted. Specific groups, such as vulnerable people, groups with collective or individual rights and any groups that may be disproportionately impacted, are identified. Planned engagement activities are shaped by business activities, identified social risks and the needs and interests of stakeholders. Iluka seeks to engage with stakeholders in a range of ways, including multi-stakeholder committees, local resident visits, newsletters, community events and other regular meetings.



### INDIGENOUS RELATIONS AND CULTURAL HERITAGE MI

At sites where cultural heritage is identified, a Cultural Heritage Management Plan is prepared and maintained to ensure the protection of the sites and to meet regulatory requirements. Where Indigenous people have rights over, or special connections to, the land where mining related activities are planned or located, specific engagement is undertaken.

Iluka's Native Title Mining Agreement with the Far West Coast (FWC) Native Title holders has been in place since the commencement of operations at Jacinth-Ambrosia in South Australia. Further information on the success of the Aboriginal employment and contracting is on pages 25 and 36.

In Western Australia, Iluka has a voluntary agreement with the Yued People in relation to the proposed Cataby mineral sands project. Once the project moves into construction and operations, regular meetings will be held with the Implementation Committee. This group has been established to facilitate implementation of the agreed Aboriginal Heritage Protocol, progress employment, training and business opportunities for Yued people, coordinate cultural awareness training, and provide a forum for regular engagement.

During 2016, there were no incidents of violations involving rights of Indigenous people.

### HUMAN RIGHTS MI

Given Iluka's global activities, including the recent acquisition of Sierra Rutile and exploration and development activities in Sri Lanka, the company has adopted a proactive approach to ensuring human rights are respected, in accordance with the UN Guiding Principles for Human Rights.

The first step, taken in 2016, was to commence an internal human rights review. The review is examining potential human rights risks and impacts relating to activities globally, including operations, projects, logistics and shipping. Iluka's performance target is to develop and implement a human rights work program by 2018.

### GRIEVANCE MANAGEMENT

All Iluka sites and projects maintain a local grievance mechanism, developed in accordance with Iluka's Stakeholder Complaint Reporting and Resolution Procedure. Complaints are recorded, investigated and responded to, and those of a medium to high-level risk classification are reported through to the executive and Board as part of the monthly Sustainability Performance Report.

The company recognise that, at times, its activities can impact upon neighbours, community or interest groups. Iluka monitors its operations for potential issues or matters of local concern and has site-based personnel, who are able to respond to stakeholder concerns, and, where required, engage with regulators.

In 2016, Iluka received 27 public complaints (28 in 2015). All complaints were registered as being low level risk classification (Level 1) and were variable in nature with no recurring issues.

### SOCIAL INVESTMENT

Iluka engages in a wide range of partnerships and contributes to a large number of community programs and events. Some of these programs are closely tied to business objectives, such as employee diversity, environmental excellence and local employment and procurement, while others are influenced by regional and local development priorities.



In 2016 Iluka contributed \$844,000 globally. This included \$550,000 in corporate level programs in Australia, and \$294,000 to site and regional level initiatives across the globe where Iluka has a presence.

Iluka's maintains several corporate partnerships including:

- University of Western Australia – Iluka Chair in Vegetation Science and Biogeography, Western Australia;
- Virginia Polytechnic Institute and State University in Blacksburg, Virginia;
- Clontarf Foundation, Australia;
- OCHRE Contemporary Dance Company, Western Australia;
- Women in Resources Award, Western Australia; and
- Nature Play, Western Australia.

All Iluka sites make a range of contributions to their local communities. These include programs and events in the areas of youth, education, sport, culture, community safety, mental health and the arts. In 2016 over 80 organisations, events or groups received contributions from Iluka, including:

- The Royal Flying Doctor Service, Australia;
- The Ride to Conquer Cancer, Western Australia;
- Adopt-A-School Programme, Halifax County, USA;
- The Ceylon Chamber of Commerce Disaster Relief Fund USA;
- Balranald 5 Rivers Festival, New South Wales; and
- SHINE, Western Australia.

Iluka does not grant applications for support for religious or political activities, and does not provide funds to political parties.





## SOCIAL PERFORMANCE

### CASE STUDIES

#### EARLY STAGE ENGAGEMENT

Iluka's exploration team in Kazakhstan adopted a proactive approach to early stage engagement prior to undertaking the 2016 field exploration program in the Kostanay and North Kazakhstan Oblasts (districts).

While local regulations require some limited public consultation hearings during the impact assessment stage of mineral development projects, Iluka's Kazakhstan team elected to undertake a dedicated program of engagement with key local stakeholders in advance of these activities.

The objectives were to: build relationships with local stakeholders; establish Iluka as an experienced and credible operator; provide information about the upcoming drilling program; and manage expectations relating to employment opportunities.

A series of formal and informal engagement activities were undertaken, primarily with regional and local akimat (government) officials and community representatives. The team included Iluka technical specialists and an independent cultural and language advisor. Fact sheets were produced and distributed, published in Russian and Kazakh, and maps of drilling areas and product samples were shared during meetings. A formal grievance mechanism was also established to ensure the project team were made aware of any issues or concerns.

This engagement program has generated support from local government leaders and key stakeholders. It has also allowed the project team to create some early stage awareness of the issues of interest and concern amongst these groups.



#### EXCEEDING ABORIGINAL EMPLOYMENT TARGETS

In South Australia, the Far-West Coast (FWC) traditional owners are the custodians of the land on which the Jacinth-Ambrosia operation has been established. A Native Title Mining Agreement (NTMA) between Iluka and the FWC was established prior to the commencement of operations. This includes support for FWC development through education, training and business development.

In accordance with the NTMA, the company implemented an Employment, Education and Training Program aimed at achieving and maintaining a high-level of FWC employment throughout the life of the operation, with a target of 20 per cent Aboriginal workforce representation.

In April 2016, mining and concentrating operations were idled at Jacinth-Ambrosia and the workforce was significantly reduced. The current site focus is on undertaking rehabilitation work until operations re-commence. Iluka opted to undertake this rehabilitation work program itself (normally completed by contractors) in order to provide alternate duties and retain personnel until the re-commencement of operations.

The Jacinth-Ambrosia operation has maintained a level of 26 per cent FWC Aboriginal representation in the workforce, exceeding the 20 per cent target - even during this idling period.

Personnel retained for rehabilitation earthmoving roles are being trained in various nationally-recognised surface mobile equipment licences. This also provides up-skilling opportunities in readiness for the restart of full operations.

A Jacinth-Ambrosia Production Re-Start FWC Employment Strategy has also been developed. Core to this re-start strategy is a FWC talent identification work experience program, which provides exposure for FWC jobseekers to the mining environment and various employment pathways into the industry.



#### PROVIDING EMERGENCY RELIEF

During early May 2016, Sri Lanka experienced an exceptional period of heavy rains, which resulted in landslides and widespread flooding. There were numerous fatalities, hundreds of injuries and thousands of people were displaced with permanent damage to homes, crops and businesses. The Puttalam district (the location of the proposed Iluka project site) was affected by severe flooding.

The Iluka team in Colombo reacted swiftly to requests for assistance from the local authorities as well as from the committee of the Sri Lanka–Australia–New Zealand Business Council (SLANZBC). As a result, food items such as rice, sugar, tinned fish and drinking water, as well as boxes of children's clothing, were purchased in Colombo and delivered to the disaster centres near Puttalam which had been established to support displaced families.



In addition, a small financial donation was made to the SLANZBC organised fund with a request that it is primarily directed at relief efforts in the company's stakeholder area of Puttalam. Subsequently, the funds contributed to a program of re-constructing damaged houses in the area.

Iluka was one of the first responders from the business community and was praised by local authorities, the SLANZBC and the Australian High Commission for acting swiftly and generously at a time when the people of Sri Lanka were facing such difficult circumstances.







**\$204m**  
rehabilitation spend over  
past 5 years

5 year "open"  
area reduction  
**23%** ↓

## ENVIRONMENT

Iluka's approach to environmental management is based on understanding and minimising the potential impacts of its operations on the environment.

Iluka is committed to leading practice in environmental management as outlined in the Environment, Health and Safety Policy and underpinned by the company's environment, health and safety management system.

Activities are conducted such that adverse impacts on existing and potential environmental values, including ecosystem function, abundance, diversity, distribution, integrity and productivity are understood and minimised. The individual environmental requirements of each site are considered and site specific procedures and work instructions are developed in compliance with Iluka's management system.

Iluka recognises that compliance with legislative requirements is a minimum standard that should be achieved while performing at, or beyond legal requirements. Iluka has a team of multi-disciplinary technical experts to integrate leading closure and rehabilitation practice across all phases of mine planning and development.

### BIODIVERSITY

Iluka owns, leases or manages a number of operational, rehabilitation and future project sites that contain areas of high biodiversity value. Iluka's management approach is aimed at the protection and enhancement of biodiversity values and to prevent adverse impacts from occurring, or if this is not possible, to limit their significance to an acceptable level. A hierarchy of controls - avoidance, minimisation, restoration, biodiversity offsets or other conservation actions - is followed and tailored to the specific potential impact. Consideration of biodiversity values within each of the planning, operational and rehabilitation phases, ensures that biodiversity management occurs at each stage of implementation. At this level, practical and quantifiable outcomes can be achieved in protecting and enhancing biodiversity at Iluka's sites.

The protection and enhancement of biodiversity is formalised in a range of management measures. In the planning phase these include:

- pre-mine or baseline surveys of both flora and fauna by qualified experts;
- commissioning of vegetation mapping of undisturbed native vegetation areas;
- assessment of groundwater extraction on groundwater dependent ecosystems;
- determination of the direct and indirect impacts on biodiversity; and
- identification of environmental offsets to mitigate potential residual impacts on biodiversity.

Operational sites have a number of management plans that include mitigation measures to protect and address specific biodiversity aspects such as fauna, native vegetation, pest/weed species, plant disease (such as dieback) and soil management. The plans include measures to control access to areas of importance for biodiversity and protected areas; controls for vegetation and/or fauna removal prior to disturbance; and monitoring of specific fauna and flora. Collection of seed can occur prior to mining and stored and/or treated for later use during rehabilitation. Similarly native vegetation on the mine path can be removed prior to mining and stored separately for potential use as mulch for soil stabilisation, a seed source or direct transferred to rehabilitated areas.

The company develops and implements leading practice in protecting and enhancing biodiversity through implementation of scientific research. Iluka supports fundamental scientific enquiry through partnerships with research institutions.

### KEY PARTNERSHIPS

#### ■ The University of Western Australia

Iluka formed a partnership with The University of Western Australia in March 2013 to research the restoration of areas of kwongan healthland at Eneabba in the Mid West of Western Australia. The partnership involves sponsorship of the Chair in Vegetation Science and Biogeography with a five-year term ending December 2017.

#### ■ University of Adelaide

Iluka has a strong history of supporting ecological research at the Jacinth-Ambrosia in South Australia, through its partnership with the University of Adelaide. The research programs and partnerships complement the onsite rehabilitation activities and contribute to the broader understanding of revegetation in saline and arid environments.

#### ■ Botanic Gardens and Parks Authority

Iluka supports research by the Botanic Gardens and Parks Authority (Kings Park Science Directorate) into the ecology and restoration of known vegetation post mining including the propagation of threatened flora and investigating conservation genetics in Western Australia.

Iluka is also continuously improving its capability to propagate species through its nationally accredited site nursery (Nursery Industry Accreditation Scheme Australia). Recent nursery developments have focused on propagation of difficult-to-grow species via cuttings, and sedge propagation via division.



## ENVIRONMENT

### LAND REHABILITATION AND CLOSURE MI

Land management and rehabilitation are a major focus for Iluka and constitute a significant, continuous part of the company's activities. Rehabilitation efforts are aligned with leading practice and undertaken in a socially and environmentally responsible manner.

Closure planning begins before mining starts and where practicable, rehabilitation occurs progressively with ongoing mining activity.

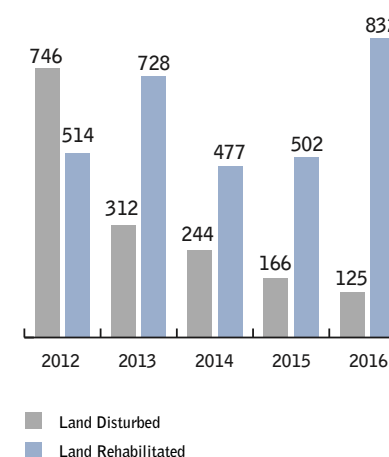
Mine closure plans are developed in the planning phase of a project and are updated as the operations move through the project life cycle. During rehabilitation, mine voids are backfilled and covered with stockpiled soils to recreate a soil profile and final landform that complements the designated final land use. As at the end of 2016, 12 sites had completed closure plans, with the remaining four sites partially completing closure plans.

Closure risk assessments are updated annually and precede the annual review of closure provisioning. The company undertakes research projects, where necessary, to support rehabilitation planning and activities.

During 2016, Iluka rehabilitated 832 hectares of land in Australia and the United States. Overall land disturbance for the year was 125 hectares.

Iluka's rehabilitation efforts are not only focussed on protecting and reinstating biodiversity, but also ensuring that where agricultural land is impacted, it is restored to functional and productive land. Significant rehabilitation challenges associated with soils after mining include heavy compaction and lack of organic matter, which together may restrict root growth and water holding capacity. In the United States, Iluka has a key partnership with the Virginia Polytechnic Institute and State University in Blacksburg focusing on soil rehabilitation methods to improve crop yields on post-mining farmland, as detailed on page 42.

### LAND DISTURBED LAND REHABILITATED (HECTARES)



### CASE STUDY

#### DIGITAL HERBARIUM IMPROVING BOTANICAL KNOWLEDGE

The Iluka team has developed a South West Digital Herbarium to assist with identification of juvenile native plants during the rehabilitation and revegetation of the Yoganup mine site, located approximately 10 kilometres from Capel in the South West of Western Australia. The Herbarium was produced during Iluka's rehabilitation of the Yoganup ecological corridor, a 12 hectare corridor of native vegetation linking the state forest on the Whicher Scarp with a block of significant vegetation on the coastal plain.

The Herbarium contains information on botanical descriptions, flowering, seed collection timing, locations, germination numbers per gram, treatments and storage to guide rehabilitation activities with photographic images for each species also included.

Iluka has made the Herbarium available to the public. The approach to the Herbarium has guided general environmental management and planning practices in Western Australia. For further information, visit the Biodiversity page on the Iluka website.





## CASE STUDIES

### IMPROVING CROP YIELDS

Virginia Polytechnic Institute and State University in Blacksburg, Virginia, and Iluka have collaborated for over 25 years to measure rehabilitation outcomes by comparing post-mining crop yields with crop yields in adjacent undisturbed farmlands and average crop yields in the surrounding region.

The experimental work began with the establishment of a 45 hectare post-mining plot, divided into areas of soil rehabilitation methods. These methods included soil ripping treatments, biosolids as soil enhancements and re-application of topsoil. The land was managed intensively with cropping typical of the area and compared to a nearby undisturbed plot of prime farmland using identical cropping management techniques. The research has monitored results between 2004 and 2014, with the results published in 2014. Crop yields in the experimental plots have been lower than the prime farmland, however have generally exceeded the local county average noting the plots had the benefit of irrigation and the county average includes irrigated and non-irrigated land.

Protocols for the rehabilitation of prime agricultural lands following mineral sands mining have been developed and implemented as a result of this collaborative project.



### ILUKA ACHIEVES RELINQUISHMENT

Iluka has met its rehabilitation and mine closure requirements for two tenements at the Yoganup Extended mine site, located in the South West of Western Australia. Few mine sites in Australia have had rehabilitated land "signed off" and environmental obligations relinquished by regulators. There is little regulatory information regarding this process and few case studies or precedent information available regarding acceptable standards.

In early 2016, Iluka developed and submitted a Rehabilitation Completion Report to the Western Australian Department of Mines and Petroleum (DMP) for the two tenements at the Yoganup Extended mine site. The two tenements were mined between 2000 and 2001, with agricultural rehabilitation completed in 2007.

DMP advised that Iluka had met its environmental and rehabilitation requirements and confirmed that Iluka has relinquished its environmental obligations for the tenements, under the *Mining Act 1978*.

The relinquishment of environmental obligations on the tenements is a significant achievement and reflects Iluka's commitment to leading practice environmental management.

This milestone also demonstrates that Iluka's rehabilitation standards and closure processes are well aligned with stakeholder expectations which, provides greater certainty of achieving relinquishment for other sites in Australia.

The DMP has published Iluka's relinquishment success as a case study in their September 2016 edition of Environment eNewsletter.





ENVIRONMENT

MINERAL WASTE MANAGEMENT MI

Mineral waste is the definition given to the materials removed from the mine void that are separated from the valuable minerals over various processing stages. These are handled, stored and disposed of according to their properties, environmental factors and regulations. Many wastes are returned to the mine void to enable the formation of a final land surface similar to the pre-mining environment.

Where mineral waste is contained in a slurry form, either within mine voids or in off-path storage, Iluka utilises tailings storage facilities (TSFs). Iluka is committed to minimising, and where possible, eliminating risks to the environment, people and property associated with the use of TSFs. Mineral wastes stored in TSFs include clay fines; sand tails; co-disposal (sand and clay) tailings; and tailings from mineral separation and synthetic rutile plants. Iluka adopts the Australian National Committee of Large Dams guidelines, and state or country specific guidelines. Annual audits by external geotechnical specialists are conducted to confirm structural integrity and to assess that the design is appropriate for the current situation.

Iluka acknowledges that in the past, some practices of managing mineral waste streams may not meet current standards. Iluka acknowledges this and monitors legacy issues associated with historic activities, with the principal focus on the protection of human health and the environment.

The total amount of overburden, rock, mine and processing tailings (including sand tails and clay fines) for 2016 was 5,913,398 tonnes, down 69 per cent from 2015 (refer to page 53).

Naturally Occurring Radioactive Material

Mineral sands and clay, soils, rocks and many ores contain levels of natural occurring radioactive material. Concentrations of this natural occurring radioactive material in most natural substances are low, however any process where the material is extracted from the earth and processed can concentrate the natural occurring radioactive material in products, by-product or waste streams. For this reason, stringent and internationally-accepted radiation management standards are adopted to minimize potential risk to human health or the environment.

Regulatory agencies control the risk associated with radioactive streams by setting limits and regulations that control disposal and storage activities. Radiation regulations are based on advice from the International Commission on Radiological Protection, founded on radiobiology research and epidemiological studies.

Sierra Rutile geotechnical risks

At the time of the Sierra Rutile acquisition in December 2016, Iluka identified geotechnical risks associated with freeboard at a number of containment ponds as well as the structural integrity of its impoundment structures. In addition, an embankment posed a geotechnical risk due to a high rate of seepage through the structure. Structural improvements have been made to the current tailings ponds and a number of TSFs that support the current mining operations have been dewatered to meet the freeboard requirements. Piezometers were installed to monitor the phreatic surface to aid in determining the geotechnical stability. To date, measurements illustrate that the pond dewatering is lowering the risk by reducing the seepage through the embankment. Surveillance of the pond levels and seepage has been implemented and is tracked as part of Iluka's geotechnical risk reporting.

Douglas by-product disposal

Iluka commenced mining the Douglas mineral sands deposits, located near Horsham, Victoria, in 2005. Ore from Iluka's mines in Victoria and South Australia is separated into valuable minerals (zircon, rutile and ilmenite) and by-products (sands, clay and gypsum) at the company's Hamilton mineral separation plant.

Since 2006, Iluka has been disposing of the by-products from the Hamilton mineral separation plant at the former Douglas mine site in accordance with all regulatory requirements. In 27 January 2017, the Victorian Civil and Administrative Tribunal (VCAT) approved the continuation of this practice.

Iluka welcomes this decision, which is available on the tribunal's website. The company notes that VCAT's findings on health, safety and environmental matters are consistent with Iluka's longstanding position and operational track record; as well as separate determinations made by State Government regulatory agencies and independent technical experts.



CASE STUDY

FLUOROCYCLE SCHEME

FluoroCycle is a voluntary product stewardship scheme that seeks to increase the national recycling rate of waste mercury-containing lamps. It is estimated that currently 95 per cent of mercury-containing lamps are sent to landfill in Australia. Mercury in landfill converts to the toxic methylmercury and spreads through the wider environment through air, water and soil. Lamp recycling can reduce the amount of mercury being sent to landfill. The scheme targets the commercial and industrial sectors where the majority of waste lamps are generated.

Iluka's Jacinth-Ambrosia operations became a signatory to the scheme in 2011. Signatories receive public recognition for their commitment to the environment. Since 2011, Jacinth-Ambrosia have recycled 1,229kg of fluoro tubes/globes and recently received a certificate of Recycling Excellence from the company which recycles the fluoros – CMA Ecocycle.



PRODUCT STEWARDSHIP

Over the course of 2016, Iluka developed an approach to product stewardship that follows the ICMM Sustainable Development Principles which promotes the safe production, use, recycling and disposal of metals and their products.

Iluka's product stewardship approach seeks to guide the application of mineral sand products to ensure a thorough understanding of the health, safety and environmental benefits and risks and to promote their responsible use. This is done by integrating product stewardship throughout business decisions and materials management. Iluka engages with customers to create opportunities that promote the responsible use of mineral sands products. Iluka supports scientific research activities and participates in industry consortia to support productive utilisation of products.

Iluka also identifies market opportunities for a number of by-products (or secondary products) including iron concentrate and activated carbon. These products were traditionally seen as a waste, however are now successfully used in other applications. In addition, Iluka re-treats tailings that were previously viewed as uneconomic or a waste, to produce products and reduce rehabilitation legacies.

All of Iluka's products and by-products sold into global markets have an associated Safety Data Sheet (SDS). The SDS informs customers of the possible hazards of materials and provides information on the safe storage, handling and disposal of those materials. Iluka's SDSs conform to the Global Harmonising System of Classification and Labelling of Chemicals and is translated into the native language of customers.



Iluka was the principal sponsor for the 11th International Mine Closure Conference, held in Perth, Western Australia in March 2016.

Iluka's Principal Rehabilitation Scientist also presented at the Revegetation Industry Association of Western Australia 2016 - "Setting the Standards" conference in September 2016 on "Innovation in re-vegetation after mineral sands mining".



ENVIRONMENT

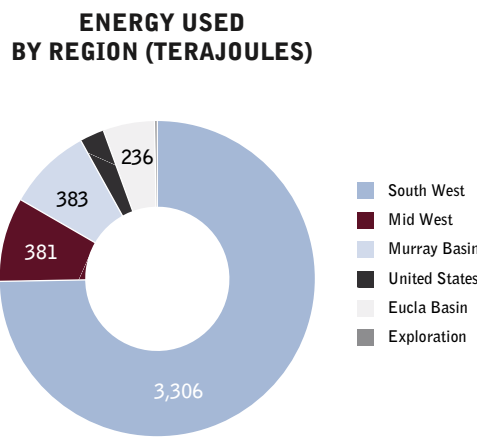
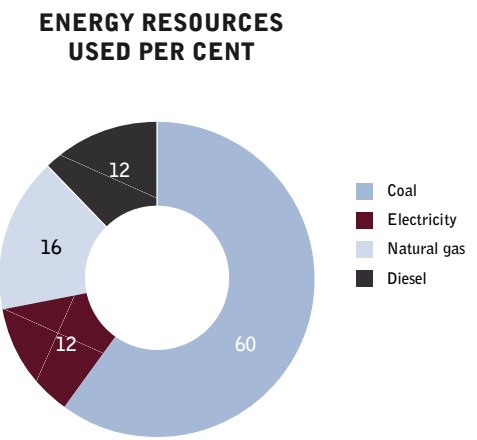
ENERGY AND GREENHOUSE GAS EMISSIONS

Energy use and greenhouse gas (GHG) emissions are recognised for their economic, social, environmental and regulatory impacts. Iluka aims to conserve energy, measure outputs, monitor impacts and is committed to meeting current and future regulatory requirements.

Methodologies used by Iluka to calculate Scope 1 emissions include direct measurements of energy sources consumed, and calculations based on site-specific data, and those based on published criteria - such as emission factors and global warming potential values. In Australia, Iluka reports its emissions and energy consumption under the National Greenhouse and Energy Reporting System (NGER).

Iluka’s activities are inherently energy-intensive with the majority of its GHG emissions generated from energy use during mining and processing. Energy consumption for 2016 has decreased by 2 per cent. Iluka’s synthetic rutile operations in the South West operated for the whole of 2016 which lead to an increase in coal usage. Coal usage makes up 60 per cent of energy resources used. Scope 1 and 2 emissions were lower overall in 2016 due to decreased activities in all the regions with the exception of the South West where the synthetic rutile kiln is located.

Iluka’s current operating kiln, SR2, in the South West of Western Australia, has a waste heat recovery plant. The function of the plant is to convert the energy contained in the high temperature kiln exhaust gas, firstly into steam energy and then into electrical energy. Without the plant, the exhaust gas would otherwise need to be quenched with water and the energy wasted as evaporation.





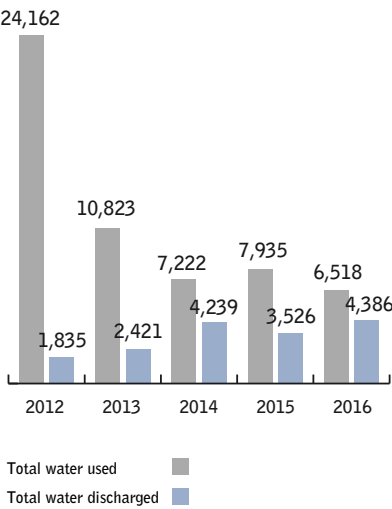
ENVIRONMENT

WATER USE

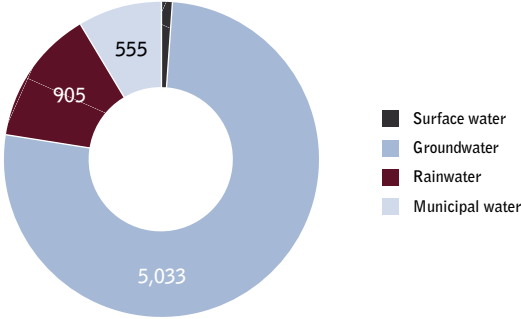
Iluka understands that water is a precious shared resource and mining is a significant water user. The company has an important role in the sustainable management of water resources in the locations it operates, particularly in water-stressed areas. Iluka uses water in its mining, processing and separation processes, and places a strong focus on the sustainable use of water and in continually developing efficient and improved solutions for water use. Some of these initiatives include the process use of hyper saline water and recycled water in process plants.

2016 saw a decrease in water use across the Iluka operations mainly due to the suspension of activities at Jacinth-Ambrosia and in the United States, as well as the completion of rehabilitation activities at Kulwin in the Murray Basin. The increase in the use of collected rainwater can be attributed to unseasonal high rainfall experienced in Australia. Similarly, the increase in water discharges is in part due to the increased rainfall and dewatering of voids prior to rehabilitation and planned water discharges in the United States in preparation for the idling of operations.

TOTAL WATER USED AND DISCHARGED (MEGALITRES)



WATER USE BY SOURCE (MEGALITRES)



CASE STUDY

WATER EFFICIENCY EFFORTS RECOGNISED

Iluka’s Narngulu operation in the Mid West of Western Australia was one of five businesses to receive a Platinum award from Western Australia’s Water Corporation for reducing water use by more than 50 per cent in 2016. The operations also achieved a 35 per cent or greater improvement in water efficiency for two years running and were recognised as Waterwise Champions through the Water Corporation’s Water Efficiency Management Plan program.

Iluka also won the Water Corporation’s Waterwise Business of the Year in 2016. This is awarded to participants of the Water Efficiency Management Plan Program that achieved above and beyond the requirements of the mandatory program in relation to water efficiency and water use management. In 2016 Narngulu operations achieved the highest water savings of any customer participating in the program based on 2014/15 water use.

This was achieved by increasing production without increasing water consumption as well as implementing water saving initiatives including:

- lining a number of dams to reduce expected losses from ~10kL/hour to ~5kL/hour;
- upgrades of tailings stacker cyclones to more efficient models to reduce the amount of water required;
- installation of flow meters to improve accuracy of water usage and effectively model plant section water consumption; and
- display of stickers and posters in all amenities areas promoting water efficiency.



ENVIRONMENTAL INCIDENTS

Iluka uses an event management system to record environmental incidents, which are then classified according to the severity of the potential impact to the environment. Level 1 incidents have no or minimal impact and Level 5 incidents have the greatest potential cumulative impact over time. For incidents of Level 3 or above, detailed investigations are undertaken and lessons learned are shared throughout the company. During 2016 the number of Level 3 and above environmental incidents decreased from previous years.

The overall number of incidents reported decreased from 887 in 2015 to 744 in 2016. The decrease in incidents can be attributed to a number of factors including the suspension of mining and concentrating activities at Jacinth-Ambrosia in South Australia and in the United States. The majority of Level 3 incidents and above related to the discharge of turbid surface water off-site due to significant rainfall events in both Australia and the United States. Consequently, Iluka plans to review and update surface water management plans at all sites in 2017.

Environmental incidents

Incident level	2012	2013	2014	2015	2016
Level 3	42	45	30	11	8
Level 4	16	12	4	3	3
Level 5	0	0	0	0	0
Level 3 - 5	58	57	34	14	11
Total (all levels)	1,041	986	1,196	887	744

During 2016, one non-monetary sanction was issued to Iluka which relates to the discharge of turbid surface water. Additionally, one case was brought against the organisation through a dispute resolution mechanism.



PERFORMANCE DATA

Economic Responsibility						
Financial performance (million)	2012	2013	2014	2015	2016	
Mineral sands revenue	1,069.8	763.1	724.9	819.8	726.3	
Underlying mineral sands EBITDA	603.7	204.1	189.2	231.8	103.0	
Mining Area C EBITDA	72.7	88.3	66.8	61.6	47.5	
Underlying Group EBITDA	676.4	292.4	256.0	293.4	150.5	
Net profit (loss) after tax	363.2	18.5	(62.5)	53.5	(224.0)	
Operating cash flow	368.7	124.0	254.8	222.2	137.3	
Net (debt) cash	(95.9)	(206.6)	(59.0)	6.0	(506.3)	
Economic contribution (million)						
Total economic (GDP) contribution = direct economic contribution (total expenditure) + flow on effects (industrial + consumption).						
Direct GDP contribution	-	-	-	-	362.9	
Indirect GDP contribution	-	-	-	-	647.0	
Employment contribution						
Direct number of FTE jobs	-	-	-		1,373	
Indirect number of FTE jobs	-	-	-	-	3,127	
Taxes Paid						
Tax information can be found in the Iluka Tax Transparency Report on the website						
People						
Gender Diversity – Australia (per cent)	2012	2013	2014	2015	2016	Trend*
Male	78	76	73	71	73	●
Female	22	24	27	29	27	●
Indigenous Diversity – Australia (per cent)						
Non-Indigenous	97	96	95	95	95	●
Indigenous	3	4	5	5	5	●
Employee Turnover (per cent)						
Employee initiated turnover	12	14	5	5	11	-

\*compared to 2015 statistics

Health and Safety						
Proactive or leading metrics	2012	2013	2014	2015	2016	Trend*
Safety visits	21,698	24,572	24,564	25,252	25,030	-
Safety visits per employee per month	1.65	2.26	2.37	2.27	2.51	●
Planned workplace inspections	3,871	3,434	3,508	4,108	5,198	-
Planned workplace inspections per employee per month	0.30	0.32	0.34	0.37	0.52	●
Hazard cards	2,941	3,773	6,564	4,657	4,012	●
Training compliance (per cent)	-	-	60	84	87	●
Reactive or trailing metrics						
Lost time injuries	9	1	3	3	1	●
Lost time injury frequency rate	1.9	0.3	0.9	0.9	0.4	●
Medical treatment injuries	24	10	6	17	8	●
Medical treatment injury frequency rate	4.9	3.1	1.8	5.2	2.9	●
First aid and minor injuries upgraded to restricted work case injuries	18	4	3	2	3	●
Total recordable injuries	51	15	12	22	12	●
Total recordable injury frequency rate	10.5	4.6	3.6	6.7	4.4	●
Percentage of recordable injuries assigned to employees (as opposed to contractors)	33%	33%	33%	36%	17%	-
Severity – number of days lost	227	109	74	8	3	●
Severity rate	46.7	33.7	21.9	2.4	1.1	●
All injury frequency rate	29.2	14.9	9.5	14.8	12.0	●
Duration rate (days)	25.2	1.0	25.0	2.7	3.0	●
Serious Potential Incidents	11	2	11	21	13	●

\*compared to 2015 statistics



PERFORMANCE DATA

Environment						
Environmental incidents (number)	2012	2013	2014	2015	2016	Trend*
Level 3 environmental Incidents	43	45	30	11	8	●
Level 4 environmental incidents	16	12	4	3	3	●
Level 5 environmental incidents	0	0	0	0	0	●
Total Level 3-5 environmental incidents	58	57	34	14	11	●
Land Footprint (hectares)						
Land Disturbed	746	312	244	166	125	-
Land Rehabilitated	514	728	477	502	832	●
Greenhouse Gas Emissions (ktCO2e)						
Scope 1 and 2 emissions	765	333	244	436	386	●
Energy use (terajoules) and resources used (per cent, rounded)						
Energy use	8,461	3,702	2,330	4,537	4,415	●
Coal	45.7	28.7	0.0	45.7	60.2	-
Electricity	14.8	19.5	24.7	18.0	11.6	-
Natural gas	19.3	16.4	24.2	14.3	15.7	-
LPG	0.0	0.1	0.1	0.0	0.0	-
Diesel	20.0	35.0	50.3	21.4	12.4	-
Petrol	0.2	0.3	0.5	0.5	0.2	-
Fuel, oil and greases	0.1	0.0	0.2	0.1	0.0	-
Water use (megalitres)						
Total water used	24,162	10,823	7,222	7,935	6,518	●
Total water discharged	1,835	2,421	4,239	3,526	4,386	-
Surface water used	-	-	258	464	25	-
Ground water used	-	-	6,036	6,414	5,033	-
Rainwater collected directly and stored	-	-	483	409	905	-
Municipal water supplies or other organisations	-	-	598	647	555	-
Mineral Waste volumes (kilotonnes)						
Overburden	-	-	30,621	5,943	1,387	-
Rock	-	-	651	790	298	-
Tailings, includes mine and processing tailings, as well as clay fines	-	-	10,438	12,195	4,228	-

\*Compared to 2015 statistics

Mineral waste disposal 2016							
	Murray Basin	Eucla Basin	South West	Mid West	United States	Projects	Total
MINING							
Overburden							
Volume (tonnes)	-	685, 547	702,424	-	-	-	1,386,971
Disposal location	-	Returned to mine void	Returned to mine void	-	-	-	-
Rock							
Volume (tonnes)	-	165,727	132,642	-	-	-	298,369
Disposal location	-	Returned to mine void	Returned to mine void	-	-	-	-
Clay fines, sand tails, co-disposal material (sand and clay)							
Volume (tonnes)	-	2,224,514	1,558,833	-	-	864	3,784,211
Disposal location	-	Co-disposal in TSF* cells within mine void	Off-path TSF* for drying (clay fines) and then returned to mine void	-	-	Returned to mine void	-
PROCESSING							
Mineral separation plan tailings							
Volume (tonnes)	49,271	-	74,962	87,964	212,244	-	424,441
Disposal location	Returned to mine void	-	Returned to mine void	TSF*	Returned to mine void	-	-
Synthetic rutile plant tailings							
Volume (tonnes)	-	-	19,406	-	-	-	19,406
Disposal location	-	-	Returned to mine void	-	-	-	-

\*Tailings storage facility

2016 Sustainability objectives and performance outcomes for incentive payments		
Measure	Rationale for inclusion	Performance outcome and commentary
Total Recordable Injury Frequency Rate (TRIFR)	Providing a safe workplace for all employees is an integral part of Iluka’s corporate objective and values.	<div>● Below threshold performance</div> <p>In 2016 TRIFR of 4.4 (rolling 12-month average to 31 December 2016) was achieved, a 34 per cent reduction on the 2015 outcome. Despite the improvement in performance the result fell below the threshold performance level.</p>
Level 3 and above environmental incidents	Iluka has a strong commitment to ensuring that its activities do not have an adverse impact on the environment.	<div>● Above threshold performance</div> <p>Above stretch performance level maintained with an improvement on 2015 levels (11 incidents in 2016 compared with 14 incidents in 2015).</p>





# ILUKA

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