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INTRODUCTION

September 20, 2019

This 2018 Global Reporting Initiative (GRI) Report, based on the internationally recognized GRI Framework for Sustainability Reporting, supplements the Tronox Holdings plc 2018 Annual Report by providing additional data and information on our economic, environmental and social performance.

In developing this report, we utilized the “GRI Standards” guidelines, applied to data for the fiscal year ending December 31, 2018. We believe this level of data, combined with the required GRI Standard Disclosures, enables Tronox to declare that this report complies with the GRI Standards Core “in accordance” option (see also Disclosure 102-54). We also took into account the G4 Mining and Metals Sector Disclosures, including several sector-specific indicators.

Our unwavering focus on safety resulted in an exceptional safety performance in 2018. The total injury frequency rates were the lowest in Tronox history (0.45 for employees only and 0.49 for employees and contractors combined) and no fatalities were recorded.

Throughout 2018 and into 2019, we continued to work diligently on obtaining regulatory approval for our proposed acquisition of the TiO₂ business of The National Titanium Dioxide Company Limited, known as Cristal, a privately held global chemical and mining company. Tronox completed the acquisition on April 10, 2019, therefore the data associated with the operations we acquired in Australia, Brazil, China, France, Saudi Arabia, and the United Kingdom are not captured in this report. The acquisition of Cristal more than doubled our size and was an important step in positioning Tronox as the world’s leading integrated manufacturer of TiO₂ pigment. More information on changes to the organization and entities included in this report can be found in Disclosures 102-10 and 102-45, respectively.

Please refer to the GRI Index provided on page 51 for quick reference to specific disclosures and indicators.
GENERAL DISCLOSURES (GRI 102)

1. Organizational Profile

Name of the organization (Disclosure 102-1)
Tronox Holdings plc (Tronox, the company or we).

Activities, brands, products, and services (Disclosure 102-2)
Tronox Holdings plc is a public limited company incorporated under the laws of England and Wales. We are the world’s leading integrated manufacturer of titanium dioxide pigment. We operate titanium-bearing mineral sand mines and beneficiation and smelting operations in Australia, South Africa, and Brazil to produce feedstock materials that can be processed into titanium dioxide for pigment, as well as high-purity titanium chemicals, including titanium tetrachloride and ultrafine titanium dioxide. We consume a substantial part of our feedstock materials in our own pigment facilities in the United States, Australia, Brazil, United Kingdom, France, the Netherlands, China, and Saudi Arabia. The mining, beneficiation and smelting of titanium-bearing mineral sands creates meaningful quantities of zircon that we also supply to customers around the world.

Products

Pigment
Titanium Dioxide (TiO₂)
Titanium dioxide is a white inorganic compound used primarily in the production of paints, printing inks, paper and plastic products. Titanium dioxide has a remarkably high refractive index and exceedingly high reflectance, offering maximum opacity and imparting whiteness and brightness to the products made with it.

Mineral Sands
Rutile
Naturally occurring rutile contains a very high titanium concentration and does not need to be upgraded for use in the company’s titanium dioxide pigment process. Feedstock with high concentrations of titanium produce less waste at pigment plants and are more efficient. Rutile is also used for the coating of welding rods and the production of titanium metal.

Chloride Slag and Slag Fines
Ilmenite is the most abundant titanium mineral in the world. Tronox upgrades ilmenite using a smelting process to create chloride slag and slag fines, which are converted by pigment manufacturers into titanium dioxide.

Synthetic Rutile
Tronox also upgrades ilmenite into synthetic rutile using a rotary kiln. Synthetic rutile has a higher titanium content than chloride slag or slag fines, but not as high as natural rutile.
**Leucoxene**

Leucoxene is a naturally occurring mineral formed through the geological alteration of ilmenite. It is an amorphous iron-titanium oxide mineral that contains high levels of titanium. In addition to its use as a raw material for chloride-process TiO₂ pigment, higher grades of leucoxene are suitable for welding rod flux manufacturing.

**Staurolite**

Staurolite is a naturally occurring ferro alumina silicate mineral associated with some heavy mineral deposits alongside zircon and titanium feedstock products. It is a hard, chemically resistant, high melting point, abrasive mineral, which makes it particularly suitable for sand blasting metal surfaces prior to welding and painting, and as a water jet cutting media for stone and glass. It can also be used as a source of alumina in the production of cement.

**Zircon**

Zircon is a primary co-product of heavy mineral sands mining. Zircon is separated from heavy mineral concentrate after being transported to a mineral separation plant or dry mill. A non-magnetic and non-conductive mineral, zircon is used in the production of ceramics, tiles and sanitary ware, refractories, TV screens, computers, and a wide range of industrial and domestic products.

**High-Purity Pig Iron**

High-purity pig iron is a co-product of the titanium slag smelting process. It is typically low in manganese, phosphorous and sulfur, and is sold to foundries as a diluting agent for trace elements and to steel producers for iron units.

**Activated Carbon**

Activated carbon is a byproduct of the synthetic rutile reduction kiln, in which coal is used as both a fuel and a reductant. Activated carbon is used as an absorbent, decolorizer or deodorizer in water, vapor and gas purification/filtration.

---

![2018 Production by Product Distribution](image)

**Note:** “Other” includes activated carbon, leucoxene, and staurolite.
Location of headquarters (Disclosure 102-3)
Tronox operates manufacturing and mining facilities, research and development labs, and corporate, sales and marketing offices worldwide. The company maintains corporate offices in United Kingdom and the United States.

Location of operations (Disclosure 102-4)
In 2018, Tronox operated titanium-bearing mineral sand mines and beneficiation and smelting operations in Australia and South Africa, and consumed a substantial part of its feedstock materials in pigment facilities in the United States, Australia, and the Netherlands. With the acquisition of Cristal, which closed on April 10, 2019, we expanded our mining operations in Australia and added mining operations in Brazil, as well as expanded our pigment operations in Australia, and added pigment operations in Brazil, the United Kingdom, France, China, and Saudi Arabia.

Below are our primary manufacturing and mining facilities and their associated production capacities at December 31, 2018.

<table>
<thead>
<tr>
<th>TiO₂ Pigment Facilities</th>
<th>Capacity (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hamilton (Mississippi, USA)</td>
<td>225,000</td>
</tr>
<tr>
<td>2. Kwinana (Western Australia, Australia)</td>
<td>150,000</td>
</tr>
<tr>
<td>3. Botlek (the Netherlands)</td>
<td>90,000</td>
</tr>
</tbody>
</table>

Mineral Sands Facilities

<table>
<thead>
<tr>
<th>Mineral Sands Facilities</th>
<th>Capacity (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Cooljarloo/Chandala¹</td>
<td></td>
</tr>
<tr>
<td>Synthetic Rutile</td>
<td>220,000</td>
</tr>
<tr>
<td>Zircon</td>
<td>40,000</td>
</tr>
<tr>
<td>Rutile</td>
<td>35,000</td>
</tr>
<tr>
<td>Leucoxene</td>
<td>20,000</td>
</tr>
</tbody>
</table>

| 5. Tronox Mineral Sands (Western Cape, South Africa) | | |
| Titanium Slag | 190,000 |
| Zircon | 125,000 |
| Pig Iron | 100,000 |
| Rutile | 31,000 |

| 6. KZN Sands (KwaZulu-Natal, South Africa) | | |
| Titanium Slag | 220,000 |
| Pig Iron | 121,000 |
| Zircon | 55,000 |
| Rutile | 25,000 |

¹ Tronox operates its Cooljarloo mine and its Chandala synthetic rutile plant jointly as “Northern Operations.”
Ownership and legal form (Disclosure 102-5)
Tronox Holdings plc is a public limited company listed on the New York Stock Exchange (NYSE:TROX) and is incorporated under the laws of England and Wales. (see also Disclosure 102-10).

Markets served (Disclosure 102-6)

Scale of the organization (Disclosure 102-7)

Human Resource Scale
As of December 31, 2018, we had approximately 3,300 employees worldwide, of which 610 are located in the U.S., 600 in Australia, 1,840 in South Africa, and 280 in the Netherlands and other international locations.

Economic Scale
Breakdowns of our capitalization for 2017 and 2018 are provided below.

<table>
<thead>
<tr>
<th>Total capitalization broken down in debt and equity</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Liabilities</td>
<td>353</td>
<td>300</td>
</tr>
<tr>
<td>Non-current Liabilities</td>
<td>3,496</td>
<td>3,480</td>
</tr>
<tr>
<td>Equity</td>
<td>1,015</td>
<td>862</td>
</tr>
<tr>
<td>Assets</td>
<td>4,864</td>
<td>4,642</td>
</tr>
</tbody>
</table>
**Information on employees and other workers** (Disclosure 102-8)

**Employees by employment contract and gender** (as of December 31, 2018)

**Employees by employment contract and region** (as of December 31, 2018)

**Supply chain** (Disclosure 102-9)

In 2018, Tronox mined and manufactured inorganic chemical compounds in Australia, South Africa, the United States and the Netherlands. With the acquisition of Cristal, which closed on April 10, 2019, we expanded our mining operations in Australia and added mining operations in Brazil, as well as expanded our pigment operations in Australia, and added pigment operations in Brazil, the United Kingdom, France, China and Saudi Arabia. The company operates an integrated supply chain to support its TiO₂ business, as well as its corporate and administrative functions. Through a “hub and spoke” process, the company is able to leverage economies of scale to supply and produce materials to support our business operations and our global customers. At the same time, we are able to work with local business partners leading to socioeconomic advances in the communities in which we operate.

**Tronox Supplier Standards**

Tronox values its partnerships with suppliers and fully recognizes that our mutual success is built on open communication and a commitment to common principles and business practices. Accordingly, the company has set high standards for the way it conducts business in the areas of regulatory compliance, social responsibility and environmental stewardship.

It is the responsibility of each supplier to ensure that its employees and representatives understand and comply with the Supplier Code of Conduct.

**Ethics and Legal Requirements**

Suppliers will conduct their business in a legal and ethical manner and act with integrity.
Further, they will ensure that all third parties and subcontractors are in full compliance with contractual agreements and compliance requirements, including:

**Compliance with Applicable Laws and Regulations**
Meet and document compliance of all applicable regulatory and statutory requirements.

**Avoid Conflicts of Interest**
Avoid any conflict of interest when interacting with Tronox employees.

**No Bribery**
- Refrain from engaging in any form of commercial bribery with its suppliers, agents or customers, nor offer any incentive to any Tronox employee or family member of a Tronox employee in order to obtain or retain business.
- Abstain from any form of governmental bribery with any political, regulatory or other government employee and comply with all applicable laws dealing with the bribery of government officials, including the U.S. Foreign Corrupt Practices Act (FCPA) and the U.K. Bribery Act.

**Fair Competition**
Comply with all applicable laws regarding fair competition and antitrust.

**Protect Information**
Safeguard Tronox's confidential information and act to prevent its misuse, theft, fraud or improper disclosure.

**Identification of Concerns**
Provide means for their employees to report concerns or potentially unlawful activities in the workplace. Treat any report in a confidential manner. Investigate such reports and take corrective action if needed.

**Human Dignity and Labor**
Suppliers are expected to protect the human rights of their employees and to treat them with dignity and respect, including:

**Child or Forced Labor**
- Comply with the applicable child labor laws of the countries in which they operate and demonstrate zero tolerance of child labor that are not in accord with local laws.
- Comply with applicable modern slavery laws, including the U.K. Modern Slavery Act 2015 and the Australian Modern Slavery Act 2018, and demonstrate zero tolerance of forced or involuntary labor of any type and the trafficking or involuntary servitude of any worker.

**Nondiscrimination**
Nondiscrimination in hiring practices on grounds of race, creed, gender, religion, national origin, age, disability or sexual orientation, or other factors as mandated by the applicable laws of the countries in which they operate.
**Fair Treatment**
- Respect for workers, and a zero tolerance for any engagement in corporal punishment, violence or threats of violence, or other forms of physical coercion or harassment.
- Sexual harassment of employees will not be tolerated.

**Working Hours, Wages and Benefits**
Working hours for suppliers’ employees will not exceed the maximum set by the applicable national law. Compensation paid to employees will comply with applicable national wage laws in the interests of providing an adequate standard of living. Employees must be paid in a timely manner in accordance with local laws.

**Freedom of Association**
In accordance with local laws, respect the rights of employees to associate freely, join labor unions, seek representation and engage in collective bargaining.

**Environment, Health and Safety**
Tronox’s commitment to sustainability includes efficient use of resources, respect for the environment, and safe and healthy workplaces. The company expects its suppliers to make similar commitments to continuously improve their environmental, health and safety performance, including:

**Respect the Environment**
Collaborate to eliminate waste and cost from the supply chain such as programs to reduce emissions and waste, promote the efficient use of energy and natural resources, and encourage responsible management of their products and processes through their entire life cycle, and for their intended end use.

**Protect Health and Safety**
- Demonstrate and actively work to advance sustainable business practices and a clear commitment to a safe workplace by complying with the Tronox LIFE Saving Rules.
- Health, safety and security must be priorities in product manufacturing and in planning for new products, facilities or processes.
- Employees must work in a safe and healthy workplace, with the appropriate controls, training, work procedures and personal protective equipment.

**Quality**
Tronox strives for continuous improvement in quality of goods and services in all facets of operations and expects suppliers to partner in the investment. Suppliers will maintain a documented quality system that utilizes process controls and emphasizes defect prevention rather than defect detection, including:

**Communication**
- Promptly notify Tronox of changes to goods or services that may adversely impact Tronox’s product usage and/or business relationship.
- Notify, in advance, any plans to discontinue goods or services and channel all communications on terms, conditions and pricing through designated Tronox supply chain or departmental representatives.
- Obtain prior approval before soliciting or reaching out to others in the company.
Information
- Give a timely response to requests for information, technical assistance or corrective actions.
- Commit to openly share information on all elements of cost and cost-improvement initiatives.
- Share sustainability and related data and, if necessary, cooperate in a sustainability audit.

Service
- Accept only specifications or requirements that can be met.
- Pay prompt and professional attention to the highest customer service standards.
- Comply with purchase order and contract compliance regarding schedules and deliveries for goods and services.

Innovation
Process Development
Partner to develop process improvements and new applications, in addition to providing goods, services or innovations that give Tronox a technical, process or service advantage over our competition.

Productivity Improvements
Assist with research and the implementation of productivity improvements that result in lower costs every year, as well as provide ideas and solutions that will improve the cost of goods and services.

Effective Use of Electronic Commerce
- Cooperate to improve efficiency of interaction through the utilization of e-Sourcing, e-Invoicing and other web-based electronic tools.
- Include purchase order numbers and reference numbers, where applicable, on all transaction documents.
- Participate in the automation of procure-to-pay processes, when applicable, and in the construction of parts catalogs.

Compliance
The Supplier Code of Conduct is supplemental to any contract between Tronox Holdings plc and its subsidiary businesses and suppliers. To the extent that more specific or stringent terms are agreed in a contract, the contract terms shall control.

Suppliers are expected to maintain management systems and controls to promote and facilitate compliance with applicable laws and the principles set forth in the Supplier Code of Conduct. Suppliers should also apply these or similar principles to the subcontractors and suppliers they work with in providing goods and services to Tronox.

Significant changes to the organization and its supply chain
(Disclosure 102-10)
The following sets forth the key strategic initiatives undertaken during 2018 that we believe will set a strong foundation for our future growth and results of operations.
On April 10, 2019, we completed the acquisition of the TiO₂ business of The National Titanium Dioxide Company Limited of the Kingdom of Saudi Arabia, known as Cristal, a privately held global chemical and mining company, for $1.673 billion of cash and 37,580,000 ordinary shares. The transaction was initially announced in February 2017, and the process to obtain necessary legal approvals to consummate the transaction continued throughout 2018. The transaction more than doubled our size and added new operations in Australia, Brazil, China, France, Saudi Arabia and the United Kingdom.

On September 1, 2018, Tronox LLC, our indirect wholly owned subsidiary sold to EMD Acquisition LLC certain of the assets and liabilities of our Henderson Electrolytic Operations based in Henderson, Nevada, a component of our TiO₂ segment, for $1.3 million in cash and a secured promissory note of $4.7 million, which was paid in full on December 27, 2018.

Prior to March 27, 2019, Tronox Limited, a public limited company registered under the laws of the State of Western Australia, was the ultimate parent company of the Tronox group of companies. Effective March 27, 2019, Tronox Limited effected a re-domiciliation transaction (“the Re-domicile Transaction”), effectively changing its jurisdiction of incorporation from Western Australia to England and Wales, by “top-hatting” the Tronox group of companies with Tronox Holdings plc, a public limited company registered under the laws of England and Wales. As a result of the Re-domicile Transaction, Tronox Limited became a wholly owned subsidiary of Tronox Holdings plc.

The Re-domicile Transaction supported our stated strategic goal of becoming the world’s most vertically integrated and lowest cost producer of TiO₂ and we believe it will benefit our shareholders in a number of important ways, including enhancing our ability to repurchase shares, creating more options in terms of refreshing our Board of Directors and bringing our jurisdiction of incorporation more into line with some of our peers and the majority of other non-U.S. companies listed on the NYSE.

All data presented in the topics section of this report includes information on the Legacy Tronox TiO₂ segment as it existed prior to the closing of the Cristal acquisition. In addition, data relating to the Henderson Electrolytic Operations, which we divested during 2018, was not included for the sake of equal comparison of years.

Precautionary approach (Disclosure 102-11)

Tronox supports the precautionary approach to evaluate and address potential environmental impacts, reflected in the Tronox Code of Ethics and Business Conduct (Code of Conduct). An outward mindset allows us to see beyond ourselves and be accountable for the whole. We have the following core values:

- We have an uncompromising focus on operating safe, reliable and responsible facilities.
- We honor our responsibility to create value for stakeholders.
- We treat others with respect and act with personal and organizational integrity.
- We build our organization with diverse, talented people who make a positive difference and we invest in their success.
• We are adaptable, decisive and effective.
• We are trustworthy and reliable, and we build mutually rewarding relationships.
• We share accountability and have high expectations for ourselves and one another.
• We do the right work the right way in every aspect of our business.
• We celebrate the joy of working together to accomplish great things.

By focusing on the above core values, we deliver safe, quality, low-cost tons for our customers and exceptional shareholder returns.

We encourage creativity and measure results. We set clearly defined and challenging objectives; we own those objectives and we deliver results with a relentless focus on operational excellence. We innovate our processes to continuously deliver better results.

Every facility owned and operated by Tronox must comply with the company’s safety, health and environmental policies, and demonstrate compliance with all applicable safety, health, environmental and security laws pertaining to its operations. Each employee is expected to play a critical role in ensuring the quality and safety of Tronox products, from design through manufacturing, ongoing improvements and customer support.

Tronox implements these requirements through management and employee engagement; allocation of sufficient human and capital resources; and rigorous measurement, review and corrective action systems.

Advancing our safety, health and environmental policies is an integral part of the company’s commitment to ethical business conduct. We have a steadfast commitment to the safety and health of our employees, those that visit our operations, and the surrounding communities in which we live and work. We maintain an equal commitment to environmental stewardship and sustainable business practices. We work with our global business partners so they can meet our standards and we provide information and assistance on how to do so.

Any employee who learns of a suspected violation of the Code of Conduct must immediately report it by following defined procedures. Employees are required to come forward with any such information without regard to the identity or position of the suspected offender. Tronox will treat the information in a confidential manner and will ensure that no acts of retribution or retaliation will be taken against anyone for making a report in good faith.

Cybersecurity
Tronox takes the security of its information, infrastructure and applications very seriously. We are committed to protecting our critical assets and resources through the implementation of technology, policies, controls and standard procedures. As cybersecurity threats evolve and attacks against individuals and corporations increase, Tronox continues to take appropriate steps to detect, protect and mitigate these threats.
External initiatives (Disclosure 102-12)
Our South African operations annually publish the South African Mining Charter Scorecard. This Scorecard measures their progress against the Broad-Based Black Economic Empowerment criteria, posed by the Department of Mineral Resources in South Africa.

Please refer to page 50 for the 2018 South African Mining Charter Scorecard.

Membership of associations (Disclosure 102-13)
- European Chemical Industry Council (Cefic)
- Titanium Dioxide Manufacturers Association (TDMA)
- American Coatings Association (ACA)
- Titanium Dioxide Stewardship Council (TDSC)
- Minerals Council South Africa (MCSA)
2. Strategy

Statement from senior decision maker (Disclosure 102-14)

Over the past year, we have continued our journey of environmental, social and economic sustainability, building on the efforts made in previous years. At Tronox, we believe in having an uncompromising focus on operating safe, reliable and responsible facilities. We strive to be the industry standard for safety and corporate responsibility, and to foster a culture where people embody our values each day. Our values are not just words on a page. Through the strength of our diversity, we have the ability to live our values from every corner of the world. We invite you to learn more about our values and our demonstrated commitment to advancing sustainability in our 2018 Global Reporting Initiative summary.

As a global industry leader, we understand that sustainable business practices are essential to our success. Therefore, we are committed to providing positive contributions to environmental protection, economic performance, and the social well-being of the communities, customers and consumers we serve by providing sound products and services. Within this report, you will find demonstrations of this commitment through the successful utilization of waste capture and reuse projects, self-sufficient steam production and usage, investment of more than US$5.5 million for use in mining rehabilitation activities in Australia and South Africa, and more.

We are investing in technology, our people and our communities to drive improvements in our business. Whether we are upgrading our control systems to reduce consumption at our global pigment facilities or recirculating carbon monoxide gas in our operations, our global team is implementing solutions that limit our ecological impact, lower our costs and drive greater productivity within our mines and pigment facilities. This global emphasis on innovation and problem solving enables us to continually find new ways to use energy and water more efficiently and reduce our waste and care for the environment.

On behalf of Tronox, I want to thank you, our stakeholders, for your support as we further our sustainability efforts.

Sincerely,

Jeffry N. Quinn
Chairman and Chief Executive Officer
3. Ethics and Integrity

Values, principles, standards and norms of behavior (Disclosure 102-16)
We are building a lasting foundation for growth around the nine core values of Tronox, which are described under Disclosure 102-11. These values define our approach to business and corporate citizenship. The Tronox Code of Conduct applies to all employees worldwide. The Code of Conduct consolidates all company policies with respect to business ethics and conflict of interest.

The company has also adopted business standards and principles for all of its global business partners and suppliers (see also Disclosure 102-9).

4. Governance

Governance structure (Disclosure 102-18)
The company’s business and affairs are managed by a multinational executive management team under the oversight of the Tronox Board of Directors (Board), which, as of December 31, 2018 was comprised of nine members.

The listing standards of the New York Stock Exchange (NYSE), as well as our Corporate Governance Guidelines, require that a majority of our Board be comprised of independent directors. Our Board affirmatively determined that seven of the nine directors were independent, as of December 31, 2018.

The Board’s Role in Risk Oversight
The Board has established three committees: corporate governance and nominating; human resources and compensation; and audit. Each committee is governed by a written charter. A current copy of each charter is available to our shareholders at www.tronox.com.

The Board administers its risk oversight function directly and through its various committees. Each of our committees also plays an important role in risk oversight:

The audit committee oversees the management of risks related to the company’s financial performance and financial statements, the financial reporting process and internal controls, internal and external audit functions, tax and accounting matters, anti-bribery and corruption, cybersecurity and information technology systems and other exposures. Our audit committee routinely discusses with senior management and our independent registered public accounting firm any financial risk exposures, including risks related to financial reporting, tax, accounting, disclosure, internal control over financial reporting, financial policies and credit and liquidity matters, steps taken to manage those exposures and our company’s risk tolerance in relation to our overall strategy.

In particular, the audit committee works closely with the Vice President, Internal Audit to ensure that management undertakes a robust annual Enterprise Risk Management (“ERM”) program whereby members of management assess the key risks inherent to Tronox’s commercial activities as well as the efficacy of Tronox’s mitigation efforts to ensure that those risks don’t impact long-term shareholder value. The Global Risk Committee (the “Risk Committee”), composed of senior managers of Tronox, oversees, identifies and assesses the material risk
exposures that are faced by Tronox. The Risk Committee makes periodic reports to the audit committee and a detailed report-out of the results of the ERM process are made to the full Board. In addition, throughout the year the Board receives periodic reports from members of senior management on areas of material risk to Tronox, including operational, financial, competitive, management retention, cybersecurity and legal risks. The Board routinely discusses with senior management our major risk exposures, their potential financial impact on Tronox, and the steps (both short-term and long-term) we take to manage them.

The human resources and compensation committee has oversight responsibility with respect to the risks relating to the design and implementation of our compensation and benefit plans.

The corporate governance and nominating committee primary focus is to ensure that the Board has the policies, practices and procedures in place to adequately oversee risk through board membership and structure, succession planning for our Directors and executive officers, and corporate governance more generally.

**Subsequent Events**

As a result of the Re-domicile Transaction on March 27, 2019, two independent directors, Dr. Vanessa Guthrie and Mr. Stephen Jones, were appointed to the Board effective March 28, 2019.

On March 28, 2019, the Board combined the roles of Chairman and CEO by appointing Mr. Jeffry Quinn, our Chief Executive Officer, as Executive Chairman of the Board. In connection with the closing of the Cristal acquisition and effective as of the closing of the acquisition on April 10, 2019, the Company appointed two members of the Board designated by Cristal pursuant to the terms of the shareholders’ agreement the Company entered into with Cristal. As described above, pursuant to such shareholders’ agreement, the Board appointed Mutlaq H. Al-Morished and Moazzam A. Khan to the Board. In addition, upon consummation of the Cristal acquisition on April 10, 2019, the Board appointed Dr. Talal Al-Shair, the founder of Cristal, as director emeritus for the purpose of providing consulting and advisory service to the Board.

In addition, in connection with the repurchase on May 9, 2019 by the company of 14 million ordinary shares held by Exxaro Resources Limited (“Exxaro”), the number of ordinary shares of the company owned by Exxaro fell below an ownership threshold specified in the shareholder’s deed entered into by the Company and Exxaro on March 14, 2019. Upon completion of the share repurchase, Mr. Mxolisi Mgojo, as the director previously nominated by Exxaro, notified the company that he resigned from the Board, effective as of May 9, 2019.
The table below provides the current membership for each of the Board committees.

<table>
<thead>
<tr>
<th>Name</th>
<th>Audit</th>
<th>Human Resources and Compensation</th>
<th>Corporate Governance and Nominating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeffry Quinn</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ilan Kaufthal</td>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Mutlaq Al-Morished</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanessa Guthrie</td>
<td>M</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Andrew P. Hines</td>
<td>M</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Wayne Hinman</td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Peter Johnston</td>
<td>M</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Ginger Jones</td>
<td>C</td>
<td></td>
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</tr>
<tr>
<td>Stephen Jones</td>
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<td>Moazzam Khan</td>
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<td>Sipho Nkosi</td>
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<td>M</td>
</tr>
</tbody>
</table>

C = Chairperson, M = Member

5. Stakeholder Engagement

**List of stakeholder groups (Disclosure 102-40)**

Tronox engages a number of external and internal stakeholder groups, including the communities in which we live and work, business partners, community and traditional leaders, and employees. In addition, we engage with a number of regional or international not-for-profit and advocacy organizations.

**Collective bargaining agreements (Disclosure 102-41)**

*Percentage of employees covered by collective bargaining agreements (as of December 31, 2018)*

- **Bargaining 59%**
- **Non-bargaining 41%**
Identifying and selecting stakeholders (Disclosure 102-42)
Stakeholders are identified based on active community outreach and engagement activities at all Tronox business operations worldwide.

Approach to stakeholder engagement (Disclosure 102-43)
We are a diverse global company and, as such, our approach to stakeholder engagement is determined at the local, regional and corporate levels, as appropriate. Operating under our Code of Conduct and adhering to our corporate citizenship principles and guidelines, each operating site determines the frequency and level of interaction with local stakeholders. Our external affairs and investor relations teams conduct routine communications with key external stakeholders and shareholders.

Key topics and concerns raised (Disclosure 102-44)
Stakeholder engagement is an integral component of the Tronox business strategy. Based on feedback from relevant constituents, the company has developed and implemented comprehensive programs in areas, such as:

- Health and Safety;
- Suppliers and business partner standards;
- Community-based initiatives that support STEM (science, technology, engineering and mathematics) education, environmental awareness, health and sanitary concerns, and equal rights and empowerment;
- Reducing waste and lowering our carbon footprint; and,
- Investing in skills training and development curricula for our workforce.

6. Reporting Practice

Entities included in consolidated financial statements (Disclosure 102-45)
In 2018, the company operated its TiO₂ business, including three mineral sand mines, beneficiation and smelting operations, and three pigment facilities.

The Henderson Electrolytic Operations were sold to EMD Acquisition LLC, on September 1, 2018 (see also Disclosure 102-10) and is not included in the scope of this report.

Defining report content and topic boundaries (Disclosure 102-46)
Applying the GRI principles for defining report content and completeness, this report focuses on the most material issues facing the company. These issues are guided by the GRI definition of materiality: topics and indicators that reflect the company’s significant economic, environmental and social impacts, or that would substantively influence the assessments and decisions of stakeholders. Our key stakeholders include employees and prospective employees, investors, lenders, customers, suppliers, governments and regulatory bodies, communities and nongovernmental organizations.

To identify material issues to Tronox, we solicited input from our senior management team and then asked relevant managers in the business to identify the matters of highest interest to external stakeholders with which they engage. A representative sample of this engagement follows:
The resulting issues and topics that are most material to our business are summarized and explained in Disclosure 102-47. The topics selected formed the basis of our 2017 reporting and are now being evaluated in this 2018 report.

We welcome feedback from stakeholders on our report content and further request that matters of additional interest that are not covered here be communicated to Tronox via the appropriate communication channels described under Disclosure 102-53.

**List of material topics (Disclosure 102-47)**

The table below includes the 2018 Tronox material topics for the economic, environmental and social categories. Descriptions of the topics, boundaries and management approaches are stated in the category-specific Disclosure 103 on page 23 (economic), 26 (environmental), and 41 (social).

<table>
<thead>
<tr>
<th>Category</th>
<th>Material Topic to Tronox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Economic Performance</td>
</tr>
<tr>
<td>Environmental</td>
<td>Energy</td>
</tr>
<tr>
<td></td>
<td>Water</td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
</tr>
<tr>
<td></td>
<td>Emissions</td>
</tr>
<tr>
<td></td>
<td>Effluents and Waste</td>
</tr>
</tbody>
</table>
Other relevant issues and topics were evaluated for report content, but were not deemed material at this time. Nevertheless, simply because these other issues were not deemed material does not mean they are not important nor that Tronox is not already engaged in addressing the relevant sustainability elements of the matter. It simply means that the matter is not yet material to Tronox from a GRI Standards reporting perspective.

**Restatements of information** *(Disclosure 102-48)*

All re-statements of data and information provided in earlier reports are noted in the particular report section and can be identified by the text following a “Note.”

**Changes in reporting** *(Disclosure 102-49)*

Tronox sold the Henderson Electrolytic Operations (Electrolytic) to EMD Acquisition LLC, in September 2018. Accordingly, all Electrolytic data, for 2018 and prior years, was excluded from this report.

**Reporting period** *(Disclosure 102-50)*

The reporting period is based on the 2018 fiscal year, which, at Tronox, coincides with a calendar year: January 1 to December 31.

**Date of most recent report** *(Disclosure 102-51)*

The most recent report, which is the Tronox 2017 Global Reporting Initiative Report, was published on September 18, 2018.

**Reporting cycle** *(Disclosure 102-52)*

The reporting cycle of Tronox GRI Reports is on an annual basis.

**Contact point for questions regarding the report** *(Disclosure 102-53)*

Questions regarding the report or its contents may be directed to the Tronox Corporate Communications Department:

263 Tresser Boulevard  
Suite 1100  
Stamford, CT, USA 06901  
T: +1-203-705-3800  
E: sustainability@tronox.com  
W: [www.tronox.com](http://www.tronox.com)
Claims of reporting in accordance with the GRI Standards
(Disclosure 102-54)
This report has been prepared in accordance with the GRI Standards – Core option. See also the introduction on page 3.

GRI content index (Disclosure 102-55)
The location of the General Standard Disclosures and Performance Indicators in this report can be found in the GRI Index, presented on page 51.

External assurance (Disclosure 102-56)
Although no external assurance was obtained for the development of this report, Tronox has followed the GRI Standards “Reporting Principles” regarding (i) defining report content, and (ii) ensuring the quality of reported information.

The environmental data in this report is subject to internal audits in line with our Environmental Management Systems and external audits in connection with ISO 14001 certification requirements, with which the majority of our operations are compliant.

In this report, a total of 15 indicators are reported. We also included three indicators from the Mining and Metals Sector Supplement.
ECONOMIC TOPICS

Management Approach – Economic (Disclosure 103)

<table>
<thead>
<tr>
<th>Material Topic to Tronox</th>
<th>Description</th>
<th>Topic Boundary</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>Tronox operates in cyclical commodity markets, and the economic sustainability of our business (of interest to all stakeholders) is linked to being a safe, quality, low-cost provider, which means we must invest and spend cash efficiently, where it can generate the highest returns.</td>
<td>Within Tronox, TiO₂ segment, Investors, Lenders, Customers, Suppliers, Communities</td>
<td>US, EUR, ZA, AU</td>
</tr>
</tbody>
</table>

Geography abbreviations: AU = Australia; EU = Europe; US = United States; SA = South Africa.

Safe Quality Low-Cost Tons (SQLCT)
Tronox is the global leader in providing trusted high-quality mineral sands, titanium dioxide pigment, and other goods, and aims to provide exemplary service. Through continuous improvement of products and processes, our customers can have confidence that Tronox’s products and capabilities will meet or exceed their needs. Thanks to the dedication and diligence of Tronox employees at every step and every location, we will continue to produce safe, quality, low-cost tons, satisfying current customers and attracting new ones.

Tronox stakeholders, including investors, lenders, governments and regulators, customers, employees, suppliers, and communities, have a clear preference for a business that is committed to the health and safety of its workforce, superior product quality, strong customer relationships, and economically sustainable.

An economically sustainable business is one that uses its resources efficiently and responsibly so that the business can operate indefinitely. Two core elements of economic sustainability are (i) generating sufficient cash profits to satisfy our providers of debt and equity capital, and (ii) spending resources in such a way, as to satisfy all our other stakeholders and retain our license to operate.

The GRI Sustainability Guidelines identify six topics of economic disclosures that may be material to an organization: Economic Performance, Market Presence, Indirect Economic Impacts, Procurement Practices, Anti-corruption, and Anti-competitive Behavior. Tronox has identified Economic Performance as the only material topic to its stakeholders, using 201-1 as the performance indicator.

Economic Performance
Given that Tronox principally operates in commodity markets, the economic sustainability of our business is linked to being a low-cost provider. This means that we must invest and spend cash efficiently, where it can generate the highest returns. Our annual 10-K report, filed with the U.S. SEC and available on the tronox.com website, is the primary mechanism we use to report our
economic performance, and should be read in conjunction with this report. The 201-1 indicator we report here is intended to measure the economic outcomes of our activities, and the effects of those outcomes on our stakeholders.

Tronox sells a range of commodity products, including titanium dioxide pigment, titanium feedstock, zircon, rutile and pig iron.

In our 2018 Annual Report, we noted that we delivered strong results in 2018, which showcase the benefits of our vertical integration. Compared to 2017, revenue of US$1,819 million was seven percent higher and Adjusted EBITDA of $513 million was 22 percent higher. Higher zircon and TiO₂ pigment prices were primary drivers of the revenue growth.

**Direct economic value generated and distributed** *(Disclosure 201-1)*

This indicator reflects the economic value generated² (including community investment), distributed³, and retained⁴, during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO₂ segment.

² Direct economic value generated refers to total revenue on an accruals basis.
³ Economic value distributed refers to operating costs, employee wages and benefits, payments to providers of capital, payments to government, and community investments on an accruals basis.
⁴ Economic value retained is calculated as direct economic value generated less economic value distributed.
Economic value retained

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>$0</td>
<td>$50</td>
<td>$500</td>
</tr>
</tbody>
</table>

Community investments

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>$1,000</td>
<td>$1,500</td>
<td>$2,000</td>
</tr>
</tbody>
</table>
# ENVIRONMENTAL TOPICS\(^5\)

Management Approach – Environmental (Disclosure 103)

<table>
<thead>
<tr>
<th>Material Topic to Tronox</th>
<th>Description</th>
<th>Topic Boundary</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Tronox consumes material amounts of energy in its TiO(_2) operations, but particularly at our slag furnaces at the two smelter sites in Saldanha (Western Cape) and Empangeni (KwaZulu Natal), SA.</td>
<td>TiO(_2) segment</td>
<td>Markets, Communities, Regulators</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>Tronox uses material amounts of water in mining, beneficiation and processing in its TiO(_2) operations. Water efficiency has become particularly critical at our Brand se Baai and Fairbreeze mine locations in the Western Cape and KwaZulu Natal, SA locations.</td>
<td>TiO(_2) segment</td>
<td>Markets, Communities, Regulators</td>
</tr>
<tr>
<td><strong>Biodiversity</strong></td>
<td>Tronox operates three above-ground ilmenite/rutile/zircon mines (two in SA, one in AU). Each of these mines disturbs the land and the biosphere.</td>
<td>TiO(_2) segment</td>
<td>Markets, Communities, Regulators</td>
</tr>
<tr>
<td><strong>Emissions</strong></td>
<td>The reduction of Greenhouse Gas (GHG) emissions is a matter of interest to all Tronox stakeholders, and increasingly to customers. Most Tronox GHG emissions are generated from our TiO(_2) slag furnaces (SA), synthetic rutile kiln (AU), and TiO(_2) chemical plants (US, EU, AU).</td>
<td>TiO(_2) segment</td>
<td>Markets, Communities, Regulators</td>
</tr>
<tr>
<td><strong>Effluents and Waste</strong></td>
<td>Tronox generates material amounts of waste, of which the majority (overburden and waste rock from the mines) is used to fill and contour mined out areas. Waste from chemical processing is primarily generated from our synthetic rutile kiln (AU), and TiO(_2) chlorinators (US, EU, AU).</td>
<td>TiO(_2) segment</td>
<td>Markets, Communities, Regulators</td>
</tr>
</tbody>
</table>

Geography abbreviations: AU = Australia; EU = Europe; US = United States; SA = South Africa.

Our business – mining and chemicals processing – can be disruptive to the environment. Among other activities, we disturb the ground to extract minerals and ore, we employ water in mineral separation, we burn carbon when we beneficiate ilmenite into titanium slag or synthetic rutile in our furnaces/kiln, we generate various emissions from our titanium dioxide pigment plants, and we dispose of waste tailings.

\(^5\) Except as otherwise noted, the disclosure in this section is as of December 31, 2018.
The Tronox Code of Conduct holds managers and employees responsible for:

- Pursuing a business strategy that builds on sustainable innovation, operations and business practices, as we seek to grow our businesses and improve the quality of people’s lives everywhere;
- Openly conducting our business in a manner that is protective of public and occupational health, the environment and employee safety;
- Giving environmental considerations priority in manufacturing our products and planning for new products, facilities and processes;
- Complying with all environmental laws and regulations;
- Striving to reduce emissions and waste, and use energy and natural resources efficiently as we grow;
- Actively soliciting constructive discussions with our employees, suppliers, customers, neighbors and shareholders on managing environmental issues to ensure continuous improvement; and,
- Supporting the principles of responsible environmental stewardship, as embodied in voluntary standards and management systems appropriate to our operations around the world. These goals are accomplished by working with our employees, suppliers, customers, contractors and commercial partners to promote responsible management of our products and processes through their entire life cycle, and for their intended end use, worldwide.

We implement these standards through management and employee engagement, allocation of sufficient human and capital resources, and rigorous measurement, review and corrective action systems.

Tronox has determined that five of the eight environmental topics identified in the GRI Sustainability Guidelines are material to its stakeholders:

- Energy (302-1, 302-3);
- Water (303-1);
- Biodiversity (304-3, G4-MM1);
- Emissions (305-1, 305-2, 305-4); and,
- Effluents and Waste (306-2)

Within these topics, we report on environmental indicators that cover performance related to both inputs (e.g., energy, water) and outputs (e.g., emissions, waste).

**Energy**
The production of high-quality Mineral Sands and TiO\(_2\) products are associated with considerable energy consumption demand. Therefore, energy availability issues have a direct impact on operational efficiency at all locations. Also, energy consumption for mining and manufacturing operations is the primary driver of greenhouse gas (GHG) emissions. Proper management of energy consumption is therefore required in order to mitigate our impact on the local environment and on the climate.

Beginning in 2015, Tronox TiO\(_2\) launched a multi-year operational excellence initiative that, among other things, addressed our energy demand. These efforts continued in 2018. Energy efficiency improvements include, but are not limited to, process control automation, heating and cooling optimization, and insulation measures, at all locations.
Tronox also invests in efficient energy-generation options, the reuse of process emissions, and renewable energy sources. Examples include: the combined heat and power plant that generates electricity and steam for the Kwinana TiO₂ pigment plant; the carbon monoxide (CO) gas facility that reuses CO gas formed during the furnace smelting operations at the Empangeni Smelter in KZN; the cogeneration plant that utilizes previously flared furnace gases to fuel eight General Electric Jenbacher gas-fired engines for electricity production at the Saldanha Smelter; and the consumption of renewable steam imported from the neighboring waste incineration plant in Botlek, the Netherlands, satisfying 100 percent of the TiO₂ pigment plant's steam needs.

**Water**

Tronox realizes that fresh water is not an infinite resource. In fact, only 2.5 percent of all the water on Earth is considered fresh water, of which the majority is stored in glaciers and ice caps⁶. We therefore focus on “fit-for-purpose” water. In this way, we match water of a certain quality to a use appropriate for that quality, reducing our reliance on municipal water around the world.

A good example of fit-for-purpose water can be found at the Brand se Baai Mine and Mineral Separation Plant (MSP) at our Mineral Sands Operations in Western Cape in South Africa, where 79 percent of total water consumption is sea water. This low-quality water is sufficient for use in the concentration processes of heavy mineral sands in the Primary and Secondary Concentration Plants. At our Botlek facility in the Netherlands, an even higher total of 95 percent of water demand is satisfied by the use of low-quality brackish water from the adjacent river.

At Kwinana, Western Australia, in the past 10 years, a large portion of municipal water has been replaced with high-quality, industrial-grade water from the Kwinana Water Reclamation Plant (KWRP). The KWRP recycles industrial waste water and provides water at varying levels of quality to neighboring industries. We are currently investigating additional uses of water supplied by the KWRP⁷, reducing Kwinana’s dependency on municipal water even further.

In addition to our focus on fit-for-purpose water, Tronox relies on multiple water reuse and recycling systems to make sure scarce fresh water can be allocated as efficiently as possible. We also collect and consume rain water at KZN Sands, South Africa.

**Biodiversity**

Tronox operates three above-ground mines (two in South Africa, one in Australia). Activities at our mines may disturb local ecosystems, which could have lasting impacts on biodiversity in the region. It is our mission to mitigate any impact from mining and beneficiation, to make sure designated ecosystems are protected, restored, and able to thrive in the long term.

Studies have been conducted, as part of Environmental Management Programs (EMPs) and Environmental Impact Assessments, to determine areas for mining and development, as well as for restricted areas. Rehabilitation measures have been included in the EMPs, Rehabilitation Guidelines, and Procedures, and are integrated in our way of doing business. These measures are monitored and reported on a consistent basis to ensure that closure objectives are met. In case rehabilitation of land is more effective in areas other than the affected land, Tronox identifies offset areas. For example at KZN Sands’ Fairbreeze Mine in South Africa, where an Offsets Advisory Committee consisting of various stakeholders and biodiversity experts determines an offset requirement commensurate to impacted water resources and ecosystems. The offset commitment made by Tronox is to restore the historical biodiversity functions of the targeted

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wetlands, which would not only benefit the site, but also improve water quality and quantity to the Siyaya River.

At Western Australia’s Northern Operations, Tronox has implemented plans to eradicate invasive flora, including Phytophthora Cinnamomi (Dieback), in order to protect indigenous plant species on the site.

**Emissions**
The reduction of GHG emissions is a matter of interest to all Tronox stakeholders, and increasingly to customers. GHGs absorb and emit radiation in the atmosphere and are the fundamental cause of the greenhouse effect. Most Tronox GHG emissions are generated from our four TiO₂ slag furnaces (South Africa), a synthetic rutile kiln (Australia), and three TiO₂ pigment plants (US, the Netherlands, Australia).

GHG emissions are a direct result of the combustion of fossil fuels. The energy efficiency improvements, which are a key element of our operational excellence initiative described above, directly enhance our performance from a GHG emissions point of view. In addition, we employ strategies to minimize high-carbon content energy sources where possible (for example, favoring natural gas delivered by pipeline versus coal transported by truck).

The amount of GHG emissions (measured in CO₂ equivalents) is often used as a measure for environmental sustainability. Tronox, as a member of the Titanium Dioxide Manufacturers Association (TDMA), has contributed to a cradle-to-gate analysis that mapped the carbon footprint of its TiO₂ operations. This analysis was later expanded to a full-size cradle-to-gate life cycle assessment, of which carbon footprint is just one of 16 parameters measured in the process. The results from these studies will be used to engage with supply chain partners to advance product life cycle sustainability.

**Effluents and Waste**
All Tronox waste is managed according to local waste management procedures that are based on the principles of cradle-to-gate waste management. We ensure that all waste leaving our sites is labeled, weighed and only handled by contracted and/or authorized service providers. Waste processed onsite is either used to fill and contour mined-out areas (overburden and waste rock), deposited in sedimentation lagoons (tailings), or placed in specifically designed landfill pits (hazardous and non-hazardous waste).

Tronox continuously seeks alternatives for waste streams. For example, the Tronox Botlek pigment plant in the Netherlands partners with local industries to research the application of filter cake (currently land filled) in concrete. Also, roundtable sessions should result in new destinations for waste streams, including sulfuric acid and hydrochloric acid. The Kwinana plant in Australia provides hydrochloric acid that can be upgraded for use in swimming pools.

**Energy consumption within the organization (302-1)**
This indicator reflects the primary energy consumption within the organization during the fiscal year of 2018. All presented data relates to the legacy Tronox TiO₂ segment.
### Energy Consumption Table

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-renewable fuel sources</strong></td>
<td>16.6</td>
<td>18.5</td>
<td>18.9</td>
</tr>
<tr>
<td><strong>Electricity and steam sold</strong></td>
<td>-0.9</td>
<td>-0.8</td>
<td>-1.0</td>
</tr>
<tr>
<td><strong>Total direct primary energy consumption</strong></td>
<td>15.8</td>
<td>17.7</td>
<td>18.0</td>
</tr>
</tbody>
</table>

**2018 Non-renewable fuel sources**

- Cokes/coal reductant: 47.0%
- Natural gas: 43.4%
- Diesel: 1.9%
- Sasol gas: 1.6%
- Paraffin: 1.2%
- Toluene: 0.1%
- Other: 4.9%

**Note:** Tronox does not consume direct renewable energy and does not self-generate electricity, heating, cooling or steam from energy sources other than non-renewable sources.

### Energy Consumption by Source

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity</strong></td>
<td>12.1</td>
<td>15.9</td>
<td>16.7</td>
</tr>
<tr>
<td><strong>Steam</strong></td>
<td>0.6</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Total indirect primary energy consumption</strong></td>
<td>12.8</td>
<td>16.6</td>
<td>17.4</td>
</tr>
</tbody>
</table>

The Botlek plant in the Netherlands is the only site which consumes imported steam in addition to self-generated steam. Other Tronox plants are self-sufficient with regard to steam consumption.

### Standards, methodologies, and assumptions used

Energy consumption within the organization includes the components stated below. All components are converted into primary energy, in order to arrive at total direct and indirect primary energy consumption.

- **Non-renewable fuel consumed**
  These sources are assumed to be primary energy sources, even though some sources have been through a transformation process.

- **Electricity and steam sold**
  This component is only applicable to the Kwinana pigment plant in Western Australia, where efficiencies of the combined heat and power plant and steam boilers, that generate electricity and steam respectively, are taken into account to arrive at primary energy.

- **Electricity and steam purchased for consumption**
  Intermediate energy purchased for consumption is converted to primary energy by taking into account the energy input of the production process where possible, or by using efficiency assumptions. No primary energy conversion is applied for electricity and steam from renewable sources.
In case non-renewable fuel sources were consumed to produce electricity or steam used on site, only the non-renewable fuel sources were counted, in order to prevent double counting of energy consumption.

**Source of the conversion factors used**
Calorific values that were used to convert volumes of non-renewable fuel sources into primary energy were taken from the energy suppliers where possible, or from the Guidelines for National Greenhouse Gas Inventories⁷.

Efficiencies used for electricity and steam sold were based on local metered input and output values and annual efficiency samples, respectively.

Regarding electricity and steam purchased for consumption, conversion efficiencies are provided by energy suppliers where possible, or assumptions of country-average efficiencies were taken from the Trends in Global Energy Efficiency Report⁸.

**Energy intensity (302-3)**
This indicator reflects the primary energy intensity during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO₂ segment.

![Energy intensity chart]

**Notes:**
1) The total primary energy intensity is calculated by dividing the sum of direct and indirect primary energy consumption by the total weight of products produced.
2) All energy sources included in 302-1 (non-renewable fuel, electricity and steam, minus electricity and steam sold) are included in the energy intensity calculations.

In 2018, both the Brand se Baai mine and Northern Operations experienced challenges with regard to the quality and stability of ilmenite feedstock. As a result, coal consumption was increased to improve product grades. Kwinana’s direct primary energy intensity increased as well, as the plant was not able to run flat out due to strategic planning.

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Water withdrawal by source (303-1)
This indicator reflects the total water withdrawal during the fiscal year of 2018. All presented data relates to the legacy Tronox TiO₂ segment.

<table>
<thead>
<tr>
<th>millions of cubic meters</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total water withdrawal</td>
<td>56.2</td>
<td>63.7</td>
<td>57.3</td>
</tr>
</tbody>
</table>

Total water withdrawal only takes into account water that is used for the first time. Water that is reused or recycled to be consumed twice or more times, either in the same process or in a different process, is not included in this indicator.

In 2017, total water withdrawal increased, mainly because of dewatering from the Northern Operation’s North Mine voids to facilitate the removal of overburden in preparation for dredge mining. Compared to 2016, overall water intensity decreased in 2017 and 2018, as a result of increased mineral sands production at all three mines. The mines use water relatively efficiently compared to the TiO₂ plants (per ton of product produced). An increase in the water proportion used by the mines therefore has a positive effect on total water intensity. In addition, all six production sites decreased their water intensity from 2017 to 2018 by at least 2.4 percent.

Habitats protected or restored (304-3)
Amount of land disturbed or rehabilitated (G4-MM1)
The combined indicators 304-3 and G4-MM1, reflect the total land use of the organization, in terms of area protected, area disturbed, area in rehabilitation and area restored. Partnerships and approval from independent external professionals are also reported. All presented data relates to the legacy Tronox TiO₂ segment.

<table>
<thead>
<tr>
<th>Hectares</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area protected</td>
<td>31,953</td>
<td>31,854</td>
<td>32,092</td>
</tr>
<tr>
<td>Area disturbed</td>
<td>4,844</td>
<td>4,822</td>
<td>4,719</td>
</tr>
<tr>
<td>Area in rehabilitation</td>
<td>2,179</td>
<td>2,250</td>
<td>2,242</td>
</tr>
<tr>
<td>Area restored</td>
<td>4,227</td>
<td>4,518</td>
<td>4,749</td>
</tr>
<tr>
<td>Total land use</td>
<td>43,203</td>
<td>43,445</td>
<td>43,803</td>
</tr>
</tbody>
</table>

Notes: 1) All data refers to a snap shot at year end (December 31 of the relevant year).
2) The land use footprint includes all Tronox operations, however, more than 95 percent of total land use can be attributed to our three titanium feedstock mines in South Africa and Australia. 

3) During integration activities between legacy Tronox and legacy Cristal, it was decided that exploration tenements should be excluded from Area Protected. This change in the definition has resulted in a significantly smaller footprint, as presented in the table above, compared to the footprint published in prior reports.

Total area restored increased in 2018, as both the Brand se Baai mine and Northern Operations scaled up their rehabilitation activities and restored more land than in 2017. Contrary, rehabilitation activities at KZN Sands significantly decreased, as a specified quality level of land has been achieved for the majority of its Hillendale mine, in accordance with requirements posed by the South African authorities.

Mining at KZN Sands’ Hillendale mine stopped in 2013 and the new Fairbreeze mine was officially opened in 2016 (minor mining activities commenced in 2015). From 2013 onward, major rehabilitation activities started at the Hillendale mine to ensure the local habitat would be restored. These activities have now come to an end and closure application work commenced in 2019.

<table>
<thead>
<tr>
<th>Restored habitats at our mines</th>
<th>Area opened during fiscal year [hectares]</th>
<th>Area restored during fiscal year [hectares]</th>
<th>Expenditures on rehabilitation during fiscal year [US$]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillendale Mine</td>
<td>2016</td>
<td>16</td>
<td>$598,765</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>270</td>
<td>$2,206,444</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>65</td>
<td>$1,529,921</td>
</tr>
<tr>
<td>Brand se Baai Mine</td>
<td>2016</td>
<td>196</td>
<td>$2,632,120</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>221</td>
<td>$2,254,397</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>284</td>
<td>$3,219,242</td>
</tr>
<tr>
<td>Northern Operations</td>
<td>2016</td>
<td>72</td>
<td>$225,379</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>100</td>
<td>$558,969</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>54</td>
<td>$817,482</td>
</tr>
<tr>
<td>Total</td>
<td>2016</td>
<td>285</td>
<td>$3,456,264</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>591</td>
<td>$5,019,810</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>402</td>
<td>$5,566,646</td>
</tr>
</tbody>
</table>

Note: Rehabilitation and restoration of mined out land is inseparably connected to the way we operate our mines. In the table above, the area opened, area restored and expenditures on rehabilitation are presented for our mines.

At Brand se Baai mine, rehabilitation costs increased in 2018 due to the purchase of additional nets to ramp up rehabilitation efforts. Nets are used to protect the rehabilitated land from the wind, as the flora is notoriously fragile in the region. The purchase of additional nets in turn increased maintenance activities related to rehabilitation. Additionally, specialist studies were completed according to the Environmental Management Plan and new Water Use License. At Northern Operations, costs related to rehabilitation of disturbed areas increased in 2018 because the total area restored during the year increased and because the majority of rehabilitation activities was focused on native rehabilitation. This activity has a higher unit rate compared to pasture rehabilitation.
Standards, methodologies and assumptions used
We apply the following definitions to the different land use categories:

Area protected:
This category includes undisturbed land (land not affected by any operations) that remains in its original state and land that is actively protected from operations to maintain a healthy, functioning ecosystem.

Area disturbed:
Reflects areas that are used during or affected by operational activities, including:
- Operational plants and units (including tank and silo storage)
- Office buildings (including maintenance shops, storage locations and contractor areas)
- Other areas (occasionally used, including roads and parking lots)
- Waste treatment/storage (including ponds and storage of fine and coarse material fractions)
- Areas prepared for surface mining (i.e., areas where the top soil has been removed)
- Areas actively mined
- Former mining or operational areas where backfilling operations are in progress, but where the top soil has not yet been replaced

Area in rehabilitation:
Reflects former mining or operational areas where the top soil has been placed back, but where rehabilitation measures have not yet been completed. Offsetting areas where rehabilitation measures have commenced are also included in this category. This is a temporary phase between area protected/disturbed and area restored.

Area restored:
Former mining or operational areas where rehabilitation measures have been completed and a specified quality level has been achieved according to pre-determined agreements with authorities, or, in case of absence of agreements with authorities, according to internal standards. These agreements can include restoration to farm land, native land, land with a high biodiversity value, etc. Once the agreed quality level has been achieved, the area is considered to be restored, even if Tronox is still putting in effort (through third parties or otherwise) to maintain the area at that quality level.

Approval from independent external professionals
Our Brand se Baai mine operations in South Africa are currently in the process of determining (i) the criteria for rehabilitation success; and (ii) establishing a methodology that can measure compliance with the criteria. The process will be open for public comment and submitted to the relevant authorities for final approval.

At our Northern Operations location in Australia, rehabilitation monitoring is conducted by an external contractor and is undertaken to track rehabilitation development over time, to confirm successful practices and identify improvement opportunities. Tronox, with an external contractor, has developed formal rehabilitation completion criteria in order to clearly define rehabilitation objectives, how these will be achieved, and measures to demonstrate success. These are outlined in the Cooljarloo Mine Closure Plan9, as endorsed by the government.

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Where performance issues are recognized for any given site, appropriate corrective actions are identified and implemented. Where a solution is not obvious, further investigation is undertaken through research programs with the University of Western Australia, Murdoch University, external contractors, and internal on-site trials. Rehabilitation improvement programs have been detailed in the Cooljarloo Mine Closure Plan.

The rehabilitation data is presented to the Mineral Sands Agreement Rehabilitation Coordinating Committee (MSARCC; various government departments) each year. To date, no areas of rehabilitation have been signed off.

**Partnerships**

We believe in long term sustainability of the environment and as such value stakeholder relations which include the communities within which we operate. As part of Tronox KZN Sand’s impact mitigation measures at the Fairbreeze mine in South Africa, the company has established protected areas, such as the Siyaya Biodiversity Offset (230 hectares / 568 acres). We have partnered with Eco-pulse, a reputable environmental consulting company to ensure a state-of-the-art offset management planning. We also participate in the uMhlathuze Catchment Management Agency where we play a critical role in ensuring catchment protection and efficient water utilization. As part of our environmental stewardship, we have partnered with the Mtunzini community and formed an Environmental Oversight Committee comprising of representatives of Tronox and the community. The EOC, whose primary function is to ensure that Tronox delivers on our environmental/biodiversity impacts mitigation promise is chaired by an independent leader.

Tronox Northern Operations has provided grants, on an annual basis since 2005, to the Department of Parks and Wildlife (DPAW). This funding is for important conservation projects within the catchment area of the Chandala Processing Plant. Each year, a list of projects is submitted to Tronox by DPAW. Tronox then selects projects with a focus on improving the health of the surrounding environment. Since its inception, this program has delivered around US$186,000 worth of funding to local environmental projects. Listed below are a few of the projects Tronox has funded:

**2011: Fox predation impact on western long-necked tortoise study**
This study confirmed that fox predation is having a significant impact on the western long neck turtle. This resulted in the implementation of methods for reducing fox predation, specifically during the breeding cycle of the turtles.

**2013: Feral European honey beehive mapping and eradication re-survey and control**
The feral European honey bee is recognized as a major threat to biodiversity in Western Australia. Feral honey bees also pose a serious threat to native bees and other insect pollinators by out competing them for limited food resources. The vegetation types common to the Chandala Region support a number of threatened species and communities, such that the presence of feral honey bees has the potential to place greater pressure on their conservation.

**2011 – 2016: Macro invertebrate and reptile studies across catchment**
Thanks to funding from Tronox, the area surrounding the Chandala plant has undergone the most comprehensive macro-invertebrate and reptile inventory in Western Australia. The studies looked at hundreds of species of spiders, insects, lizards, snakes, and other fauna.

**2012 – 2016: Supporting the Chittering Wildlife Caretakers**
Tronox Chandala has committed funding to a local wildlife caretakers group to allow them to achieve their goal of treating and caring for sick, injured, and immature native wildlife in order to re-establish rehabilitated wildlife into their natural environment.

2001 to date: Western Shield feral predator baiting program
Tronox has sponsored the Western Shield fox baiting program in the Cooljarloo area since 2001. This program enables distribution of baits for the eradication of the feral fox. In 2018 this baiting program was extended to include Eradicat, which is a bait for feral cats. Both foxes and cats have a significant impact on fauna native to the Cooljarloo area.

Other environmental projects sponsored by Northern Operations include:

Satellite tracking of wedge tail eagles
This project focuses on gaining insight into the movement and behavior of the wedge tail eagles. The project will follow the full life cycle of these birds.

Chittering Landcare
Tronox has had a partnership with the Chittering Landcare group since 1990. Tronox supplies financial funding and supplies office facilities for the group to work out of. Chittering Landcare group carries out monitoring on all local water ways. They also receive government funding each year to carry out various environmental projects, such as planting of native flora on eroded lands.

Tronox has been a major sponsor of this group since its inception in 2000. The group is responsible for promoting sustainable farming practices, reducing environmental impacts, and improving productivity. This includes fencing of creek beds to stop erosion, perennial grasses on light soils, various deep ripping and cropping practices, and fertilizer and grain trials. West Midlands also runs regular community meetings with guest speakers.

Direct (Scope 1) GHG emissions (305-1)
This indicator reflects the direct GHG emissions (Scope 1)10 of operations over which Tronox had operational control during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO2 segment.

<table>
<thead>
<tr>
<th>millions of metric tons of CO₂ equivalents</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct GHG emissions (Scope 1)</td>
<td>1.2</td>
<td>1.4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

10 Direct GHG emissions, or Scope 1 emissions, refer to GHG emissions from operations that are owned or controlled by Tronox.
Standards, methodologies, and assumptions used
Greenhouse gases included in this indicator are in line with the GHGs covered by the United Nations Kyoto Protocol, the World Resources Institute, and the World Business Council for Sustainable Development (WBCSD) GHG Protocol Corporate Accounting and Reporting Standard:

- Carbon dioxide (CO$_2$)
- Methane (CH$_4$)
- Nitrous oxide (N$_2$O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF$_6$)

Furthermore, the reporting of Scope 1 and Scope 2 GHG emissions is in line with the WBCSD Standard’s Operational Control Approach$^{11}$.

Source of the conversion factors used
GHG emission factors for CO$_2$ are based on data provided by local energy suppliers. In case this data is not readily available, the emission factors used are in line with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (default emission factors on a net calorific basis).

For GHGs other than CO$_2$, Global Warming Potentials (GWPs) are used to convert GHG emissions into CO$_2$ equivalents. These GWPs are in line with the IPCC Fifth Assessment Report$^{12}$.

Energy indirect (Scope 2) GHG emissions (305-2)
This indicator reflects the energy indirect GHG emissions (Scope 2)$^{13}$ of operations during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO$_2$ segment.

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$^{13}$ Indirect GHG emissions, or Scope 2 emissions, refer to emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by Tronox.
### Indirect GHG emissions (Scope 2)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect GHG emissions</td>
<td>1.1</td>
<td>1.5</td>
<td>1.6</td>
</tr>
</tbody>
</table>

### 2018 Indirect (Scope 2) GHG emissions

#### Note:
Botlek is the only Tronox site that imports steam. Since 2018 this steam is generated by the incineration of 100% renewable waste (biomass). GHG emissions resulting from the combustion of biomass are classified under biogenic emissions by GRI and thus are not included in the GHG emission numbers published in this report.

#### Standards, methodologies, assumptions and source of conversion factors
Please refer to 305-1 for the type of GHGs included, the chosen consolidation approach, and the sources of emission factors and GWPs.

#### Renewable steam
In 2018, the TiO₂ pigment plant in Botlek, the Netherlands, started importing steam generated by the incineration of 100% renewable waste (biomass). The steam is imported from neighboring company AVR, which has been Tronox’s steam supplier for over 15 years. In past years AVR’s biomass plant, where non-recyclable waste wood is processed, was only suitable for the extraction of electricity. Last year however, this process was adjusted to produce and supply steam and district heat, resulting in a significant reduction in Botlek’s Scope 2 GHG emissions. Currently Tronox and AVR are working on a new project; the condensate from the imported steam that retains after treatment of the pigment still has a high temperature. The teams from both companies are now researching options for linking the residual heat into the district heating supply from AVR, which should improve heat efficiency.

#### GHG emissions intensity (305-4)
This indicator reflects the GHG emissions intensity during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO₂ segment.
Notes:  1) The GHG emissions intensity is calculated by dividing the sum of direct and indirect GHG emissions by the total weight of products produced.
2) All GHG emissions included in 305-1 and 305-2 (Scope 1 and Scope 2) are included in the GHG emissions intensity calculations. This automatically includes all GHGs stated under 305-1.

Waste by type and disposal method (306-2)
This indicator reflects the total weight of waste produced during the fiscal year of 2018. All presented data relates to the Legacy Tronox TiO₂ segment.

<table>
<thead>
<tr>
<th>metric tons x100,000</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous waste</td>
<td>1.1</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Non-hazardous waste</td>
<td>6.0</td>
<td>6.3</td>
<td>6.5</td>
</tr>
</tbody>
</table>
The global non-hazardous waste intensity has decreased in 2017, due to an increase in production at the South African operations. These operations generate relatively little non-hazardous waste (the majority of waste from our South African operations is classified as hazardous) compared to the other plants.

Two factors are responsible for a slight increase in non-hazardous waste intensity in 2018, compared to 2017: 1) Kwinana increased dredging activities to reduce waste solids in its evaporation ponds; and 2) the high iron oxide content of ilmenite at Northern Operations resulted in a relatively greater waste production.

**Residue Storage Facilities**

Tronox has residue storage facilities at many of its operating sites worldwide. These facilities are subject to stringent design practices to ensure security of the materials contained within. In addition to the initial design of a residue storage facility, Tronox undertakes an extensive process of monitoring and management of the facilities. These monitoring and management activities extend to both active residue storage facilities and those that have since been closed. Each storage facility is reviewed periodically and testing is done to ensure ongoing stability and integrity. This form of monitoring is supported by independent external consultants.
### Material Topic to Tronox

<table>
<thead>
<tr>
<th>Description</th>
<th>Topic Boundary</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labor/Management Relations</strong></td>
<td>TiO₂ segment</td>
<td>Communities</td>
</tr>
<tr>
<td>In SA, approximately 74 percent of our TiO₂ workforce are members of a union. In AU, approximately 46 percent of our employees are represented by a CBA and in EU, approximately 49 percent are represented by a CBA and 27 percent are members of a union.</td>
<td></td>
<td>SA, AU, US, EU</td>
</tr>
<tr>
<td><strong>Occupational Health and Safety</strong></td>
<td>TiO₂ segment</td>
<td>Communities, Regulators</td>
</tr>
<tr>
<td>&quot;Health &amp; Safety&quot; is one of our core values, and we are deeply committed to the safety of our employees and our communities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diversity and Equal Opportunity</strong></td>
<td>TiO₂ segment</td>
<td>Communities</td>
</tr>
<tr>
<td>We have made “People” one of our core values, and our business is most effective when it is diverse and our people enjoy a fair and supportive work environment. In SA, the Mining Charter obligates us to specific objectives for employment equity and human resources development.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indigenous Rights</strong></td>
<td>TiO₂ segment</td>
<td>Communities</td>
</tr>
<tr>
<td>Two of our operations (KZN Sands, SA, and Northern Operations, AU) are in or adjacent to Indigenous Peoples’ territories, and they are important communities to the success of our operations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Local Communities</strong></td>
<td>TiO₂ segment</td>
<td>Communities</td>
</tr>
<tr>
<td>&quot;Responsibility&quot; is one of our core values, and we believe active engagement in our communities is key to our success. In SA, the Mining Charter obligates us to address the housing and living conditions of our employees, and the development of our communities.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Geography abbreviations: AU = Australia; EU = Europe; US = United States; SA = South Africa.

Tronox has an impact on the social systems where it maintains operations, and management is engaged in understanding and addressing those social dimensions of sustainability. Our commitment to social sustainability is thoroughly addressed in both the Tronox values and the Tronox Code of Conduct.

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14 Except as otherwise noted, the disclosure in this section is as of December 31, 2018.
Within the Tronox Values, we define expectations for social sustainability, which include:
- Creating a safe and healthy workplace and driving continuous safety and health improvements;
- Caring for the environment, including taking personal responsibility for environmental stewardship;
- Remaining involved in our communities; and,
- Treating people as our most important resource, creating opportunities for development, and acting intentionally to create a diverse and supportive work environment.

Within the Tronox Code of Conduct, we also address areas that include anti-corruption, anti-competitive behavior, and product stewardship.

Tronox has determined that five of the 19 social topics identified in the GRI Sustainability Guidelines are material to its stakeholders:
- Labor/Management Relations (G4-MM4);
- Occupational Health and Safety (403-2);
- Diversity and Equal Opportunity (405-1);
- Indigenous Rights (G4-MM5); and,
- Local Communities (413-1)

**Labor/Management Relations:** Our employees in the United States are not represented by a union or collective bargaining agreement. As of December 31, 2018, in South Africa, approximately 74 percent of the workforce are members of a union. As of December 31, 2018, in Australia, approximately 46 percent of our employees are represented by a collective bargaining agreement. As of December 31, 2018, in the Netherlands, approximately 49 percent of Tronox employees are represented by a collective bargaining agreement and 27 percent are members of a union.

**Occupational Health and Safety:** We proactively identify and manage risk, conduct ourselves responsibly, exercise good judgment, and take responsibility for our actions. Our goal is that every employee, contractor and visitor to one of our sites leaves that site unharmed.

**Diversity and Equal Opportunity:** We believe our business is most effective when it is diverse and our people enjoy a fair and supportive work environment. We describe the behaviors we expect from our employees as follows: listens to others with diverse perspectives; supports new and different approaches; supports fairness and equality in the workplace; encourages others to be open-minded and to appreciate alternative cultural perspectives; does not tolerate discrimination.

**Indigenous Rights:** Two of our operations (KZN Sands, South Africa, and Northern Operations, Australia) are in, or adjacent to, Indigenous Peoples’ territories, and they are important communities to our license to operate, and to our community objective as discussed below.

**Local Communities:** Active engagement in our communities is key to our success. We understand the social impacts of our activities and are committed to resolving situations where operational goals conflict with community goals, and to promoting positive engagement with the community. Our employees act as advocates for the community within our organization, fostering a culture of employee volunteerism, and promoting community initiatives related to education in science and the arts.
Number of strikes and lock-outs exceeding one-week duration (G4-MM4)
There are no records of strikes or lock-outs at any Tronox location in the last 10 years.

Types of injury and rates of injury, occupational diseases, and number of work-related fatalities (403-2)
This indicator reflects our safety results in terms of injuries and injury rates. All presented data relates to the legacy Tronox TiO₂ segment.

Notes:
Lost time injury = An injury that prevents the individual from returning to work the next day
Disabling injury = Either a lost time injury or a restricted work injury (when the individual can return to work but cannot perform his/her previously assigned duties)
Recordable Injury = A disabling injury or a medical treatment case (when the individual requires more than basic first aid treatment but can return to work)

\[
\text{DIFR} = \left( \frac{\text{# of lost time injuries}}{\text{total hours worked}} \right) \times 200,000
\]
\[
\text{DIFR} = \left( \frac{\text{# of disabling injuries}}{\text{total hours worked}} \right) \times 200,000
\]
\[
\text{TRIFR} = \left( \frac{\text{# of total recordable injuries}}{\text{total hours worked}} \right) \times 200,000
\]

In 2018, the total injury frequency rates were the lowest in Tronox history (0.45 for employees only and 0.49 for employees and contractors combined). These results, combined with no recorded fatalities during the year, coin 2018 as a year of exceptional safety performance.
<table>
<thead>
<tr>
<th>Recordable Injuries</th>
<th>2016</th>
<th></th>
<th>2017</th>
<th></th>
<th>2018</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employees</td>
<td>Contractors</td>
<td>Total</td>
<td>Employees</td>
<td>Contractors</td>
<td>Total</td>
</tr>
<tr>
<td>Fatalities</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lost Time Incidents</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Restricted Work Cases</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>DISABLING INJURIES</strong></td>
<td><strong>11</strong></td>
<td><strong>8</strong></td>
<td><strong>19</strong></td>
<td><strong>10</strong></td>
<td><strong>2</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>Medical Treatment Cases</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td><strong>RECORDABLE INJURIES</strong></td>
<td><strong>17</strong></td>
<td><strong>14</strong></td>
<td><strong>31</strong></td>
<td><strong>16</strong></td>
<td><strong>13</strong></td>
<td><strong>29</strong></td>
</tr>
<tr>
<td>Reversible Occupational Health Illnesses</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Safety Vision and LIFE Saving Rules**
Tronox has a clear vision to be a world-class business. We are dedicated to making high-quality products at low cost in a safe and sustainable manner. Our commitment to safety is an integral element of our vision and is reflected by the steps we are taking toward an even safer and healthier workplace for everyone.

Our Global Safety Vision and Tronox LIFE (Life-altering Incident and Fatal Event) Saving Rules, which were introduced in 2015, provide a foundational view of how employees and contractors must operate and act. And it lays out our safety policy and illustrates what it means to live safety at Tronox at every level of the company. The set of LIFE Rules is a critical preventative tool. It is an unconditional obligation that applies to everyone at a Tronox facility, whether it is at a mine, beneficiation facility, chemical plant, or office building.

**Subsequent Events**
In January 2019, a contractor at our KwaZulu-Natal metal processing site sustained a fatal injury during the offloading of a pressurized vessel. In August 2019, a contractor at our Snapper mining operations in Australia was fatally injured when a D10 bulldozer ran over his vehicle. In both instances, the sites immediately contacted emergency response personnel and activated an investigation team to determine the cause of the incidents. These are viewed as losses for all of Tronox and we have shared the learnings of the investigations with all operating facilities in effort to best prevent a reoccurrence.
Diversity of governance bodies and employees (405-1)

Tronox Diversity Network
Diversity and inclusion are important strategic issues for any modern organization. Worldwide trends mean organizations are taking a serious look at the role diversity has to play in ensuring they have access to the best talent and best ideas.

Tronox Diversity Network (TDN) chapters continue to work to keep diversity and inclusion top of mind. Oklahoma City publishes a quarterly newsletter. Stamford hosts an initiative called Lunch Roulette, which encourages employees to have lunch with colleagues whom they might not otherwise see or interact with. The TDN chapter in Botlek engaged with outside consultants to facilitate weekly sessions during which small groups of employees learned how to better appreciate others’ differences in work habits and communication styles.

Another way that sites are fostering inclusion is by removing barriers and assessing how to best accommodate all employees. TDN members in Australia are looking at the ergonomics of equipment to make sure that it is accessible to everyone, regardless of height or physical strength.
The same is true in Hamilton, where team members have made many small adjustments to ensure that work can be done as efficiently as possible.

Active members of the TDN appreciate the opportunity to promote diversity and inclusion throughout Tronox. Among the group’s objectives, as stated in its charter, are to influence and develop practices and systems to encourage diversity and inclusion; educate others on the benefits of diversity and inclusion in the workplace; and to support and engage with Tronox leaders so they proactively encourage diversity and inclusion.

The TDN charter states, “Many studies have shown that companies that hire a diverse range of talent and foster an inclusive workplace will achieve increased creativity and innovative problem-solving; stronger employee engagement; and better retention of existing key talent. This, in turn, has been found to drive superior business results and performance.”

**Total number of operations taking place in or adjacent to Indigenous Peoples’ territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples’ communities (G4-MM5)**

Two of our operations (KZN Sands, South Africa, and Northern Operations, Australia) are in or adjacent to Indigenous Peoples’ territories. A total of ten Indigenous Peoples’ territories have been identified, of which seven are in or adjacent to Hillendale and Fairbreeze mine site, and three are in or adjacent to Northern Operations. Tronox has formal agreements with all ten communities.

**KZN Sands**

We operate within community areas. As such, formal benefit agreements (e.g., Local Community Procurement Forum) with seven Traditional Authorities (Amakhosi) in KwaZulu-Natal, South Africa, form part of the KZN Sands Local Economic Development Projects. These projects are in line with the KZN Sands Social and Labor Plan (SLP). The SLP is a compliance document initiated through a legislative framework called Mineral and Petroleum Resources Development Act (MPRDA). Each mining house is required to submit its SLP to the Department of Mineral Resources every five years, to indicate the type of Local Economic Development Projects that the company will embark on for the duration of that five-year period. In this plan, projects and beneficiary communities are committed along with the budget to be spent. The community projects must be in line with Municipalities’ Integrated Development Plan.

*Various Indigenous Territories KZN Sands is adjacent to, or on, include:*
  - Dube Traditional Authority
  - Somopho Traditional Authority
  - Mkhwanazi Traditional Authority
  - Macambini Traditional Authority
  - Nzuza Traditional Authority
  - Ogagwini Traditional Authority
  - Madlebe Traditional Authority

**Northern Operations**

The Cooljarlool Mine site and Chandala processing plant in Western Australia are situated on mining tenements that were granted prior to the introduction of Australia’s Native Title Act, and
as result, those mining tenements are deemed to be valid against Native Title and operations on such mining tenements do not require Tronox to enter into any form of land access agreement.

Tenements granted subsequent to the commencement of the Native Title Act (on 1 January 1994), however, are required to comply with procedures under the Native Title Act for the purpose of procuring the consent of the relevant (registered) Native Title claimants, which processes frequently result in such consent being recorded in Land Access Agreements. Tronox has entered into such Land Access Agreements with relevant Native Title claimants in respect of the grant of mining tenements relating to, and its operations at, Falcon, the Dongara Project and Cooljarloo West, (under which, among other things, the Native Title claimants agree to the grant of future mining tenements over the area the subject of the agreement), an additional tenement to the south of Cooljarloo, which has been rolled into the Cooljarloo West Agreement, and a tenement for the Chandala borefield.

The Falcon and Cooljarloo sites are on Yued Native Title Group’s claimed lands. The Chandala borefield is on Whadjuk land, and Dongara is on the Southern Yanatji Native Title Group’s claimed land.

Northern Operations is adjacent to or on various indigenous territories, which include the following formal agreements:

Falcon Indigenous Territory (all completed now):
- Work Ready training program
- Educational scholarships
- Apprenticeships
- Traineeships
- Cross-cultural awareness training for Tronox staff
- Business opportunities

Dongara Project Indigenous Territory:
- Signing fee (cash component)
- Establishment of administration center
- Workshops and training
- Educational scholarships
- Apprenticeships
- Traineeships
- Work Ready Program
- Business opportunities and support of business establishment
- Cross-cultural awareness training

Cooljarloo West Indigenous Territory:
- Signing fee (cash component)
- Right to payments upon grant of new mining tenements within the area of the agreement
- Educational scholarships
- Apprenticeships
- Traineeships
- Health fund
- Sporting and recreational fund
- Mentor program
- Indigenous community center
- Mogumber training facility
- Business/leadership training

**Operations with local community engagement, impact assessments and development programs** (413-1)

Below is a summary of the implementation levels of different engagements, assessments and programs at our operations.

<table>
<thead>
<tr>
<th></th>
<th>Botlek</th>
<th>Kwinana</th>
<th>Hamilton</th>
<th>Fairbreeze Mine</th>
<th>Brand se Baai Mine</th>
<th>Northern Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social impact assessments, including gender impact assessments, based on participatory processes</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Environmental impact assessments and ongoing monitoring</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Public disclosure of results of environmental and social impact assessments</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Local community development programs based on local communities’ needs</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Stakeholder engagement plans based on stakeholder mapping</td>
<td>○○</td>
<td>○○</td>
<td>○○</td>
<td>○○</td>
<td>○○</td>
<td>○○</td>
</tr>
<tr>
<td>Broad based local community consultation committees and processes that include vulnerable groups</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Works councils, occupational health and safety committees, and other employee representation bodies to deal with impacts</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Formal local community grievance processes</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Fully implemented ○, partly implemented ○○, not implemented ○○

**KZN Sands Dube Housing Project**

Tronox KZN Sands have built 135 quality houses for families living around its depleted and closed Hillendale mine.

Stakeholder Relations Lead, Nick Bulunga said the company had received an influx of requests in 2012 from host community members who had been battling with poor structured homes, largely made out of mud and substandard building materials that often collapsed during heavy rains.

“With our intervention, 135 families now have quality houses that give them dignity and pride. In 2019, 10 more houses are going to be built in the area, bringing the total number to 145 from 2013 to date, as we move closer to the target of 214 households.”
The Dube Housing Project further empowers the community by allocating construction contracts to locals. In this way, short-term job opportunities are also created. This makes a difference in the lives of community members.
## SOUTH AFRICAN MINING CHARTER SCORECARD

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<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Measure</th>
<th>Weighting</th>
<th>Compliance target by 2018</th>
<th>KZN Sands performance 2018</th>
<th>TMS performance 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reporting</td>
<td>Has the company reported level of compliance with the Charter for the calendar year</td>
<td>Documentary proof of receipt from the department</td>
<td>Y/N</td>
<td>100%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>2. Ownership</td>
<td>Minimum target for effective HDSA ownership</td>
<td>Meaningful economic participation</td>
<td>Y/N</td>
<td>26%</td>
<td>26.0%</td>
<td>26.0%</td>
</tr>
<tr>
<td>3. Procurement</td>
<td>Procurement Spent on BEE entity</td>
<td>Capital Goods</td>
<td>5%</td>
<td>40%</td>
<td>82.0%</td>
<td>76.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Services</td>
<td>5%</td>
<td>70%</td>
<td>88.5%</td>
<td>74.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumable Goods</td>
<td>2%</td>
<td>50%</td>
<td>63.1%</td>
<td>78.6%</td>
</tr>
<tr>
<td></td>
<td>Multinational suppliers contribution to social fund</td>
<td>Annual spend on procurement from multinational suppliers</td>
<td>3%</td>
<td>0.5%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>4. Employment Equity (Excl White Females)</td>
<td>Diversification of the workplace to reflect the country’s demographics to attain competitiveness</td>
<td>Top Management (Board)</td>
<td>3%</td>
<td>40%</td>
<td>100.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior Management (Exco)</td>
<td>4%</td>
<td>40%</td>
<td>100.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Middle Management</td>
<td>3%</td>
<td>40%</td>
<td>50.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Junior Management</td>
<td>1%</td>
<td>40%</td>
<td>69.8%</td>
<td>74.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Core Skills</td>
<td>5%</td>
<td>40%</td>
<td>91.1%</td>
<td>95.3%</td>
</tr>
<tr>
<td>5. Human Resources Development (Excl White Females)</td>
<td>Development of requisite skills, incl. support for South African based research and development initiatives intended to develop solutions in exploration, mining, processing, technology efficiency (energy and water use in mining), beneficiation as well as environmental conservation</td>
<td>HRD expenditure as percentage of total annual payroll (excl. mandatory skills development levy)</td>
<td>25%</td>
<td>5%</td>
<td>7.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>6. Housing and living conditions</td>
<td>Conversion and upgrading of hostels to attain the occupancy rate of one person per room.</td>
<td>Percentage reduction of occupancy rate towards 2014 target (1 person per room)</td>
<td>Y/N</td>
<td>100%</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conversion and upgrading of hostels into family units</td>
<td>Y/N</td>
<td>100%</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>7. Mine Community Development</td>
<td>Conduct ethnographic community consultative and collaborative processes to delineate community needs analysis</td>
<td>Implement approved community projects</td>
<td>5%</td>
<td>Up-to-date project implementation</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Project implementation</td>
<td>Percentage of Net Profit After Tax (NPAT) spent on community development</td>
<td>10%</td>
<td>1%</td>
<td>100.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>8. Sustainable Development and Growth</td>
<td>Improvement of the industry's environmental management</td>
<td>Implement approved environmental management programs (EMPs)</td>
<td>12%</td>
<td>Annual progress achieved against approved EMPs</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Improvement of the industry's mine health and safety</td>
<td>Implementation of tripartite action plan on health and safety</td>
<td>12%</td>
<td>Annual progress achieved against commitments in tripartite action plan</td>
<td>100.0%</td>
<td>66.7%</td>
</tr>
<tr>
<td></td>
<td>Utilisation of South African based research facilities for analysis of samples across mining value</td>
<td>Percentage of samples in South African facilities</td>
<td>5%</td>
<td>100%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
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