

2020 Environmental, Social and Governance (ESG) Report



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Environment – How we manage environmental impacts of our operations and provide solutions for global challenges. See [page 11](#)



Social – How we work to keep people and communities safe, foster positive relationships with stakeholders and ensure product safety. See [page 29](#)



Governance – How we develop and foster a strong culture and business practices to ensure we act as an ethical and responsible business. See [page 43](#)

Letter from the President & CEO

I am pleased to share with you Nutrien's new environmental, social and governance (ESG) report. This document builds on our previous sustainability reporting and is meant to support decision making by our stakeholders. I'm proud of how we're advancing ESG integration into our business. I hope you find the report informative and share our firm belief that we're on the right path and making great strides.



Chuck Magro, President and Chief Executive Officer – Nutrien

Our ESG commitment and actions

ESG is not a trend. It is a systemic shift in the foundations of strategy, and it is fundamentally changing our business model and how we operate. For agricultural companies like Nutrien that are integrated from the ground to the grower, we are uniquely positioned to impact our supply chain and partners.

In 2019, we continued to move the needle on our ESG performance, including the following:

- We received limited external assurance on our 2018 Scope 1 and 2 emissions (see [KPMG Limited Assurance](#)

[Statement](#) on our website), a testament to the rigor of our greenhouse gas (GHG) emissions accounting.

- We are advancing our GHG mitigation strategy, with some projects already underway – including carbon capture and storage through the innovative *Alberta Carbon Trunk Line*.
Read more on page 15.
- We continue to analyze how changes in weather and climate, including water scarcity, could impact our business and create opportunities for us to help farmers build more sustainable and resilient operations.
- We undertook a safety culture assessment to understand the extent

to which our safety behaviors are in line with our values and principles as an organization. It showed us we are making great progress, but we know there is more work to be done. We are among the best in our class when it comes to safety, but, in 2019, one employee tragically lost his life while working for Nutrien. This was our first fatality since becoming Nutrien, and we are deeply saddened by this loss. We are committed to building one of the world's strongest safety cultures and ensuring employees go home safe, every day.

- We continued to promote inclusion, with 25 percent of our leadership

Letter from the President & CEO (continued)

Working with growers to apply today's cutting-edge technology and best practices more widely and consistently around the globe will be key to the sustainability of the agriculture industry.

positions now occupied by women, and 33 percent women representation on our Board of Directors (Board), in alignment with the 30% Club.

- We renewed our Memorandum of Understanding and partnership with the Saskatoon Tribal Council in May 2019, continuing our commitment to initiatives and events that ensure our Indigenous partners share in opportunities both as employees and as suppliers.
- We integrated ESG topics, as well as cybersecurity and data privacy risks, into our enterprise risk management system.

We have expanded our ESG reporting, including increased depth and breadth on material topics related to our company and industry. In particular, we more fully describe our retail and fertilizer production businesses, as well as operations outside North America. We also aligned our disclosures with the *Task Force on Climate-Related Financial Disclosures* (TCFD) and the *Sustainability Accounting Standards Board* (SASB) frameworks.

As our business evolves and grows, and as new technologies become available, continual improvement of our ESG performance is our goal. We intend to release our strategic plan for climate and other ESG priorities, including key targets, within the next year.

Leading the next wave in sustainable agriculture

Working with growers to apply today's best practices more widely and consistently is key to the sustainability of the agriculture industry. We also need to develop new technologies, which is why Nutrien continues to invest in the development of a portfolio of sustainable products and solutions for growers, and we're supporting many of these climate-smart technologies through our innovative digital platform. We're helping to drive nutrient use efficiency and farm productivity, provide environmentally sustainable soil and plant health solutions, and enable digital agronomic and sustainability analysis. To meet the United Nations' *Sustainable Development Goal 2 (Zero Hunger)*, the global agriculture industry will need to feed another two billion people by 2050 and with less environmental impact. As the largest fertilizer producer in the world and the global leader in ag retail, Nutrien takes our role in this challenge extremely seriously. We are committed to taking on a pivotal role, identifying opportunities, setting targets and following through on GHG emissions reductions across our value chain.

COVID-19 and feeding the world

"Quick decisions today to provide food for tomorrow" - This was Nutrien's approach as COVID-19 began impacting our operations, supply chains, communities and customers. Nutrien is at the beginning of the food supply chain, and our role as an essential service is more critical than ever. We are proud to be part of a strong, sophisticated food system that is committed to putting food on tables, even under the most difficult of circumstances. As an industry, we are planning ahead to ensure that grocery store shelves are full this fall and into the future. Our role is to provide farmers what they need, from products to solutions, while minimizing business interruption and keeping our valued employees safe. Our commitment to getting food on tables extends to supporting our communities as well. We continue to act quickly and locally to ensure our partners are able to provide food solutions to those in need through this crisis.

We are committed to doing what is right for all our stakeholders and we thank you for your support and trust as we bring our purpose to life and grow our world from the ground up.

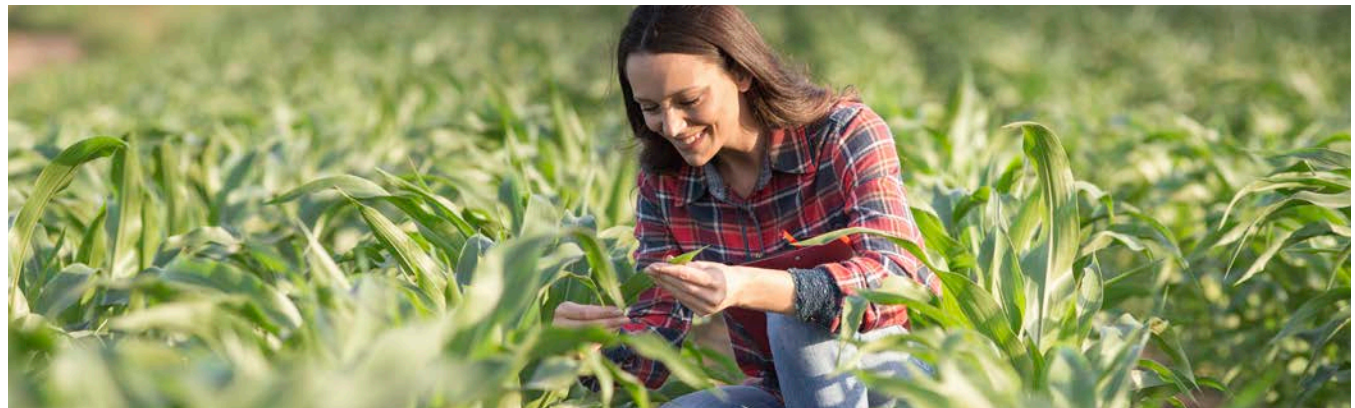


Chuck Magro
President and Chief Executive Officer
April 2020

About Nutrien

Nutrien is the world's largest provider of crop inputs and services, playing a critical role in helping growers increase food production in a sustainable manner. We produce and distribute 25 million tonnes of potash, nitrogen and phosphate products worldwide.

With this capability and our leading agriculture Retail network, we are well positioned to supply the needs of our customers. We operate with a long-term view and are committed to working with our stakeholders as we address our economic, environmental and social priorities. The scale and diversity of our integrated portfolio provides a stable earnings base, multiple avenues for growth and the opportunity to return capital to shareholders.



Significant operational changes in 2019

FEBRUARY 2019

We completed the acquisition of Van Horn, Inc. (Van Horn), a leading US retailer and agricultural services provider located in central Illinois.

FEBRUARY 2019

We acquired the remaining 20 percent interest in Agrichem, a leading specialty plant nutrition and plant health product company in Brazil, making Agrichem a wholly owned consolidated subsidiary of Nutrien.

MARCH 2019

We acquired Actagro LLC (Actagro), a developer, manufacturer and marketer of environmentally sustainable soil and plant health products and technologies. Actagro's commercial portfolio includes approximately 30 specialty products.

MAY 2019

We stopped producing phosphate fertilizer at the Redwater Fertilizer Operations plant in Canada, repurposing this facility to increase our ammonium sulfate capacity. This eliminated our need for imported phosphate rock.

SEPTEMBER 2019

Nutrien closed the acquisition of Ruralco Holdings Limited (Ruralco) in Australia, adding approximately 250 Retail locations and nearly 2,000 employees to our company.

NOVEMBER 2019

We rebranded our Landmark and Ruralco operations in Australia as Nutrien Ag Solutions.

2019

At A Glance

	2019 Performance	2018-2019 Change	2019 Highlights	Read more page
Environment	13.4 million tonnes Scope 1 and 2 carbon dioxide equivalent (CO ₂ e) associated with crop input production	↓ 6%	Received external limited assurance on 2018 baseline Scope 1 and 2 emissions inventory (see KPMG Limited Assurance Statement on our website)	12
	1.2 million tonnes carbon dioxide (CO ₂) captured	↑ 8%	Began injecting CO ₂ to be permanently stored into the <i>Alberta Carbon Trunk Line</i> , a large-scale carbon capture and storage project	15
	217 million m ³ water withdrawn	↑ 5%	Evaluated baseline water stress for our operating locations and found that less than 2 percent of our water withdrawals are from areas with higher water stress	21
	26 million tonnes of total waste and byproducts disposed	↓ 14%	Continued plastic recycling and reuse activities at our Retail facilities. We sold more than 19 million liters of products in returnable containers in 2019	22-23
	>9,500 North American growers benefited from our precision agriculture services	↑ 84%	More than 12 million acres registered in Echelon across Canada, the US and South America.	24-27
Social	0.34 total lost-time injuries per 200,000 hours worked	=	Rolled out a <i>Safe Driving Campaign</i> in all North America Retail facilities, and more than 1,100 employees received one-on-one driver training in Australia	30-34
	\$9.7 million invested in training and development	NPR	Trained 200 front-line supervisors in <i>Leadership Essentials</i> and launched our <i>Global Leadership Development</i> program targeting our 100 top leaders	35
	25% of leadership positions are held by women (Vice President and above)	↑ 6% ¹	Delivered unconscious bias training to more than 600 employees in North America	36
	\$29 million procured from Aboriginal businesses	↑ 48%	Renewed our partnership with the Saskatoon Tribal Council in Saskatchewan, Canada through a Memorandum of Understanding	39
	8% of our total Nutrien sales contain genetically modified organisms (GMO)	=	Developing a product rating system that will provide a holistic view of impacts from our manufactured products	40
Governance	33% of Board members are women	=	Reduced the number of Board members from 15 to 12	44
	All employees received ethics and anti-corruption training	=	Each year, we have a theme for our regular ethics communications to employees. This year, we focused on building a <i>Speak Up</i> culture	47
	1,200 employees attended online training on cybersecurity risks	NPR	Conducted cyber process hazard assessments for Nitrogen, Phosphate and Potash (NPK) sites	48

¹ Percent variance for this metric is based on a percentage point change from 2018.

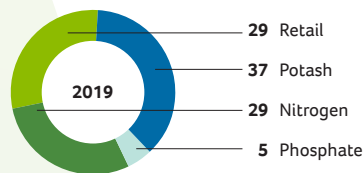
= no change

NPR not previously reported

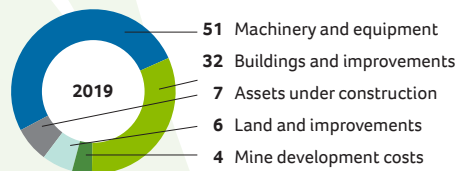
At Nutrien, our purpose is to grow our world from the ground up, and we're raising expectations of what an agriculture company can be.

Nutrien is a global Ag Solutions provider with a unique platform for generating growth and value. Our integrated business model and purpose-driven culture means that, from the bottom of the mine to the top of the silo, our employees around the world are committed to feeding the future safely and with integrity each day. We are also committed to an overall reduction of our environmental footprint by creating and implementing stewardship systems across our sites, operations and communities.

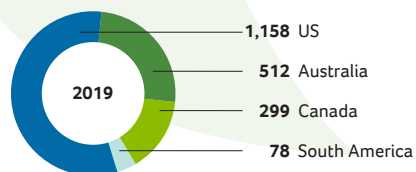
EBITDA (%)



Property, Plant and Equipment (%)



Retail Locations (number of locations)



All figures as of December 31, 2019

22,300

EMPLOYEES

14

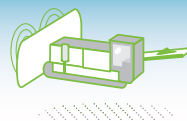
COUNTRIES

\$20B

IN SALES

500K+

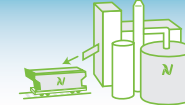
GROWER ACCOUNTS WORLDWIDE



Mining



Fertilizer Production



Storage & Transportation



Retail

6

POTASH
MINES

2

PHOSPHATE
MINES

28

PRODUCTION
FACILITIES

11.7

MILLION TONNES
POTASH

6.2

MILLION TONNES
AMMONIA

1.5

MILLION TONNES PHOSPHATE (AS P₂O₅)
(Excludes Redwater)

NEARLY

7

MILLION TONNES
STORAGE CAPACITY

~16K

OWNED & LEASED
RAILCARS

\$13.2B

RETAIL
SALES

11

MILLION TONNES
CROP NUTRIENT SALES

>1,850

PROPRIETARY
PRODUCTS

>2,000

RETAIL LOCATIONS
WORLDWIDE



For more information on [our corporate strategy](#), see the [2019 Annual Report](#).
Learn more about [Nutrien's Purpose](#).

Our Approach to ESG Reporting

We believe that managing environmental, social and governance (ESG) impacts contributes to long-term value creation, protects our reputation, enhances our resilience and helps future-proof our business. This report is a step forward in our ESG reporting and is designed to provide our investors and other stakeholders with information about how Nutrien manages relevant ESG topics. We will share additional sustainability and ESG goals and targets as they are developed.



Our reporting approach centers on five key principles:

Nutrien's ESG Ratings Profile

	Nutrien's Score	Rating Scale
MSCI ESG	A	CCC to AAA
CDP Climate	D	D- to A
RobecoSAM – S&P Global	53	0 (worst) – 100 (best)
Sustainalytics ESG Risk	46.9	0 (low risk) – 100 (severe risk)
ISS Governance Quality Score	2	1 (low risk) – 10 (severe risk)

NOTE: These ratings reflect the extent of our ESG disclosure, not the quality of disclosed information or our ESG performance. Where possible, we have addressed reporting gaps in this report.

Frameworks Used ¹

	Index
 SASB disclosure for the chemicals and mining standards are tagged throughout the report	page 60
 TCFD disclosures are tagged throughout the report	page 64

¹ The listing of these organizations does not imply endorsement or approval of this report.

Considering industry risks

We evaluate how industry risks can impact our success as a company. In 2019, we participated in the *World Business Council for Sustainable Development's* (WBCSD) industry-wide Dynamic Risk Assessment to better understand the emerging trends, risks and opportunities stemming from forces internal and external to the agriculture industry.

Listening to stakeholders

We proactively and regularly engage with our stakeholders to identify and address their concerns and communicate the long-term value opportunities associated with our business plans. We incorporate stakeholder feedback into our reporting and actions. Our efforts are meant to address what matters most to our stakeholders.

Implementing ESG reporting best practices

Our ESG report is informed by best practices from the WBCSD ESG Disclosure Handbook, and recommendations from the *Sustainability Accounting Standards Board* (SASB) and the *Task Force on Climate-Related Financial Disclosures* (TCFD). In addition, our disclosures are informed by the *Global Reporting Initiative* (GRI).

Read our GRI Index on page 62.

Focusing on material topics

We focus our reporting on the ESG topics representing the most material risks and opportunities for our business. Materiality is used in a sustainability context for this report and refers to our ESG priorities as determined within the frameworks used and with input from our stakeholders.

Monitoring global trends

As a global company working in a globalized industry, we intend to be informed and responsive to environmental and social trends.

Reporting scope and boundary

This report focuses on Nutrien's material ESG topics, performance and key initiatives for the fiscal year ending December 31, 2019. Reports from previous years and supplementary ESG information are available on our website.



We welcome and value your feedback on [this report](#) and all of our [sustainability and ESG initiatives](#).

Please contact us at: sustainability@nutrien.com or investors@nutrien.com

What We Heard

We regularly engage with investors and other stakeholders to better understand factors they believe are critical for Nutrien and the agriculture industry. In 2019, we conducted an extensive outreach program aimed at identifying and ranking stakeholder priorities. Participants included approximately 30 percent of Nutrien's shareholder ownership and 1,100 representatives from key stakeholder groups, including customers, growers, governments, communities and non-governmental organizations (NGOs). The following key themes emerged:

It all starts with governance

Stakeholders believe that good governance leads to positive results throughout our business. They also expect companies with strong governance practices to be better able to manage their environmental and social risks.

"Our governance section is probably the most comprehensive section in our ESG analysis and we spend probably half our time focused on the G part of the ESG."

Securities Analyst

Read about our governance practices on pages 44-46.

Climate change is more than GHGs

Our investors and stakeholders have high expectations of us helping to reduce and manage the impacts of climate change. They want to learn more about our actions and targets to reduce GHG emissions and how we minimize other interrelated environmental impacts such as water and energy use.

"We're looking at their emissions reduction goals, how they do it and how they will set them, on which basis. We are also looking at their carbon capture...how they optimize nitrogen management...the water management, there is a lot of energy efficiency as well. More broadly, everything is quite interlinked."

Investor

Read about our environmental impacts on pages 12-28.

Safety is foundational

Workforce and operational safety is a priority to our stakeholders. They want to understand our overall safety performance as a company, and at the mining, production, and retail levels.

"As a mining materials analyst, I always start with health and safety, and we look at that very carefully."

Securities Analyst

Read about our safety practices on pages 30-34.

Industry leaders look beyond their operations

Our stakeholders expect Nutrien to be a leader in the agriculture industry. This means differentiating our business by instructing customers on the safe use of Nutrien products, and by protecting air, soil and water from production and product impacts.

"I think that [making sure that their products are appropriately used and not negatively impacting community water supplies] is very integrated with chemical and fertilizer companies' ability to maintain a license to operate... of course, that's a good practice... but we would expect that of a company that is trying to act as the best player in the space."

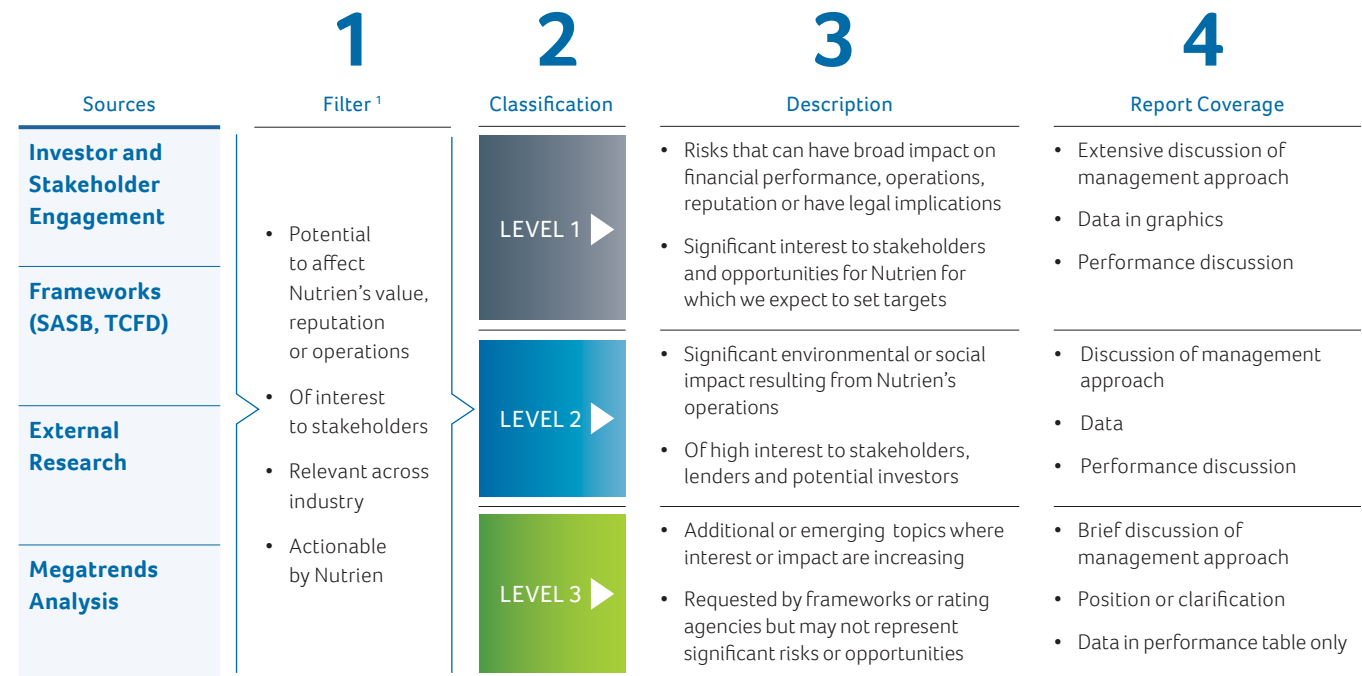
Investor

Read about our approach to reducing the environmental impacts of products and services on pages 24-27 and about product responsibility on pages 40-41.

Material ESG Topics

Nutrien took great care in identifying material ESG topics through engagement with stakeholders, sourcing topics from reporting frameworks and in-depth research on risk, reputation management, and megatrends. We cross-referenced these topics with our internal risk registry to ensure that Nutrien's principal ESG risks have been considered and that our risk management process is informed by this materiality assessment.

To narrow our focus, we used SASB's criteria to filter and prioritize material topics. The criteria included the potential to affect corporate value, the extent to which the topic is of interest to stakeholders, relevance across an industry, and the extent to which a topic can be controlled or influenced by Nutrien (that is, whether it is "actionable"). We plan to reassess the list annually.

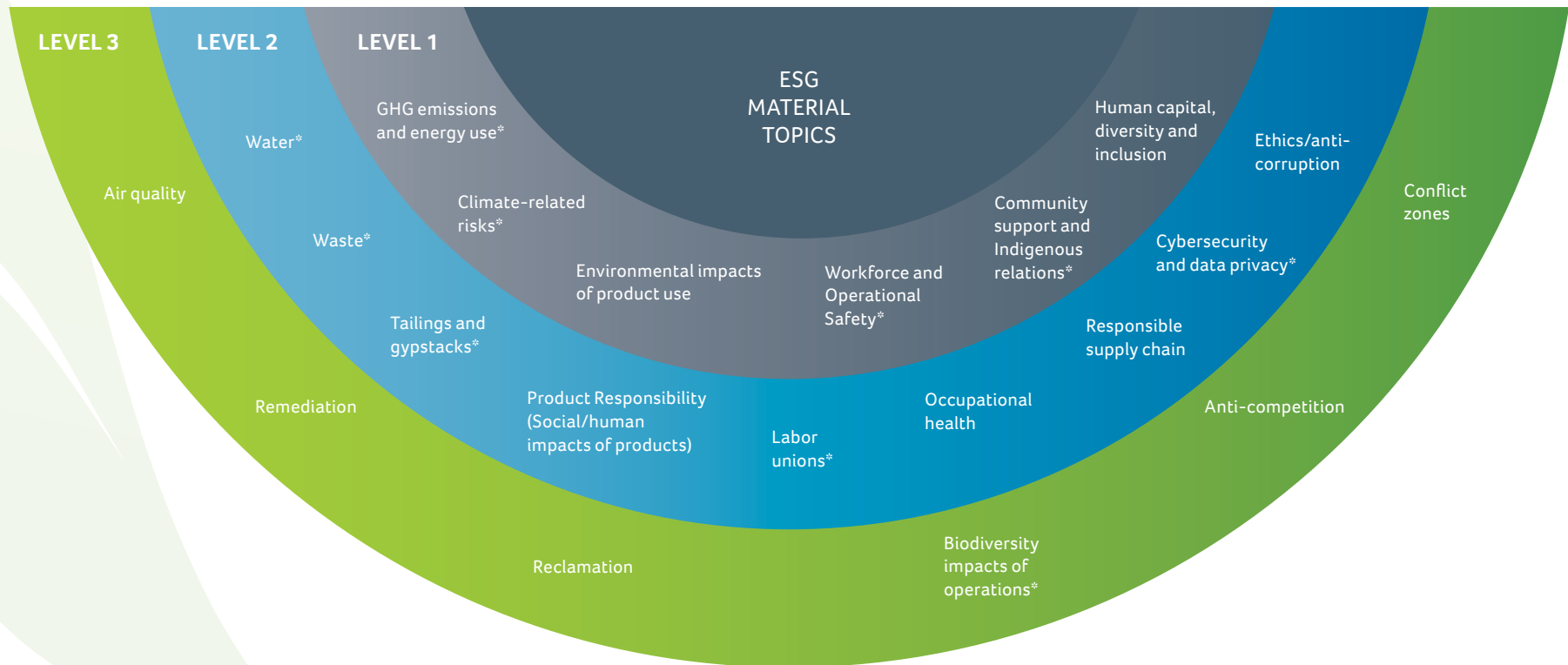


¹ These criteria align with SASB's criteria for a material topic.

Material ESG Topics (continued)

Reporting on our material topics

We have classified our material topics into three levels to reflect the degree of associated risk and the amount of coverage in this report. Each topic includes a number of subtopics and related metrics. Level 1 topics represent Nutrien's most significant ESG-related risks and opportunities, and we provide the most extensive content on them. We include less content on Level 2 and 3 topics due to the reduced risk or opportunity they present relative to Level 1 topics. Please refer to our website for an overview of [Nutrien's sustainability strategy](#) which addresses our most material ESG topics. We expect to share our sustainability goals and targets within the next year.



* Risks that are included in our [2019 Annual Information Form](#)

Megatrends Shaping Our Actions

As part of Nutrien's long-term vision and risk management, we actively track key environmental and social megatrends that could directly or indirectly affect the agriculture industry.

These trends are interrelated and provide Nutrien with the opportunity to advance sustainable global food production through our unique relationship with growers. We can facilitate the adoption of new technologies and farming practices to increase yields, while also focusing on soil health and environmental sustainability.



Food Security

What is the trend?

With an anticipated global population of 10 billion by 2050, producing enough nutritious and accessible food is expected to strain existing land and water resources. Current food system transformation efforts are focused on the dual challenge of producing more food while protecting and restoring natural ecosystems.

What is the risk or opportunity?

Risk: If current production systems are not able to increase agricultural yields to meet future food demand without expansion of agricultural land, we will place increased pressure on global ecosystems and could further affect our ability to achieve food security.

Opportunity: We can use our expertise, products, and influence to potentially boost crop yields, help limit deforestation, and provide opportunities for growers around the world to enjoy a sustainable livelihood.

What are we doing?

Through our digital services and improved products, we help growers increase input efficiency and boost yields, potentially reducing production variability and increasing the reliability of food supply.



Climate Change

Weather patterns are increasingly difficult to predict, and extreme weather events are becoming more frequent and more severe. Societal decarbonization goals to mitigate climate change put pressure on us and our growers to reduce GHG emissions.

Risk: Severe weather events can physically impact Nutrien's operations, supply chain, and our customers. Regulatory changes to reduce carbon from industrial activity could have financial implications for our company and our customers.

Opportunity: We can accelerate development and availability of solutions that help growers achieve and track sustainability outcomes.

We work to reduce our GHG emissions and to help growers reduce their emissions through nutrient stewardship. We are currently developing Nutrien's climate strategy. [Read about our climate-related activities on pages 12-28.](#)



Data and Technology

Agriculture and food systems are undergoing rapid, complex, and disruptive technological changes. Individuals and businesses have access to unprecedented amounts of data and information.

Risk: New digital services being offered by Nutrien Ag Solutions for growers online necessitate more digital interactions. The increasing need for improved data and supportive technological infrastructure requires rapid development, implementation and end-user uptake.

Opportunity: We can work to develop leading technologies and support for our growers to boost productivity and profitability while increasing transparency in the supply chain.

Our growers can use Nutrien's digital solutions to inform their decisions. Our crop consultants offer additional capability on agronomic decision-making. [See page 48 to read about how we handle data privacy.](#)



Changing Farm Socioeconomics

Unprecedented technological change and low commodity prices are putting significant pressure on growers. Growers have little influence over the cost of crop inputs, making their incomes highly sensitive to swings in agricultural prices.

Risk: Aging farmers are dealing with increasingly capital-intensive operations and new labor requirements. In addition, the next generation often has less incentive to farm.

Opportunity: We can work to support sustainable farm economics by providing growers with technical and financial options that help them adapt to changing market conditions.

Our Retail business provides agronomic expertise and options to manage a grower's risk, maximize income and support transitions through demographic and global shifts. We also provide grower credit through Nutrien Financial.

Environment

TOPICS IN THIS SECTION

- 12 GHG Emissions and Energy Use
- 16 Climate-Related Risks
- 19 Climate-Related Opportunities
- 21 Water
- 22 Waste and Tailings
- 24 Environmental Impacts of Products and Services
- 28 Additional Environmental Topics

We are committed to reducing the environmental impacts of our operations on air, land and water, and developing products and innovative solutions that help growers tackle the environmental challenges facing the agriculture industry.

2019 Highlights

~**250Kmt**

PER YEAR OF CO₂
TO BE CAPTURED AND INJECTED VIA
THE ALBERTA CARBON TRUNK LINE

>**5,000**

ACRES
IN PILOT PROJECTS FOCUSED
ON NITROGEN USE REDUCTION

>**9,500**

NORTH AMERICAN GROWERS
BENEFITED FROM OUR
PRECISION AGRICULTURE SERVICES

GHG Emissions and Energy Use

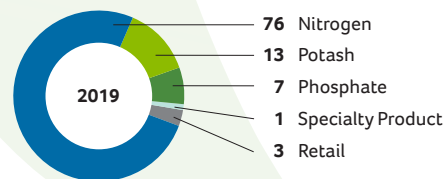
GHG Emissions
(million tonnes CO₂e)

● Scope 1 ● Scope 2
■ Scope 1 Intensity ■ Scope 2 Intensity



Our emissions are slightly lower in 2019 due to typical variations in production and maintenance activities at our production facilities.

GHG Emissions by Business Unit
(% of total Scope 1 and 2 emissions)



Our Nitrogen business unit is the largest contributor to our overall GHG emissions and a key focus of our reduction initiatives.

Why is this topic relevant to our business?

Climate change is the top ESG risk identified by Nutrien's investors and other stakeholders. We have a significant role to play in helping farmers mitigate and adapt to the changing climate as well as increasing efficiency and reducing emissions from our operations.

Our approach

Fertilizer production and use have complex and conflicting impacts on GHG emissions along our value chain. Fertilizer, especially nitrogen, generates GHG emissions. However, nitrogen is critical for healthy crops, soil organic carbon and increasing yields. Our approach will span Nutrien's integrated business and utilize our strong connections with growers to create meaningful reductions in GHG emissions through effective nutrient management and carbon sequestration at the field and farm level. [Read more on page 19.](#)

We intend to reduce the direct GHG emissions from our manufacturing facilities and the indirect emissions from purchased energy, such as steam and electricity, through GHG reduction and efficiency projects. We expect to disclose our climate strategy and targeted reductions within the next year.

Data assurance

We report emissions following the [GHG protocol](#)¹ on an operational control basis. In 2019, we engaged KPMG to provide limited assurance of our 2018

baseline² Scope 1 and 2 GHG emissions. This also improved information-gathering processes in order to support reduction initiatives and future target setting.

Read the [KPMG Limited Assurance Statement](#) in relation to 2018 emissions on our website.

GHG emission sources and inventory

The manufacturing of fertilizer accounts for more than 95 percent of our total direct (Scope 1) and indirect (Scope 2) emissions. Direct emissions are generated on site, from burning natural gas and other fuels, or from processes at our operations. Indirect emissions are from the off-site generation of purchased electricity, steam and heat.

GHG emissions related to the three types of fertilizers we produce come from the following sources:

Nitrogen: Nitrogen fertilizer is produced by reacting hydrogen from natural gas with nitrogen from the air to produce ammonia (NH₃), the basic building block of all nitrogen fertilizer. Approximately 95 percent of the natural gas we consume is in the production of ammonia, with two-thirds of this natural gas used as

hydrogen feedstock. The main GHG emission sources are CO₂ from fuel combustion, industrial process CO₂ as a byproduct of hydrogen generation, and nitrous oxide (N₂O) emissions generated as a byproduct of nitric acid production.

Potash: Potash is mined underground, hoisted to the surface, then crushed and purified with electric-powered equipment to remove rock particles and salt before being dried. Scope 1 emissions are generated from gas-fired equipment, such as dryers and boilers, and Scope 2 emissions from the electricity required for processing.

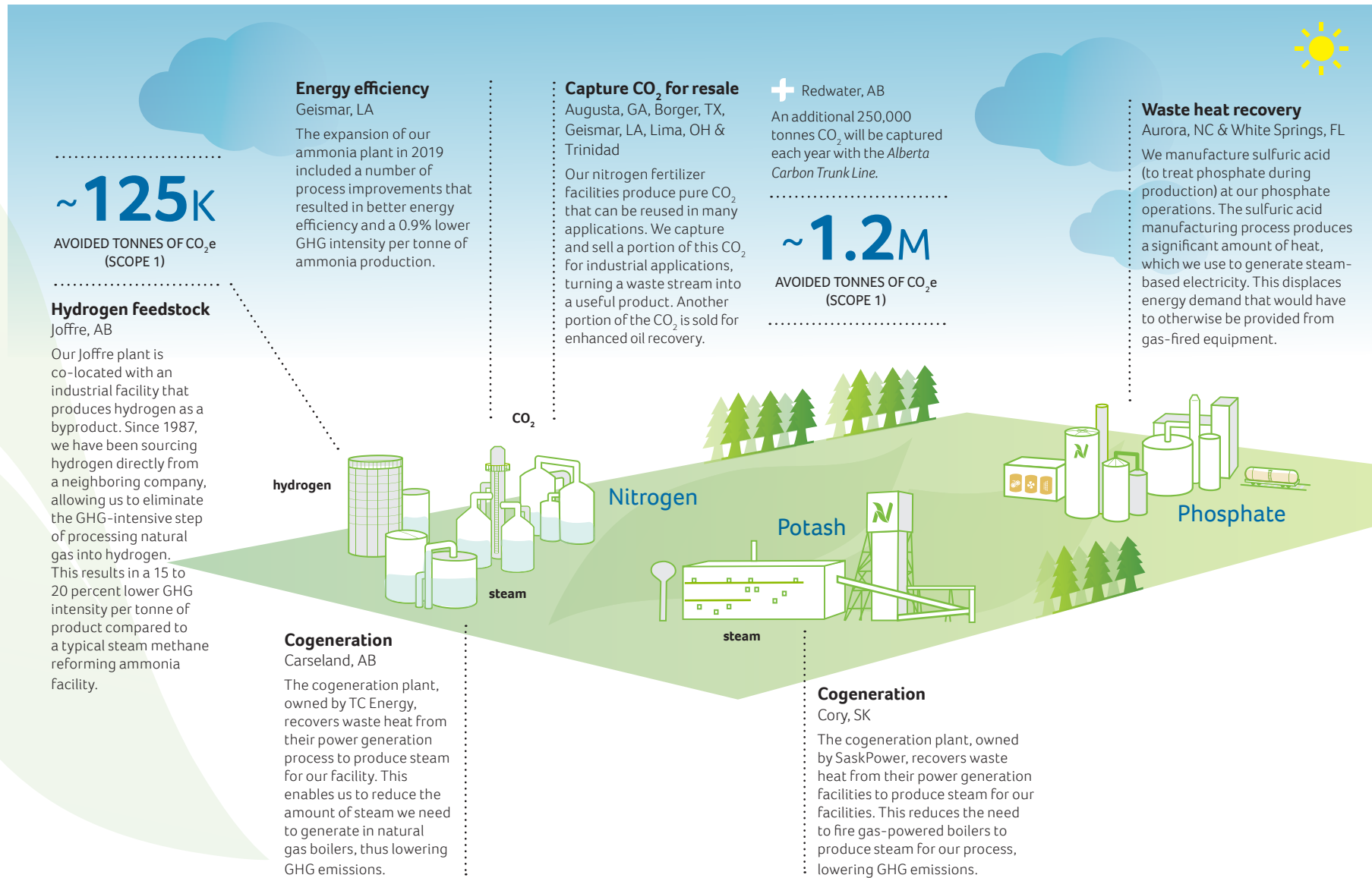
Phosphate: Phosphate fertilizer is produced by reacting sulfuric acid with phosphate rock to produce phosphoric acid, which can be reacted with ammonia to produce ammonium phosphate fertilizer or other products. The production process can generate GHG emissions in two ways. Entrained carbonates (dissolved CO₂ in the phosphate rock) are released into the air as CO₂ through the chemical reaction, and GHGs can also be released through the use of fossil fuels to calcine phosphate rock feedstock or dry fertilizer products.

¹ The GHG Protocol Corporate Accounting and Reporting Standard provides requirements and guidance for companies to prepare a corporate-level GHG emissions inventory.

² The base year currently selected by Nutrien for direct and indirect emissions sources is 2018, as it was the first full year of operation post the merger. Base year GHG emissions will be recalculated when Nutrien has a significant change in business operations (for example, change in product line), corrections to historical data based on availability of more accurate information, changes to reporting methodology, or acquisitions or divestments in a calendar year. Where historical data is not available, emissions will be estimated based on the best data available.

Ongoing GHG Emissions Avoidance Projects

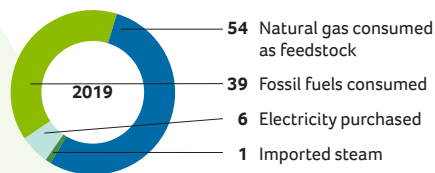
Estimated Annual Reductions, Compared to Business as Usual ¹



¹ Numbers are based upon 2019 data.

GHG Emissions and Energy Use (continued)

Energy Use (%)



More than half of our energy consumption is associated with natural gas consumed as feedstock for nitrogen fertilizer production.

Our climate strategy

We continue to advance our climate strategy, which will include long-term reduction targets. Key steps include:

- completion of a rigorous inventory of Nutrien's 2018 Scope 1 and 2 GHG emissions baseline,
- exploring Scope 3 GHG emissions to better understand our greatest impacts and opportunities,
- evaluating reduction opportunities and mitigation strategies along our entire value chain,
- assessing how climate-related scenarios can impact our company, and
- developing GHG reduction projects and targets.

Approaches to achieve GHG reductions

We believe a combination of strategies will be needed to meet society's decarbonization goals. We expect the following opportunities to play a role in Nutrien's GHG reduction strategy, which we will continue to refine as new technologies become technically or financially feasible:

1 Energy purchases and energy efficiency initiatives

Purchasing or generating lower carbon energy is one of the ways we can reduce our energy-related emissions. We have two cogeneration projects that efficiently combine heat and power generation. These facilities use natural gas to generate electricity using an efficient gas turbine, and waste heat from the exhaust is recovered to make valuable steam. In both cases, the energy efficiency does not change but the emissions impact is significant.

At our Carseland, AB facility, we partner with TC Energy to generate steam for our operations from waste heat from their natural gas-fired power plant. This efficient process offsets the requirement for a natural gas boiler to be fired at our site. We use more than 80 percent of the electricity generated, which has a significantly lower emissions intensity than grid electricity. At our Cory Potash mine in Saskatchewan, we consume steam from a SaskPower cogeneration facility, reducing some of our natural gas requirements. Nutrien is evaluating opportunities for similar projects to continue to reduce its GHG emissions.

Energy conservation, especially reductions in fuel consumption, have significant cost-saving and GHG-reduction potential. Our approaches to energy efficiency vary for different operations:

Nitrogen: The majority (more than two-thirds) of our natural gas consumption is as hydrogen feedstock. The remaining one-third is used as fuel to provide heat for the ammonia production process. We continue to seek opportunities to improve our energy efficiency, which also helps to reduce our emissions and operating costs. For example, in 2019, we made process improvements at our Trinidad plant that will allow us to produce ammonia using 5 percent less natural gas per tonne of ammonia once the project is completed in 2020.

Potash: Electricity to power equipment for potash processing represents approximately 15 percent of Nutrien's potash production costs. This is a significant cost and source of energy consumption, and we are evaluating options to source lower carbon electricity.

+ ANALYST CORNER

- ✓ SASB RT-CH-110a.2
- ✓ SASB EM-MM-110a.2

GHG Emissions and Energy Use (continued)

2 Process improvements to reduce emissions

We are working on the following process improvements to reduce GHG emissions at our nitrogen facilities:

N₂O abatement: N₂O is a byproduct of nitric acid production. Because one tonne of N₂O is equivalent to 298 tonnes of CO₂, reductions in N₂O have the potential to significantly reduce GHG emissions. We are evaluating N₂O catalyst technologies that could remove up to 90 percent of N₂O emissions from nitric acid production.

Reliability improvements: Reliability and plant turnaround schedules are important

to our GHG emissions profile because plant start-ups and shutdowns result in higher GHG emissions compared with normal, continuous operations. This is particularly relevant in the case of our nitrogen facilities since production interruptions result in non-routine process gas venting.

3 Carbon capture and storage

Carbon capture and storage (CCS) provides another technical option for reducing GHG emissions. Our Geismar, LA facility has captured CO₂ since 2013 and sells it for enhanced oil recovery (EOR), diverting more than 248,000 tonnes of CO₂ from the atmosphere in 2019. Our

Redwater, AB facility started capturing previously vented CO₂ in December 2019. The CO₂ is now compressed into a near-liquid state and injected into a pipeline to be transported to an oilfield near Clive, AB for use in EOR. This is used for carbon injection, which is a technique that helps maximize recovery and extend the life of oil reservoirs. The post-EOR CO₂ remains in permanent storage in an underground geological formation. GHG reductions from the Redwater CCS project will be realized starting in 2020 with approximately 700 tonnes of CO₂ per day being sequestered.

Learn more about the [Alberta Carbon Trunk Line](#) project.

What are some challenges in accelerating progress on reductions?

- Current technological limitations to reducing emissions
- Capital costs required to invest in new technologies
- Uncertainty around policy and carbon prices in the jurisdictions where we operate
- Despite ongoing upgrades to our operating facilities, limitations imposed by original plant design compounded by facility life spans often more than 40 years

Climate-Related Risks

Why is this topic relevant to our business?

Climate change is linked to increasing weather volatility that can impact our operations, supply chain and customers. Regulatory and societal changes to support the transition to a lower carbon economy can increase costs and create shifts in demand or consumer behavior that we must consider.

Our approach

Climate change is a strategic risk with potential financial implications for our company, capital providers, suppliers and customers. We also acknowledge that investors, lenders, and insurance underwriters need to understand how climate-related risks and opportunities could impact our future. We have aligned content in this report with the recommendations of the [TCFD](#). We are also currently analyzing climate-related risks and their implications for our company and will share our findings. Some of the climate-related risks we are evaluating are:

1 Physical risks to our customers that can impact our business

Our customers are impacted by changing weather patterns and more challenging growing conditions. These adverse conditions can delay or intermittently disrupt fieldwork during the planting and growing seasons, which may shift or reduce demand for the crop nutrients and crop protection products that we sell. In extreme cases, adverse or unexpected weather may impede farmers from applying crop nutrients and crop protection products until the following

growing season or, in some cases, altogether, resulting in lower demand for our products and reduced revenues, as well as costs related to excess inventory.

Changing weather patterns can also have an adverse effect on growing conditions (for example, water scarcity) and crop yields, which could lower the income of growers and impair their ability to purchase our crop nutrients, crop protection, seed products and services.

For details on our work to mitigate these risks, read more on pages 19-20.

2 Physical risks to Nutrien sites and facilities

Weather-related risks are treated like any other risk to our assets. We maintain risk registers and emergency response plans at both the enterprise and site level. Given the broad geographic distribution of our assets, physical risks pose minimal risk to our overall business. We evaluate acute and chronic weather changes for physical risks to our sites and facilities:

Hurricanes and floods: Nutrien's phosphate operations in Aurora, NC and White Springs, FL are in hurricane zones and they have hurricane preparedness plans. A large portion of the Gulf of

Mexico and the US east coast, where we have Retail facilities, are also in hurricane zones. In 2019, we implemented new hurricane preparedness plans for all Retail locations in these areas. The plans cover procedures for securing the facility and ordering supplies prior to, during, and after the storm event.

Tornadoes and cyclones: Nutrien facilities that have the potential threat of tornadoes or cyclones, primarily in the US Midwest, have an emergency plan in place that includes securing the facility, shelter-in-place (approved tornado shelter), proper notification to authorities, and accounting for all employees.

Wildfires: Some of our Australian Retail locations are in areas prone to wildfire. The 2019-2020 wildfire season was severe, impacting around 46 million acres of land. None of our locations were impacted, but the fires affected our customers. To help with their recovery, we donated funds to [BlazeAid](#), a non-profit organization rebuilding homes and farms in rural Australia, and provided paid time off for approximately 150 employees to support recovery efforts in our local communities.

ANALYST CORNER

- ✓ TCFD Strategy a) b)
- ✓ TCFD Risk Management b)

Climate-Related Risks

(continued)

<2%

ANNUAL WATER WITHDRAWAL
FROM AREAS WITH
HIGH WATER STRESS

+ ANALYST CORNER

- ✓ SASB RT-CH-110a.1
- ✓ SASB EM-MM-110a.1
- ✓ SASB RT-CH-530a.1
- ✓ TCFD Strategy a) b)

Increased precipitation or snow melt:

Rain or melted snow can raise water levels in our tailings ponds. Each of our sites with tailings ponds actively monitors the water level as part of ongoing tailings management.

Water stress and water scarcity: Climate change is linked to persistent drought conditions in many regions of the world. The resulting water scarcity and related challenges of managing and sharing existing water resources makes efficient industrial water management especially critical in these areas.

In 2019, we evaluated our presence in water scarce areas using the [World Resources Institute's Water Risk Atlas Tool](#) (Aqueduct) baseline water stress indicator. The evaluation indicated that, of our mining and production facilities, only our Carseland, AB Nitrogen facility is located in a region with higher water stress. This represents less than 2 percent of Nutrien's total annual water withdrawal in 2019. While the Aqueduct tool ranks our Borger, TX Nitrogen facility as low water stress, this region is surrounded by areas with higher water stress and we recognize local water concerns. In order to mitigate this risk, we use water efficiently and protect water quality.

Although the water volume used by our Retail locations is estimated to be very small in comparison to our mining and

fertilizer production operations, many of these facilities are located in water stressed areas. We have approximately 450 Retail facilities in Australia and 140 locations in California, Texas and Florida in the US.

Read about water scarcity-related opportunities on page 20.

3 Physical risks to our supply chain

Our procurement team has contingencies in place to ensure we can continue production if our key suppliers experience disruptions due to weather. We mitigate this risk by ensuring we have multiple suppliers in different locations for critical feedstocks and by using our storage sites to stock additional supplies. For example, in 2018, Hurricane Harvey impacted every major petrochemical refinery in Texas, which had a ripple effect across North America. Many chemical suppliers declared force majeure and were unable to fulfill their contracts. Our storage capabilities and supplier relationships allowed us to withstand this event without any impacts on our production levels.

4 Transitional risks

We monitor policy and regulatory changes, technology costs, and potential changes in consumer behavior as

potential risks during the transition toward a low carbon economy. We are considering, and working to mitigate, the following transitional risks:

Canadian federal carbon tax and provincial equivalencies

Canada's federal *Greenhouse Gas Pollution Pricing Act* has two parts: a federal fuel charge per tonne of CO₂e, and a trading system for large industrial emitters, known as the output-based pricing system (OBPS). The federal fuel charge does not impact our Alberta nitrogen facilities or Saskatchewan potash operations as they are regulated under the provincial programs accepted as equivalent by the federal government large emitter program.

The program for large emitters is different in each province:

Alberta: Three of our nitrogen production facilities (Carseland, Fort Saskatchewan and Redwater) have been subject to compliance reporting and carbon pricing since 2007 under different provincial programs applying to industrial facilities that emit more than 100,000 tonnes of CO₂e per year. Industrial emitter programs set emission intensity benchmarks that facilities must meet in one of three ways: emissions reductions; obtaining tradeable emissions performance or offset credits

Performance

Scope 1 emissions covered under emissions-limiting regulations

2019

27%

2018

NPR

NPR not previously reported

Climate-Related Risks (continued)

for emissions over the benchmark; or payment into a compliance fund. The Alberta carbon price for compliance fund credits for large emitters in 2019 was CAD\$30 per tonne CO₂e. The carbon price will remain at CAD\$30 per tonne in 2020, and is expected to rise to CAD\$40 in 2021 and CAD\$50 in 2022 in accordance with the federal benchmark. The aggregated compliance costs for Nutrien's Alberta nitrogen facilities regulated under the *Carbon Competitiveness Incentive Regulation* (CCIR) for 2019 were approximately CAD\$3 million. *The Technology Innovation and Emissions Regulation* (TIER) will replace the CCIR in 2020. Under TIER, Nutrien's projected 2020 compliance costs are estimated to be between CAD\$2 million to CAD\$3 million.

Saskatchewan: Saskatchewan released its Prairie Resilience climate strategy in December 2017. As part of this strategy, the province established an output-based performance standard program applicable to facilities emitting more than 25,000

tonnes of CO₂e annually. All six of Nutrien's Saskatchewan potash mines fall into this category. The provincial performance standard for the potash industry is based on achieving a 5 percent emissions intensity reduction by 2030 from a facility-specific three-year average baseline. 2019 was the first compliance year under the program, with the first compliance report due to be submitted, along with a third-party verification statement, by June 1, 2020.

Similar to Alberta, facilities whose emissions exceed their facility-specific performance standard can meet compliance through obtaining approved, tradeable performance or offset credits, or by payment into a provincial technology fund at a carbon price that will follow the federal benchmark, which was CAD\$20 per tonne in 2019. The first compliance payment for the combined 2019 and 2020 compliance years is due September 2021.

Costs to transition to lower emissions technology

Our long-term plans to reduce emissions require us to develop or purchase technologies that require considerable capital expenditure. We conduct cost-benefit and net present value analysis for each project under evaluation.

Shift to plant-based diets

Plant-based diets are increasingly popular due to the perception they are healthier and the connection of animal-based proteins to GHG emissions and land use. The demand for plant-based proteins has the potential to supplement the demand for protein and increase the pea and lentil acres. These nitrogen fixing crops require adequate phosphorus, potassium and sulfur as well as micronutrients and inoculants for optimal nitrogen fixation. Our diverse range of products and services ensure we can adapt to shifting market demands.

Climate-Related Opportunities

Why is this topic relevant to our business?

Healthy soils and crops absorb carbon dioxide and are beneficial for mitigating climate impacts.

Nutrien provides growers the products and advice for productive, healthy and profitable crops.

Our approach

Farmers manage land that is capable of storing carbon, and increasing productivity on this existing farmland is critical to protecting our natural carbon sinks and biodiversity. We are creating opportunities by developing our digital technology and providing enhanced products and services. Our crop advisors work directly at the farm level to optimize nutrients for better crops and healthier soil to help solve the climate challenge.

1 Climate-smart products and services

As climate conditions change, the ideal window to plant and apply fertilizer may

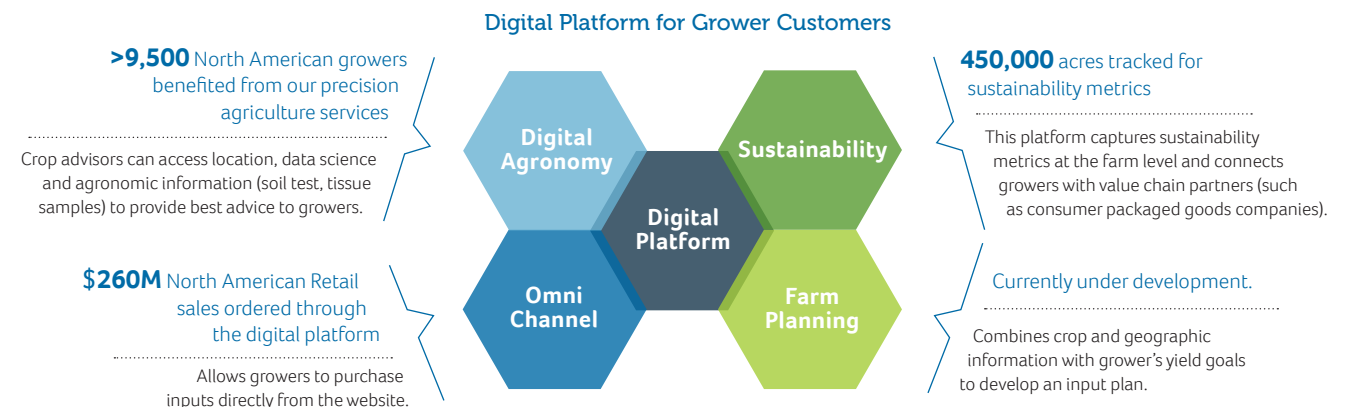
become more restricted. We have developed enhanced efficiency fertilizer products such as *Environmentally Smart Nitrogen* or *ESN*® and nitrogen stabilizers to widen the range of conditions where fertilizer can be applied effectively.

Read about Nutrien's range of climate-smart products and services for growers on pages 25-27.

We also produce diesel exhaust fluid (DEF) for our industrial customers. DEF is a urea-water solution that, when combined with diesel in larger vehicles and machinery, can improve fuel efficiency and reduce emissions. Nutrien has the capacity to produce 725,000 tonnes of DEF annually.

2 Digital tools to support better decisions

Selecting suitable products and seed is becoming more complicated with changing weather conditions and the proliferation of highly specialized products for each condition. We use forecast weather and agronomic information (crop physiology, soil characteristics, pest and disease impact) to provide growers with advice on which products to apply, based on current and predicted conditions. Our current digital offerings include fieldwork logistics, forecast production, nutrient requirements, sustainability metrics, and weather forecast analytics. All of these technologies are currently being integrated into our new digital platform.



Figures represent 2019 performance.

Climate-Related Opportunities (continued)

THROUGH THE
RURALCO
ACQUISITION,
NUTRIEN OWNS THE LARGEST
RETAIL WATER BUSINESS
IN AUSTRALIA.

3 Products and services to mitigate water scarcity

Through the acquisition of Ruralco in 2019, Nutrien now owns the largest retail water business in Australia. We now distribute water products, provide irrigation services, and broker water rights to the Australian agricultural sector. We provide customers with water infrastructure that minimizes evaporation and maximizes efficiency or recycling.

In 2019, we announced a partnership with Lindsay Corporation, a global manufacturer and distributor of irrigation and infrastructure equipment and technology. Our crop advisors will have access to Lindsay Corporation's remote irrigation management and scheduling platform to supplement our water product and service offerings. The partnership is expected to also allow us to help growers optimize their water application amount and timing at every point throughout their fields.

Some of our research and development investments target improved yield stability of seeds in challenging conditions, including resistance to drought.

Read more on page 26.

4 Weather expertise to help adapt to changing climate

Nutrien has a team of agronomic, atmospheric, and data scientists that turn raw data into critical insights for our company and customers. We have started using predictive analytics to generate weather forecasts for our procurement team. We plan to use these forecasts to send products to the regions where they will be most effectively used and where demand will likely be highest.

At Nutrien, we also turn our weather and agronomic expertise into easy-to-use, digital information for growers. Two examples are:

Weather Story: a customer-facing webpage that provides access to daily and weekly 15-minute videos explaining the long-range weather forecasts for five different regions in Canada and the US. Growers can use this information to plan farm logistics management and schedule grain marketing opportunities based on weather.

Pocket Rain Gauge: a mobile application (app) gives rainfall measurements for the last 24 hours based on the GPS location of the device. There is a feedback functionality so that farmers,

crop consultants and other users can share accurate, location-based rainfall measurements.

5 Beyond agronomic services

Mixed farming, when farmers grow crops and raise livestock at the same time, is common practice in Australia. As part of this integrated approach, farmers may switch cropland to pasture for livestock in extreme drought conditions. Since we provide both agronomic and animal care services in Australia, we help farmers manage weather-related uncertainty and make the best decision for both their crops and animals.

6 Financial services

Simplified access to the right financial products, including insurance, has a role in helping growers endure difficult years and unanticipated climate-related events. In Australia, we have nearly 39,000 insurance customers. We also offer flexible financing solutions to our customers in support of Nutrien's agricultural product and service sales. We manage the lowest risk portion of our US Retail credit portfolio through Nutrien Financial.

Performance

North American Retail sales ordered through the digital platform

Daily views of Weather Story

Uses of **Pocket Rain Gauge**

2019

\$260M

>8,000

>11.7 million

2018

NPR

NPR

NPR

NPR not previously reported

ANALYST CORNER
✓ TCFD Strategy a) b)

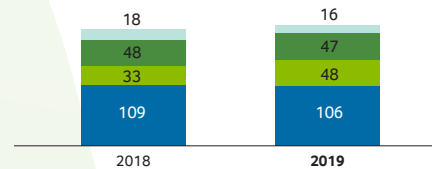
Water

Why is this topic relevant to our business?

Water is an essential input to our operations, especially in mining and fertilizer production. It is also a resource that we share with surrounding communities. Using water efficiently and protecting water quality helps us maintain positive relationships with stakeholders and ensures operational stability.

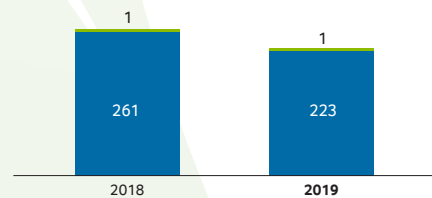
Water Intake by Source (million m³)

● Surface water ● Mine dewatering/depressurization
● Groundwater ● Industrial/municipal water



Water Discharge by Destination (million m³)

● Surface water ● Municipal treatment



+ ANALYST CORNER

- ✓ SASB RT-CH-140a.1
- ✓ SASB RT-CH-140a.3

Our approach

We focus on reducing freshwater use, increasing the amount of water we recycle, and protecting water quality.

Water use

Our primary uses of water are for raw material transportation and milling in our mining operations, and for steam generation and process cooling at our fertilizer production facilities. A smaller volume of water is used to produce some of our liquid products. Water availability is crucial for our two phosphate and six potash mining operations. At each mine site, the ore is mixed with recycled water to form a slurry, which is pumped from the mine site to our processing facilities. The ore is then screened, washed and floated, using large volumes of water, to produce potash and phosphate rock.

The majority of our fertilizer production facilities use freshwater resources (for example, rivers or groundwater) to supply the water needed for operations. To minimize this impact, we seek to use alternative water sources where feasible, including gray water, ocean water, or recycled water within our own facilities. Most of our production locations recycle water numerous times in a closed-loop system, which helps us reduce our freshwater usage.

Water quality

Our operations ensure water quality by managing:

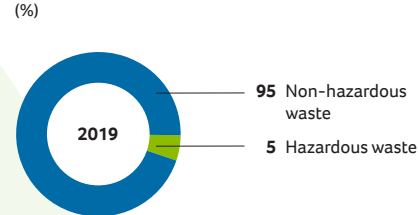
Water discharges: We meet and exceed water quality thresholds for our water discharges through engineering controls, testing and monitoring programs, and treatment if required. If not managed

properly, our water discharges could impact the quality of surrounding surface water. Where needed, we incorporate water treatment technologies and best practices to minimize impacts on water quality.

Storm water: Rainwater can transport materials into surface water bodies. Our operations are engineered to handle large rain events during which excess storm water is managed with diversion channels to storm or tailings ponds, permitted injection wells and/or storm water discharge facilities. We also divert off-site storm water from entering our sites through diversion to natural drainage channels where possible.

Waste and Tailings

Non-Mining Waste Disposed by Type (%)



Hazardous waste is a small portion of the non-mining waste we generate.

Why is this topic relevant to our business?

Managing the waste from our operations in a way that minimizes the impact on the surrounding environment minimizes costs and reduces regulatory and reputational risks.

Our approach

We manage our hazardous waste responsibly and look for opportunities to reuse or recycle our non-hazardous waste. Since mining activities generate large volumes of byproducts and waste, we pay special attention to the management of our potash and phosphate operations.

Hazardous waste management

The hazardous waste we generate includes spent catalyst, waste chemicals, asbestos, contaminated soil, and paint thinner or solvents. In order to manage hazardous waste properly, we work with our waste management suppliers to ensure that the materials are registered, transported, treated, and recycled or disposed according to applicable regulatory requirements. We do not ship hazardous waste internationally.

Non-hazardous waste management

Almost all of the waste we produce is non-hazardous. Mining waste referred to as "mine tailings" is non-hazardous waste. Because of the volumes and types of mine tailings generated at our mining facilities, this waste cannot be disposed of in industrial or municipal landfills. Potash mining and phosphate operations are the largest contributors to our waste.

1 Potash mining

We have six active potash mines with tailings management systems. Clay and salt tailings are byproducts of the potash mining process. Although clay and brine (salt solution) are innocuous waste, there is a potential environmental impact if brine spills onto soil (reduces productivity) or into surface water (impacts water

salinity levels). We sell small quantities of salt for winter road application, but the majority is stored in tailings management systems or injected into deep wells.

Tailings management systems consist of engineered containment facilities designed to store solid tailings and brine. The systems, licensed and approved by the Saskatchewan Ministry of Environment, are equipped with instrumentation that monitor key parameters and allow us to evaluate stable performance.

At each mine site, there are environmental staff that manage the day-to-day compliance and surveillance needs of the tailings management systems. At the corporate level, Nutrien has dedicated engineering groups, an enterprise risk management group and a centralized Safety, Health and Environment (SH&E)

CASE STUDY: Acknowledging concerns with tailings dams

Although we have not had any failures of tailings dams at our mine operations, recent major tailings dam failures in Canada and Brazil have led to stakeholder concerns and an industry-wide review of the design and management of tailings.

Our potash facilities have tailings management systems that meet all current safety and environmental regulations. As new data, expertise, and technology becomes available, our approach to tailings management is routinely evaluated to ensure that local communities and the environment are protected. As an additional precautionary step, we contracted an independent third party in 2019 to review facility designs and operations. The evaluation is ongoing and covers all aspects of the tailings management systems, taking into consideration best practices used globally in the mining industry and lessons learned from recent tailings facilities around the globe. Once received, the evaluation findings will be reviewed and next steps determined. [Learn more](#)

Waste and Tailings

(continued)

CASE STUDY: Growing a forest on a reclaimed gypstack

The gypstacks in Geismar, LA and Redwater, AB are currently being decommissioned and reclaimed. The gypstacks at Fort Saskatchewan, AB were used for a stack reclamation research project that started in 2005. We planted 27,000 trees covering 20 hectares during 2016 and 2017. These tree plantations sequester carbon at a rate of approximately 30 tonnes CO₂e per planted hectare per year. Using gypstacks to plant trees is another way to support carbon sequestration and GHG emissions reductions.

[Learn more](#)



[Tailings Safety Disclosure](#)

group that oversee risk assessment, oversight and audit of these facilities. We also hire third parties with expertise in engineering, construction and decommissioning activities to ensure we develop, implement and maintain our tailings systems safely.

Tailings management includes safe storage in:

Tailings ponds: We protect surrounding water bodies and aquifers by building containment appropriate for each storage pond, typically consisting of engineered dykes, engineered slurry-walls or compacted earth trench barriers. Areas surrounding tailings ponds are also closely monitored with routine inspections, investigations, and monitoring of surrounding environmental conditions.

Tailings piles: We separate the liquid from the solids through gravity drainage. The salt is stored in piles that are closely monitored through routine inspections, investigations, and examinations of surrounding environmental conditions. The salt in the piles is dissolved over time through natural rainfall events. The liquid, or saturated brine, is injected in deep wells into brackish (that is, non-fresh) water aquifers that are deeper than one kilometer beneath the ground surface. This process is conducted under regulatory oversight and approvals.

2 Phosphate operations

Phosphate fertilizer is produced by reacting sulfuric acid with phosphate rock

to produce phosphoric acid, which is then reacted with ammonia to produce ammonium phosphate fertilizer. This process also produces a byproduct called phosphogypsum (five tonnes of phosphogypsum are produced for every tonne of phosphoric acid that is formed). Although the phosphoric acid manufacturing is not a mining operation, and phosphogypsum is not classified as a waste, we are providing detailed information about phosphogypsum management in the waste management section of this report to be responsive to stakeholder concerns.

Phosphogypsum is primarily composed of hydrated calcium sulfate but it may also contain small amounts of trace metals and naturally occurring radioactive particles that were originally in the phosphate rock. Although phosphogypsum can potentially be reused for a variety of applications in construction or agriculture, it is primarily stacked in North America.

We aim to ensure safe storage in a phased process:

Phase 1 - Phosphogypsum ponds:

Phosphogypsum mixed with water is stored temporarily in a specially designed and monitored pond. As the solids settle to the bottom, the water is drained to another pond and then recycled for reuse at the plant. These ponds have an impermeable liner installed at the bottom to minimize impacts to soil and groundwater. We conduct regular local air and water monitoring.

Phase 2 - Gypstacks: Over time, the solid phosphogypsum from the ponds is formed into piles called gypstacks adjacent to mined lands. To ensure the stability of gypstacks, they are built and operated in accordance with applicable standards, codes, and regulations. An external engineering specialist develops gypstack construction and operating plans.

Nutrien has two active phosphate fertilizer operations, located in Aurora, NC and White Springs, FL. At Aurora, we both stack phosphogypsum and blend a portion of it with clays and other materials to reclaim mined lands. Nutrien also has phosphogypsum stacks at three inactive facilities in Geismar, LA, Redwater, AB and Fort Saskatchewan, AB. See the Case Study on this page for details on gypstack reclamation projects.

Nutrien does not currently reuse phosphogypsum on a commercial scale, primarily because of the United States Environmental Protection Agency (US EPA) regulatory criteria established in 1989. However, we are working with *The Fertilizer Institute* to petition the EPA to update the state of the science and allow its reuse. Phosphogypsum is safely recycled for use in many other areas of the world, and studies show no health or environmental risks. Recycling phosphogypsum for beneficial uses would conserve other non-renewable resources and support global sustainability goals and the circular economy.

Environmental Impacts of Products and Services

Why is this topic relevant to our business?

Reducing the environmental impacts from the agricultural products we manufacture and sell is one way we can help our customers manage the increasing environmental and societal pressures they face. To lead the next wave of sustainability in agriculture, we are offering growers products and technologies with a lower environmental impact and facilitating the adoption of agronomic best practices.

Our approach

The global need to feed a growing population while minimizing the environmental impacts of agriculture is an opportunity for Nutrien to provide the right technological solutions for growers' most pressing challenges: maximizing nutrient use efficiency, minimizing nutrient loss, and increasing crop quality and yields.

The main sources of environmental impacts related to the application of fertilizers at the farm level are:

Emissions to air: Volatilization is the loss of nitrogen to the atmosphere as ammonia gas. In certain conditions (warm temperatures, moist soil, surface

application) up to 40 percent of nitrogen can be lost to volatilization within hours of application. Additionally, nitrogen is subject to natural microbial conversion in the soil, which converts it to N_2O , a potent GHG (one tonne of N_2O is equivalent to 298 tonnes of CO_2). In both cases, reducing nitrogen loss is critical to reducing emissions from agriculture.

Loss to water: When fertilizers containing nitrogen and phosphorus are improperly applied to crops, some nutrients may leach into groundwater or reach surface water by runoff. Nutrient enrichment of water bodies contributes to algae growth and reduced oxygen availability, which can adversely affect water quality and aquatic life. We promote improved

management practices and nutrient-efficient products where appropriate to minimize the risk of nutrient runoff and leaching.

Water use: Water is required for crop irrigation in many arid growing environments. Given climate change and growing competition for water resources amid increasing water scarcity, finding opportunities to make agriculture more water efficient is key.

INNOVATION
THROUGH ACQUISITIONS
2018 AND 2019

actagro

Waypoint
ANALYTICAL

AGRIBLE

agrichem


Environmental Impacts of Products and Services

(continued)

Summary of products and services

Nutrien offers products, services and technologies that have multiple environmental benefits:

 Reduces air emissions

 Reduces nutrient loss to ground/surface water

 Improves soil health

 More efficient use of water

		Benefits	2019 Performance
Products	1	ESN® Smart Nitrogen	\$29 million spent on R&D >1,850 proprietary products 150 new proprietary products 5 seed breeding programs
	2	Products that help crop nitrogen utilization (nitrogen stabilizers)	
	3	Products that reduce sulfur leaching (smart nutrition monoammonium phosphate fertilizer, or MAP)	
	4	Products that enhance soil health	
	5	Seed technology including drought-tolerant genetics	
Practices and Services	1	Best practices (4R Nutrient Stewardship System in North America, Fertcare in Australia, and eKonomics tool)	20 Nutrien agronomists in Canada are 4R Designated 35 4R training sessions completed in Canada 11 Nutrien Retail facilities in the Western Lake Erie Basin are 4R Certified 400 agronomists in Australia are Fertcare accredited >15,000 eKonomics users between July and December 2019
	2	Grower education	>3,400 agronomists and field experts working directly with growers >1,300 growers in online and in-person training in South America
	3	Digital agronomy	>9,500 North American growers using Echelon 6,000 South American growers using Echelon >12 million acres registered in Echelon across Canada, the US and South America
	4	Sustainability data-driven projects (using Agrible)	450,000 acres tracked for sustainability metrics >5,000 acres participating in three pilot projects
	5	Field sample testing	15 agricultural labs in North America

Environmental Impacts of Products and Services

(continued)

Products that improve yields and environmental performance

Nutrien continues to develop products that improve crop yields and farming economics while at the same time reduce environmental impacts, including:

- 1 ESN® Smart Nitrogen:** ESN is a urea granule contained within a flexible polymer coating. The coating protects the nitrogen from loss into air or water and releases nitrogen at a rate that is controlled by soil temperature and matches the nitrogen demand of the growing crop.
- 2 Nitrogen stabilizers:** These are synthetic or biofertility products, such as [Nitrain®](#) and [Accomplish®](#), that are combined with nitrogen-based fertilizers to minimize nitrogen loss and maximize utilization.
- 3 Smart Nutrition MAP:** In 2019, we introduced a patented product that integrates micronized sulfur into the

ammonium-phosphate fertilizer (MAP) granules. This product speeds sulfur delivery to the plant and reduces the potential for sulfur loss.

4 Products that improve soil health:

Our C2 Technology products consist of extracted carbon and carbohydrate reacted with nutrients for improved soil health and plant performance by increasing nutrient uptake and availability.

- 5 Seed breeding innovation:** Seed breeding is the process of combining the traits of different seeds to produce improved characteristics for specific environments or conditions. Nutrien currently has five seed breeding programs (canola in Canada, cotton in Texas and Mississippi, rice in Texas, forage and turf seeds in Oregon and cereals in Montana). These developments are meant to enhance yield and yield stability in both ideal and challenging conditions, including

rising temperatures and reduced water availability. These seeds will help growers adapt to climate-related challenges.

Practices and services to promote agronomic best practices

- 1 4R and Fertcare:** We promote sustainable nutrient management for increased food production in an economically viable way while retaining the ecological integrity of food systems. We provide advice to growers that is aligned with the [4R Nutrient Stewardship System](#) in North America and [Fertcare](#) in Australia. Both organizations promote the adoption of best practices in fertilizer application.

Promoting Ag science-based decisions

One of the ways we promote the use of best practices is through our [eKonomics](#) website. The site provides easy-to-understand summaries of the latest university research and easy-to-use nutrient calculation tools to inform

CASE STUDY: Products to help growers protect coral reef in Australia

The coast of Queensland, Australia is home to both the Great Barrier Reef and large fields of sugar cane and horticultural crops. Heavy rainfall common in this area makes product loss through runoff into the coral reef a significant risk. We help growers manage this risk in the following ways:

ESN®: In 2012, we introduced ESN to our Australian customers to minimize nitrogen runoff into this important and endangered natural habitat without compromising their productivity goals. In 2019, our Australia Retail business sold approximately 5,000 tonnes of ESN, accounting for \$6.5 million in sales.

Crop protection digital app: Our agronomists use a third-party digital app that indicates when and where pesticide applications should ideally occur. The app assists with good planning and application practices that reduce product loss by mapping and forecasting buffer zones from sensitive areas and time prior to rainfall based on pesticides use information.

Environmental Impacts of Products and Services

(continued)

CASE STUDY: Digital agronomy in Argentina

We combine field GPS images (Echelon) with tissue sampling capabilities (Nutriscription) to provide advice for nutrient application to improve crop nutrition and yield. The uptake of this technology in Argentina has been remarkable. The cumulative results from 2017 to 2019 are:

6,000 customers using Echelon

1.4 million acres mapped in Echelon

~9,300 soil samples in 2019 alone

29 different types of crops

5-15% increase in yield (measured as kilogram per hectare) versus control group, depending on the crop



grower decisions. The tools allow growers to calculate nutrient needs and return on investment (ROI). The site saw more than 15,000 new users between July and December of 2019.

2 Grower education: In 2019, we trained approximately 900 growers in South America during 47 training sessions on soil fertility, plant nutrition and plant physiology to promote best practices in nutrient and crop input management. In Brazil, there are 473 students enrolled in our online education program called *Agrichem Nutrition Academy*. The program includes 34 classes related to plant nutrition and crop management best practices.

3 Digital agronomy: Digital agronomy combines location, agronomic information (crop physiology, soil characteristics, pest/disease impact), environmental data (for example, precipitation, temperature) and data science to support grower decisions. Our crop advisors use our digital tools combined with a grower's yield goals and evaluation of their field's capability to recommend supplementary crop input when and where needed. These crop management solutions help growers maximize product efficiency and minimize environmental impact. Nutrien offers digital agronomy solutions through Echelon, Waypoint Analytical, Nutri-Crop Solution, Precision Agri Lab and Nutrient Advisor.

4 Agrible sustainability data-driven projects: Our Sustainable Agriculture team focuses on two primary types of projects:

Measurements

We use our Agrible software tool to provide growers with field-specific sustainability analytics. The metrics can be anonymized and aggregated for downstream partners (for example, consumer packaged goods companies) who want to measure the environmental impact of agriculture in their supply chain.

Solutions

Nutrien is piloting proof-of-concept input strategies that increase grower profitability while also improving environmental outcomes. The following pilot projects are underway:

- **Pilot 1: Corn (Nebraska)** – cost neutral solution targeting a 15 percent reduction in emissions by reducing fertilizer use while adding a biocatalyst to achieve a low GHG irrigated food-grade corn. Field to Market® metrics will be used to quantify GHG and water efficiency improvements.
- **Pilot 2: Rice (Arkansas)** – cost neutral solution targeting a 10 percent reduction in emissions pairing the University of Arkansas N-STaR fertilizer recommendation system with foliar applications of late season plant nutrition.

- **Pilot 3: Cotton (Texas)** – ROI positive solution targeting a 20 percent reduction in emissions through our Nutriscription program, which uses soil, water, and tissue samples to provide nutrition recommendations throughout the growing season.

5 Field sample testing and scouting:

Nutrien has 15 agricultural labs in North America to test field samples (soil, plant tissue, and water samples) with results typically available within 36-48 hours. In Australia, digital integration with our labs improved waiting times for results from two weeks to two days. Soil testing allows us to make specific product recommendations for growers to avoid excessive nutrient levels that can impact the surrounding environment.

Collaboration with BASF's Agricultural Solutions division

In June 2019, we announced a digital collaboration with xarvio Digital Farming Solutions, part of BASF's Agricultural Solutions division. As part of this partnership, the xarvio™ [SCOUTING app](#) is offered from our Nutrien Ag Solutions Customer Portal. The app identifies weeds, classifies and counts insects, recognizes diseases, analyzes leaf damage and crop emergence, and shows nitrogen uptake, just by uploading a photo.

Additional Environmental Topics

~325

ACRES OF LAND RETURNED TO POST-MINING USE IN IDAHO



ANALYST CORNER

- ✓ SASB EM-MM-160a.1
- ✓ SASB EM-MM-160a.3

Air quality

Our operations can affect local air quality through combustion emissions such as carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx), particulates, and volatile organic compounds (VOCs), in addition to non-combustion air emissions such as ammonia. Data on our releases of air emissions are on page 54. We continue to upgrade equipment to lower NOx-emitting technologies.

Biodiversity impacts of operations

Our operations do not intersect with protected areas ¹ or recognized areas of high biodiversity value ². In the normal course of operations, if a planned project may impact a protected species, or is subject to a regulatory review (for example, the *Impact Assessment Act* in Canada or the *National Environmental Policy Act* in the US), we evaluate species at risk and endangered plant and animal life. If there are any biodiversity impacts, we develop mitigation plans.

Biodiversity and agriculture

Increasing agricultural productivity is one of the ways we can protect biodiversity. Improving yields on existing agricultural land reduces the need to convert more land for agricultural purposes. As one example, US growers are able to produce four to five times the amount of corn per acre today as they did in 1940. These productivity gains have avoided the

need for another almost half billion acres of farmland. Improving the quality of uncropped areas and field borders with seed products like the Proven Seed Pollinator Mix, and increasing the use and variety of forage crops, adds to the productivity and biodiversity in agricultural land. Partnerships with Ducks Unlimited like the [Forage Program](#) are providing greater awareness of biodiversity benefits.

Packaging and plastic waste

Plastic is an ideal material for packaging our crop protection and seed products because it is inert (it doesn't react with our products), lightweight, and cost effective. We understand the growing global concern with single use plastics and are exploring ways to reduce plastic packaging and increase recycling of packaging after use.

We have started shipping some crop protection products in large reusable or recyclable plastic containers. We own more than 50,000 large volume containers and have sold more than 18 million liters in returnable containers in Australia and the US. In Australia, 80 percent of our proprietary products are sold in returnable containers. In Canada, we are part of an industry-wide program called [CleanFarms](#) that collects seed and crop protection products bags for recycling. A total of 1.8 million empty containers were returned through this program in Saskatchewan in 2019.

Reclamation

Nutrien often has a legal obligation to reclaim land used for operations and return it to a beneficial use.

Asset retirement obligations

Each year, we estimate the cost and timing of future reclamation expenditures. At the end of 2019, our discounted asset retirement obligations (ARO) were \$1.3 billion. Retirement obligations and their estimated costs to reclaim a site to its natural state are initiated when the asset reaches its end of life; for phosphate sites, the majority of these costs are expected to be paid over the next 81 years, while costs for potash are expected to be paid after that time. We have paid \$160 million toward our AROs over the last two years.

Reclamation projects

In the past three years, we have successfully returned approximately 325 acres of public land in Idaho back to productive use after phosphate rock mining:

- The North Rasmussen Ridge Mine project was substantially completed in 2019 and involved approximately 4.5 million m³ of earthworks and 175 acres of revegetation.
- The South Maybe Canyon Mine Cross Valley Fill capping project was completed between 2015 and 2017 and involved approximately 600,000 m³ of earthworks, 110 acres of synthetic liner and 150 acres of revegetation.

¹ A geographic area that is designated, regulated, or managed to achieve specific conservation objectives.

² An area not subject to legal protection, but recognized for important biodiversity features by a number of governmental and non-governmental organizations included in the National Biodiversity Strategies and Action Plans prepared under the United Nations (UN) Convention, "Convention on Biological Diversity", 1992.

Social



TOPICS IN THIS SECTION

- 30 Safety
- 35 Human Capital
- 37 Community and Indigenous Relations
- 38 Responsible Supply Chain
- 40 Product Responsibility
- 42 Additional Social Topics

As part of Nutrien's purpose-driven culture, we intend to develop respectful and positive relationships with our employees, contractors, suppliers, customers, and local communities, and to contribute positively to society as a whole.

2019 Highlights

>1,100

RETAIL EMPLOYEES RECEIVED
SAFE DRIVING TRAINING

25%

OF LEADERSHIP POSITIONS
(VICE PRESIDENT AND UP)
ARE HELD BY WOMEN

>600

EMPLOYEES RECEIVED
UNCONSCIOUS BIAS TRAINING

\$29M

IN ABORIGINAL
PROCUREMENT SPEND

Safety

Why is this topic relevant to our business?

Nothing is more important to Nutrien than the well-being of our employees. Ensuring safe operations and delivering on our commitment to keep employees and contractors safe are essential elements of delivering strong business performance. Keeping the highest safety standards helps us maintain our reputation as a responsible employer and reduces our legal and financial exposure.

Our approach

Nutrien's SH&E strategy of home safe, every day brings our safety vision, principles and priorities to life and guides our daily actions and behaviors. We have company-wide safety programs for common activities across Nutrien and specific practices to target key safety risks unique to each of our business units.

Foundations for Safety

To lay a strong foundation for safety, we use comprehensive management systems and analytical tools, build common beliefs around safety, promote proactive safety practices, and focus on significant injury prevention and emergency preparedness.

1 Systems

Nutrien's *Safety, Health and Environment (SH&E) Management System*, which documents company-wide processes and procedures common to all business units, was updated in 2019 and is expected to be phased into all operations in 2020. Until that time, the legacy company systems are in place and operating. Read more on pages 51-52.

In 2019, we implemented an online, centralized incident management system

for our business units, including all Retail locations in North America and Australia, and 75 percent of locations in South America. This will be the first time that all business units are connected to the same system with common analytical tools for tracking safety, health and environmental data. Some business units will have the capability to input data into a real-time internal performance dashboard.

2 Safety culture assessment

In 2019, we undertook a company-wide safety culture assessment to understand if our safety behaviors are in line with Nutrien's values and principles. The results were positive and showed improvements from the previous survey. We will continue to improve our safety culture by increasing senior leadership visibility, simplifying safety processes, providing a psychologically safe environment to address concerns, and continuing our focus on significant injury prevention.

3 Proactive safety practices

Coaching for safety: We have eight full-time Safety Leader Coaches dedicated to supporting front-line leaders in

improving their safety leadership habits. Coaches report to the Vice Presidents or Senior Vice Presidents of our Nitrogen, Phosphate and Potash operations. Safety Leader Coaching is a blend of safety leadership professional development and in-field support designed to develop coaching behaviors that improve safety at the front line of our operations.

Structured pauses and hazard

identification: Employees and contractors are encouraged to regularly pause and evaluate the work area to note if anything has changed or could be a potential hazard. In 2019, we trained all retail employees as part of a *Frequent and Structured Pause Program*, connecting pauses to hazard identification, reporting, and stop work authority.

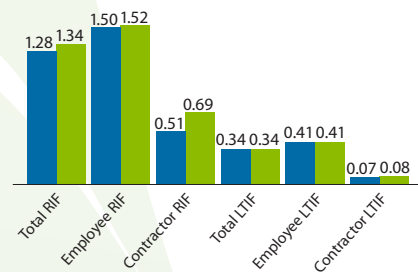
Industrial hygiene monitoring

programs: All business units track key occupational safety risks, including ammonia and other chemical exposure, dust underground, noise, and hazardous fumes or gases. Annual industrial hygiene testing is completed for key identified risks. We develop and implement mitigation plans for any identified exposures.

Safety Rates

(cases per 200,000 hours worked)

● 2018 ● 2019



RIF: Recordable Injury Frequency
LTIF: Lost-Time Injury Frequency



ANALYST CORNER

- ✓ SASB RT-CH-320a.1
 - ✓ SASB RT-CH-320a.2
- [SH&E policy](#)

Safety

(continued)

CASE STUDY: Significant injury prevention in Retail

Fertilizer tenders are a type of mobile equipment used by our Retail locations to transport fertilizer to customer sites. When the tender's augers are in the "up" position (that is, extending upwards from the tender) they pose a hazard of contacting overhead wires. We worked with our Retail locations and trailer manufacturers to design an alarm system that sounds if the auger is left in the up position prior to transport. We also implemented safety alerts and operational controls to mitigate the issue while the new trailers and retrofit kits were being manufactured.

4 Significant injury prevention

Nutrien's *Life Critical Global Standards* outline the steps to be followed to help prevent serious injuries or fatalities in our nine most hazardous working conditions. The standards include confined spaces, engulfment prevention, mobile equipment proximity, ground control, energy isolation, hoisting and rigging, hot work (that is, welding or cutting operations, or the use of spark-producing power tools near flammable materials), line break and fall protection.

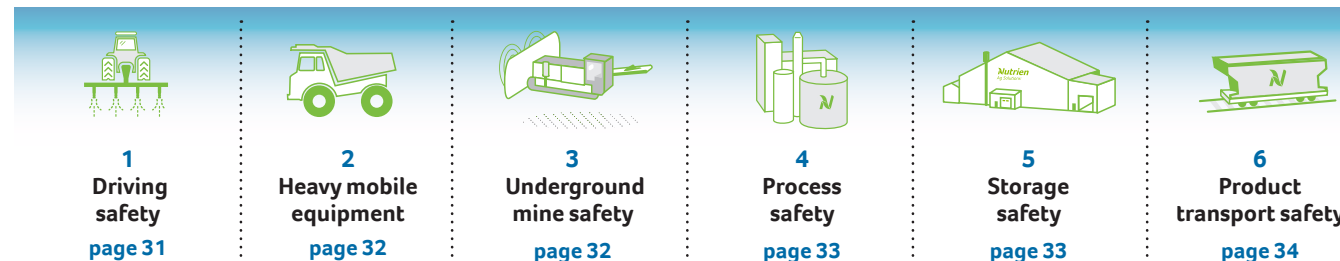
Routine work can also pose risks for significant injury, because it can lead to reduced focus and hazard identification. In the last three years, working teams at each of our production facilities conducted more than 600 formal assessments of routine tasks, looking for significant injury potential. From these formal assessments, many corrective actions were identified covering all hierarchy of controls, including procedural.

5 Emergency preparedness

Emergency preparedness plans are in place and regularly tested at every

Nutrien mine, fertilizer production and storage facility. We have emergency response teams at all production facilities who are regularly trained and drilled. We provide the public with toll-free phone numbers to report any concerns. All facilities annually reach out to local emergency management services (EMS) and local emergency planning committees (in place at 20 facilities) to review site configurations and product handling. In 2019, we conducted 20 emergency drills at our facilities, and four joint-response drills with local EMS, first responders and community members.

Business-Specific Safety Risks



Our safety metric results are reported for Nutrien's entire business. Since Nutrien is the only publicly traded company with operations across the agriculture value chain (for example, mining, manufacturing, retail), comparing our data with single-industry peers or benchmarks can be challenging. Our fertilizer manufacturing and mining operations have lower injury rates than our Retail operations as a result of the amount of driving, equipment operation and seasonal workers involved. Our Retail business unit has leading safety metrics when compared to our direct peers and is comparable to other companies with large vehicle fleets and a large seasonal workforce. We are working to reduce our injury rates company-wide and we focus on the most critical safety risks in each business area (those with the highest potential for serious injury) to eliminate serious injuries and fatalities.

1 Driving safety

Driving affects all of our business units but it is most relevant to our Retail locations. We

own a large fleet of trucks, forklifts, tractors, fertilizer/seed applicators, and other moving equipment, with 65,000 units in North America and 2,500 units in Australia.

To promote driving safety, we equip our fleet with sensors to track vehicle driving data that is used to identify and measure safety improvements. More than

Safety

(continued)



.....
 We are committed to building one of the world's strongest safety cultures. Our safety vision is that everyone goes home safe, every day.

90 percent of our fleet has GPS systems and sensors to measure seatbelt usage, speeding, hard acceleration, and harsh braking. We saw a 13 percent decrease in the seatbelt violation rate (seatbelt violations per 100 miles) in one year following an awareness campaign.

Despite our best efforts, in June 2019, we were saddened by the death of an employee while operating a tractor at a Retail site. A thorough investigation followed this tragic loss. In September 2019, we had an all-company safety summit to renew employees' engagement with safety and discuss serious injury and fatality prevention, one of our key safety priorities. We continue to strongly reinforce our commitment to safety and reaffirm the responsibility of any employee or contractor to stop work should unsafe conditions exist.

Ongoing general and task-specific driver training is another important component of driving safety. In 2019, Retail locations in North America were part of a *Safe Driving Campaign* involving a weekly topic for safe driving behavior discussions. In Australia, more than 1,100 employees participated in a risk-based driver training program, including drivers 25 years of age and under, drivers of heavy vehicles, forklift operators, and quad bike operators.

2 Heavy mobile equipment

Heavy mobile equipment refers to large haul trucks, bulldozers and other equipment used for open pit mining in

our Phosphate business unit. Because we can have up to 60 units active on a site at any time, there is risk of equipment collisions. At our Aurora, NC site, more than 90 percent of mobile equipment have proximity-detection sensors to help equipment operators avoid objects in their "blind spot". We are evaluating other sites for implementation. All heavy mobile equipment operators working at mines receive safety training and must conduct a 360° walkaround - a visual inspection of the area around a vehicle - prior to operating it.

3 Underground mine safety

Nutrien's potash is produced from underground mines, which present specific risks including ground fall, fires, and water inflow that require mitigation.

Preventing ground fall: Ground fall, when rock falls from the roof into the mine, poses a significant risk to workers and equipment by potentially disrupting ventilation and blocking critical emergency escape routes. We mitigate ground fall risks by:

- Ensuring appropriate mine design, engineering controls, and mine planning practices are in place.
- Adhering to robust hazard recognition processes, including thorough workplace inspections, geotechnical monitoring and instrumentation, safe work practices, and internal audits. Once a potential hazard is identified, it

is proactively mitigated through either engineering or procedural controls.

- Providing specific training for all underground employees on ground fall hazard recognition and safe work practices.

Preventing fires: We follow strict safe work practices, including requiring hot work permits and emphasizing hazard recognition. Nutrien's mines are designed with underground refuge stations, and fire alarm, detection and suppression systems to mitigate fire risk and impact. All workers are trained in our emergency response plans and we hold fire drills several times each year. Each site has trained emergency response teams and equipment (for example, fire trucks, emergency hoists) that can also provide mutual aid to other mining sites.

Preventing and managing water inflow: Underground potash mining has the potential to encounter water-bearing geological features that can result in water entering the mine (that is, water inflow). Inflows are not uncommon in conventional mines and the risk is mitigated by thorough exploration (for example, 3D seismic, surface drill holes) before mining activities commence, and the use of responsible mining practices during operations.

Nutrien's Lanigan, Cory and Vanscoy mines have minor water inflows. Work to fully characterize and manage these inflows has been focused and sustained. To manage inflows, we use pumps and

Safety

(continued)

pipelines to divert the water flow away from active mine workings and out of the mine. To date, these inflows have had no impact on potash production.

Taking first steps toward autonomous mining:

In late 2018, we started our Next Generation Potash Program to improve the safety of our employees and maximize the productivity of our potash operations. As part of this program, we have begun piloting the use of teleremote and autonomous machines to mitigate the risk of serious injuries by removing employees from the most hazardous places in the mine. At our Rocanville mine, we are mining autonomously through a large part of our shift changes and anticipate being able to share safety and productivity information by late 2020.

4 Process safety

Process safety focuses on reducing hazards that have the potential to affect people or assets, including fires, explosions,

and accidental releases in chemical process facilities or other facilities dealing with hazardous materials.

Nitrogen: Process safety is critical in Nutrien's nitrogen facilities that produce ammonia-based fertilizers. Ammonia is toxic if inhaled and has the potential to be flammable or explosive. A release into the atmosphere could impact employees and contractors on site and surrounding communities. We adhere to a comprehensive process safety management system at all production facilities, and all workers are trained in ammonia safety and the identification of process hazards. We also have specific safety procedures that employees and contractors must follow when conducting hot work.

Potash: Over the past year, our Potash business unit has invested in developing and implementing a *Process Safety and Integrity Management* (PSIM) program, with *Occupational Safety and Health Administration* (OSHA) process safety principles adapted to potash mining.

In 2019, we focused on using industry leading risk-based inspection techniques. We combined techniques from electrical, mechanical, and structural disciplines into a single digital platform to ensure inspections are performed regularly and repairs are made promptly.

5 Storage safety

Nutrien has more than 1,800 distribution points across North America alone, with nearly 7 million tonnes of storage capacity. This includes significant amounts of product in storage at our Retail locations. Our retail and storage facilities follow industry best practices for safe storage, including ResponsibleAg in the US and Agsafe in Australia. Other key storage safety practices include the following:

Ammonia storage: Secure storage of ammonia products is critical because a product release could cause a safety hazard in the local area. All large storage facilities have fencing, alarm systems and surveillance cameras.

Performance

	2019	2018
Tier 1 Process Safety Incidents ¹ (count)	6	NPR
Tier 2 Process Safety Incidents ² (count)	23	NPR
Tier 1 Process Safety Total Incident Rate ¹ (cases per 200,000 hours worked)	0.02	NPR
Tier 2 Process Safety Total Incident Rate ² (cases per 200,000 hours worked)	0.07	NPR
Percentage of Nutrien Retail facilities certified by ResponsibleAg (US)	67	70
Percentage of Nutrien agricultural chemical Retail centers accredited by Agsafe (AUS)	100	100

¹ Includes Tier 1 process safety events (that is, loss of primary containment with the greatest consequence) as described in the American Petroleum Institute Recommended Practice 754.

² Includes Tier 2 process safety events (that is, loss of primary containment with moderate consequence) as described in the American Petroleum Institute Recommended Practice 754.

NPR not previously reported



✓ SASB RT-CH-540a.1

Safety

(continued)

>96K

RAILCARS OF PRODUCT
MOVED IN 2019

Fire prevention: Some fertilizers are highly flammable. To prevent fires at our storage facilities, we conduct fire risk analyses to determine the locations with higher risks of fire. We also review our emergency response plans with local responders annually to ensure they are aware of our flammable products and where they are stored.

Engulfment prevention: We implement engineering and administrative controls to prevent engulfment, which refers to being surrounded and overcome by a granular or liquid substance. Controls include appropriate design of product storage buildings, installing effective barriers, restricting access to stockpiles, and maintaining procedures for safely accessing product.

6 Product transport safety

Nutrien engages third parties to transport our fertilizer products between our production and storage or Retail facilities

by rail, and then from these storage facilities to our customers by truck.

Rail: We use third-party rail carriers to ship raw materials and finished goods by rail, in railcars that are either owned or leased by us from third parties (approximately 16,000) or supplied by the railroads. More than 96,000 railcars of product were moved in 2019.

- Ammonia is transported in specialized pressure tank cars that help prevent releases in the event of a derailment or high impact incident. Between 2016 and 2018, we commissioned nearly 600 railcars to exceed the highest industry specifications (for example, extra thick steel, reinforced shield).
- To help prevent NARs ¹, we require our facilities and carriers to conduct railcar inspections and preventive maintenance and enforce strict loading and unloading procedures at our facilities.

Trucking: Third-party trucking companies transport product from our production facilities to our wholesale customers,

moving more than 95,000 truckloads in 2019. Our practices to manage safety during truck transport include the following:

- Our screening process to select service providers includes confirmation of driver qualifications, insurance, and regional safety training certifications and performance records, where applicable.
- Carriers that transport anhydrous ammonia require additional qualifications, including certification to carry hazardous materials and higher insurance coverage.
- We monitor the safety performance of our carriers in key areas such as compliance with Safety Data Sheets (SDSs).
- Carrier audits also include annual reviews of insurance certificates and, in the US, quarterly reviews of Department of Transportation Safety Measurement System scores.

Performance

	2019	2018
Total environmental incidents	23	22
Reportable quantity releases	22	20
Non-compliances	0	1
Enforcement actions	1	1
Environmental incident frequency (per 200,000 hours worked)	0.07	0.07
Non-accidental ammonia release rate (releases per thousand railcar movements)	0.00	0.07

¹ A non-accidental ammonia release (NAR) is the unintentional release of a hazardous material during transportation, including during loading and unloading, that is not caused by a rail-related accident.

Human Capital

\$9.7M

INVESTED IN TRAINING AND
DEVELOPMENT IN 2019

Why is this topic relevant to our business?

Ensuring that Nutrien employees feel valued, respected and engaged in their own success are essential factors in attracting and retaining the talented people who will help Nutrien achieve its purpose – to grow our world from the ground up.

Our approach

We attract and retain our people by investing in the experience and engagement of our employees, developing the best talent, and fostering diversity and inclusion in Nutrien's culture. In addition, we have an effective succession management process to safeguard the long-term achievement of our strategy.

1 Employee engagement

Employees who enjoy their experience at work are more likely to be engaged in working safely and collaboratively toward our shared company goals. We promote employee engagement by focusing on the overall employee experience: offering meaningful work and inspiration, providing opportunities for development and career growth, providing the right rewards, ensuring mental and physical well-being, helping employees to feel the impact of their work at Nutrien, and giving them a true sense of belonging.

Listening to our employees helps us to identify ways we can improve the employee experience at Nutrien and increase the retention of talent. We conduct frequent, real-time, targeted surveys on topics that are top of mind for employees.

In 2019, we asked almost 19,000 of our employees for input into various aspects of their employee experience in areas that mattered to them. We used their feedback to develop action plans that addressed their concerns and met their needs. In total, nine independent surveys were conducted. Two examples are:

- Canadian employees were asked to comment on their extended health and dental benefits. As a result, changes were made and communicated to employees within 60 days.
- Both US and Canadian employees provided feedback on maternity and parental leave. In response, we implemented an enhanced parental leave program by the end of 2019.

In 2020, we will be measuring employee experience and engagement in aggregate across the global organization.

2 Attraction, development and retention

We intend to hire talent with the right fit for our culture and purpose. In 2019, Nutrien's talent attraction and sourcing group hired more than 1,400 people and had a 92 percent acceptance rate on all employment offers. Employee diversity

is a consideration in all hiring decisions and global efforts continue toward an inclusive workplace.

Supporting the career development of our employees is essential for employee retention and for Nutrien's success, as is a robust performance management process. In 2019, we launched a suite of materials to support employees and managers in career development planning and introduced an online performance management tool to more than 5,000 of our employees as the first phase of a multi-phased project. This initiative also includes a globally aligned process, which is intended to be fully digitized over the next two years.

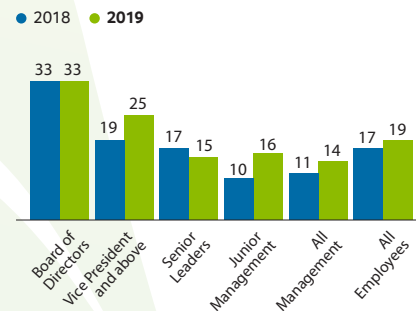
In 2019, we invested \$9.7 million in employee training and development, focusing on technical, safety, leadership, and personal development training. We rolled out new training for leaders, including *Leadership Essentials* for 200 front-line supervisors, and the first module of our *Global Leadership Development* program targeting the 100 top leaders of the organization.

We have implemented real-time dashboards within the organization to provide executives and Human Resources access to important metrics such as

Human Capital

(continued)

Women at Various Levels (%)



Our efforts have resulted in equivalent or increased gender diversity across all categories globally, except in senior leadership.

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[Code of Ethics](#)
[Respect in the Workplace Policy](#)
[Inclusive Workplace Commitment](#)
[Diversity & Inclusion at Nutrien](#)

employee turnover and workforce demographics. This information allows us to continuously monitor our organizational health.

3 Workforce diversity and inclusion

Promoting diversity and inclusive growth in our workforce enhances Nutrien's organizational strength and reflects the diversity of our stakeholders. We are committed to providing all employees with a respectful and inclusive workplace. We do this in the following ways:

Promoting diversity: Our goal is to have women in 30 percent of our Vice President roles by the end of 2020, and in 20 percent of our senior leadership roles by the end of 2022. We are also working toward more representation of Aboriginal people across all job categories in Canada. In keeping with our "match to market" strategy for visible minorities and veterans in North America, we will continue working toward the attraction and retention of people from other protected groups. In 2019, we established quarterly diversity scorecards for the Executive Leadership Team (ELT) outlining the progress of each executive officer's contribution to Nutrien's gender diversity

goals. We also created diversity dashboards for business units in North America and Australia. The dashboards show real-time data on team diversity and progress in new hire and turnover rates for each monitored category (gender and race, where possible).

Fostering inclusion: In 2019, we held roundtables with subject matter experts in Human Resources, Procurement, and Sustainability and Stakeholder Relations to assess the current state of inclusivity in our talent and business processes. In addition, we conducted one-on-one interviews with diverse employees to evaluate the true experience of inclusion across Nutrien's workforce. The work will continue in 2020, and we will use the results to inform our company-wide inclusion strategy.

Supporting Employee Resource Groups (ERGs): Nutrien supports 16 voluntary, employee-led resource group chapters that serve under-represented employee populations and contribute to a more inclusive workplace. We also have an *Inclusion Council* with more than 45 representatives from across North America helping to share and implement best practices in diversity and inclusion on behalf of our North American employees in Retail.

Increasing awareness: In 2019, we delivered unconscious bias training to more than 600 employees in North America, conducted *Aboriginal Awareness* training in Alberta and Saskatchewan, and held *LGBTQ+ Awareness* training in three of our site and office locations. We also provided intercultural training (that is, teaching employees how to increase effectiveness in a culturally diverse team) to approximately 150 employees.

4 Succession planning

Nutrien's succession process is key to managing human capital risk in the organization. Our succession planning proactively identifies roles most critical to the achievement of Nutrien's strategy and purpose. For these roles, an internal talent pool and pipeline is developed, and an external market analysis is performed. Our ELT reviews the succession roles and candidate progression on a monthly basis. At the end of 2019, more than 85 percent of our most critical roles have an internal candidate identified for succession and development.

Performance

Voluntary employee turnover rate (company-wide)
Voluntary employee turnover rate (senior leaders) ¹
Acceptance rate of all Nutrien employment offers
Number of ERG members
Number of ERG chapters across Nutrien

¹ Includes North America and Trinidad only, excludes retirements.

2019	2018
9%	9%
2%	2%
92%	NPR
145	NPR
16	7

NPR not previously reported

Community and Indigenous Relations

Why is this topic relevant to our business?

Long-standing, positive community relationships are essential to the successful operation of our business. Given our significant footprint in natural resources, we also have an opportunity to establish meaningful partnerships with Indigenous communities where we live and work.

Our approach

We build relationships with local communities through our efforts to:

1 Engage and invest in communities

We provide opportunities for community members to provide feedback to our operations through meetings and outreach. We have advisory panels that convene regularly in Saskatoon, SK in Canada; Augusta, GA, Geismar, LA, and White Springs, FL facilities in the US; and at our Trinidad site. In addition, in 2019, Nutrien representatives met with more than 50 community members in Saskatchewan to share our approach to sustainability and community relations and investment, and to provide an opportunity for two-way communication.

We invest in community initiatives that address existing needs in local communities, and further our strategic goals of promoting diversity and inclusion, reducing our environmental footprint, and promoting sustainable agriculture. We also support charities aligned with employee interests and allot one paid day per year for employees to volunteer.

Learn more about [Community Investment](#) at Nutrien.

2 Support reconciliation with Indigenous communities

Nutrien's diverse geographical locations, size, and global presence position us to help close the gaps faced by Indigenous Peoples, particularly in the areas of education and employment. In alignment with Canada's Truth and Reconciliation Commission's Call to Action #92, we commit to meaningful relationships with Aboriginal communities, ensure Aboriginal Peoples have equitable access to employment and supply chain opportunities in our operations, support programs, advocacy, education and training, and provide training to our own leadership and employees regarding the history of Canada and Aboriginal Peoples.

In May 2019, Nutrien signed A *Collaborative Understanding Agreement Regarding Employment, Training, Procurement and Agriculture Initiatives for First Nations* with the Saskatoon Tribal Council (STC) in Saskatchewan, Canada. This sets out the process for Nutrien and the STC to collaboratively identify, develop, and invest in initiatives and events that ensure people served by the STC and its member First Nations

can participate in employment and procurement opportunities.

Learn more about our [partnership with STC](#).

3 Inspire the future workforce

Through our programs, we aim to inspire the next generation to choose careers in agriculture and STEM (Science, Technology, Engineering and Mathematics). We partner with communities and training institutions to provide opportunities for young people to learn about the careers we offer and to experience STEM in their classrooms. Some examples of these activities include:

- STEM camps and science fairs for more than 300 students from Grades K-8.
- Career fairs and boot camps for more than 2,000 students in Grades 9-12.
- Providing more than CAD\$100,000 in scholarships in the areas of business, engineering, information technology (IT) and technical programs.
- Offering an Aboriginal internship program for 10 engineering, business, and IT students for a cumulative total of 56 months of work experience.

Performance	2019	2018
Community investment	\$17M	\$17M
Community partnerships	> 2,300	>2,500

+ ANALYST CORNER

- ✓ SASB RT-CH-210a.1
- ✓ SASB EM-MM-210b.1
- ✓ SASB EM-MM-210a.3

[Community Relations at Nutrien](#)

Responsible Supply Chain

Why is this topic relevant to our business?

An ethical and reliable supply chain is essential to Nutrien's risk management strategy, helping us uphold our company standards for social and labor practices and for building resilience to environmental, political, or other disruptive events.

Our approach

Our work to build a responsible supply chain includes working with suppliers that uphold our standards, reviewing supplier performance (including human rights protection in our contractual obligations) and fostering a diverse supply chain.

1 Suppliers and contractors screening

All potential service and product suppliers must agree to Nutrien's *Supplier Code of Ethics* and complete a questionnaire outlining Nutrien's basic requirements, including corporate social responsibility and a commitment to excellence in health and environmental practices. Nutrien has a due diligence program developed to evaluate potential suppliers for the issues outlined in its *Supplier Code of Ethics*. We use a risk-based approach to identify those suppliers that warrant more detailed reviews. We evaluate all suppliers based on industry, geographic

region, government interaction and expected annual spend. In addition, we are developing a supplier risk module that will include financial, environmental, social and ethical ratings to enhance supplier screening.

Nutrien only sources active ingredients from suppliers that are certified by the local certifying agency where they are sold and/or distributed (for example, EPA in the US). Active ingredients sourced from non-US sources are purchased only from manufacturers that are EPA approved. We evaluate new and existing suppliers within and outside the US via a third-party audit of their facilities and processes. Products are tested frequently at our formulation sites to confirm the ingredient or feedstock meets our specifications.

Our different business units have different on-site contractor needs. For instance, our Retail facilities have few contractors on site while, at our

Nitrogen, Potash and Phosphate sites, contractors represent between 10 and 50 percent of the hours worked. On-site contractors must be registered and in compliance (that is, with an A or B rating) with ISNetwork, an online contractor and supplier management platform that collects and verifies key contractor information, including safety, health and environmental performance.

2 Supplier performance management

Nutrien's supplier tiers are based on annual spend, risk of interruption of supply and geographical footprint. Tier 1 suppliers work across our global business units and have the highest annual average historical spend and/or highest potential of supply risk and impact to our business. We review the performance of our Tier 1 suppliers on a semi-annual or annual basis. We also review certain Tier 2 and 3 suppliers based on internal supplier risk assessments.



ANALYST CORNER

✓ SASB EM-MM-210a.3

[Supplier Code of Ethics](#)

[Aboriginal Content Playbook](#)

Responsible Supply Chain

(continued)

>2,000

NUTRIEN SUPPLIERS ARE
DEVELOPING LOCAL ABORIGINAL
CONTENT PLANS

\$29M

IN 2019 ABORIGINAL
PROCUREMENT SPEND

3 Contractual ethical obligations

Suppliers are required through the contract process to comply with our *Supplier Code of Ethics*, which includes expectations for non-discrimination, a commitment to compliance with human rights laws, non-procurement from conflict zones, and the avoidance of forced labor, child labor, and human trafficking. As part of the *Supplier Code of Ethics* due diligence program, Nutrien may conduct in-person supplier audits on a risk basis. In some cases, Nutrien staff visit supplier locations prior to executing a contract to better understand the company culture and compliance risk related to sourcing and employee treatment.

4 Diversity in the supply chain

We promote diversity in our Potash business unit supply chain by encouraging Aboriginal participation in suppliers' Request for Proposals (RFP), tracking Aboriginal supplier performance indicators, and strategically supporting

select Aboriginal suppliers to build their capacity.

Aboriginal content: In our Potash business unit, we attribute at least 10 percent of a supplier's RFP evaluation to its plans to incorporate local Aboriginal content in our supply chain. Suppliers have four options for meeting our requirements to increase Aboriginal content: direct staffing, subcontracting services, community investment, and mentorship of an Aboriginal-owned company. We developed an [Aboriginal Content Playbook](#) to support our suppliers in their efforts. The playbook is an evolving resource that provides guidance on how Nutrien incorporates more Aboriginal participation and content into our business practices and supply chain. Our suppliers choose activities that make the most sense for their business. With more than 2,000 Nutrien suppliers now developing and implementing their own Local Aboriginal Content Plans, our impact in the Aboriginal community is amplified.

Learn more about [Nutrien's Aboriginal Content Playbook](#).

Opportunity partners: To promote economic reconciliation, we engage Aboriginal community-owned service providers to work with us as Aboriginal Opportunity Partners. Opportunity Partners receive support and resources to help further establish their businesses in the potash industry.

CASE STUDY: Update on sourcing phosphate rock from Western Sahara

Phosphate rock is the major input in our phosphorus processing operations. Until the end of 2018, Nutrien purchased phosphate rock from OCP S.A. (Western Sahara) for our Geismar and Redwater Phosphate facilities. We closed our Geismar Phosphate facility at the end of 2018. The Redwater Phosphate operation ceased production in May 2019 as we repurposed this facility in order to increase our ammonium sulfate capacity, thereby eliminating the need to purchase phosphate rock. Nutrien is now fully self-sufficient in phosphate rock production.

Product Responsibility

Why is this topic relevant to our business?

Our stakeholders expect us to minimize impacts on human and animal health related to the agricultural products we manufacture and sell. This is a responsibility we take seriously as a company.

Our approach

Product stewardship extends the scope of SH&E management beyond our facility gates to take a lifecycle approach to lowering product environmental, safety and social impacts of concern. Nutrien strives to improve our product sustainability profile across procurement, product development, manufacturing, distribution and end-use application. We have a product stewardship management standard as part of our *SH&E Management System* that guides our activities and a product stewardship network that is responsible for the cross-functional development, communication and integration of standards, policies and work procedures into the NPK business. Our approach is recognized under the *International Fertilizer Association Protect and Sustain* program.

Nutrien determines product suitability and use based on scientific evidence, regulatory requirements, and a holistic product rating system. We promote the safe and sustainable use of every product

we sell by providing information to customers on appropriate use, handling and application.

1 Evidence-based decisions

We consider the social impacts of our products from development to point of sale, especially their impacts on human health and the environment. To make informed decisions about product suitability and use based on science and empirical evidence, we monitor research closely and follow product reviews by regulatory agencies, including toxicology and environmental impact studies, chemical hazard classification reviews, substances of very high concern bulletins, government chemical risk assessment reports, and regional and global environmental impact reports.

Genetically Modified Organisms

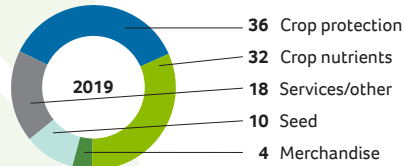
(GMOs): Nutrien is directly involved in breeding canola, cotton and rice seed using native and GMO traits, and we sell genetically modified seeds for many

crops. Research conducted by national and international scientific authorities has concluded that GMO food crops do not pose any more risk to people, animals or the environment than any other food crop. We continue to monitor GMO technology development and impact studies regarding human health and environmental impact to ensure the best possible guidance is considered in future product decisions.

Pesticides and pollinators

(neonicotinoids): Pesticides, specifically the class of chemicals known as neonicotinoids, continue to draw a level of public concern regarding their safety and potential impacts on bees and other pollinators. We acknowledge stakeholder concerns related to the use of neonicotinoids. Based on available evidence and our commitment to product stewardship, we believe that by strictly adhering to the approved label uses and applications of these products, growers can use neonicotinoid products for pest management to sustainably produce food. Health Canada and the

Retail Gross Margin (%)



ANALYST CORNER

- ✓ SASB RT-CH-410b.2
- ✓ SASB RT-CH-410c.1

[GMO Position Statement](#)

[Pesticides Position Statement](#)

[Existing and Emerging Product](#)

[Technology Position Statement](#)

Performance

Percentage of seed sales that contain GMO

Percentage of total Nutrien sales that contain GMO

2019

89%

8%

2018

89%

8%

Product Responsibility

(continued)

US EPA provide regulatory oversight for the safe use of these products.

2 Product rating system

Nutrien is developing a holistic risk-based product rating system to create impact profiles for our manufactured products. Each profile incorporates ingredient origin, regulatory evaluation information, final product hazard classification (for example, toxicity, dangerous good status), sustainability factors (for example, potential to contribute to ecosystem degradation, conflict material rating) and supply chain risk (for example, security, potential for illegal use). We anticipate completion of profiles for our major fertilizer products by early 2021. Profiles will be used to make product sustainability decisions. Our intent is to expand this function further across the organization in a phased approach.

3 Safe product handling and application

Nutrien's products are developed for specific applications. Use outside the recommended scope or misapplication have the potential to negatively impact human and animal health or the environment. We promote the safe use of Nutrien products through product disclosure, wholesale and retail systems that help enforce regulatory standards, and the provision of training to employees and contractors who handle and apply our products.

Disclosure and transparency:

- We provide Safety Data Sheets (SDSs) for all chemical products we manufacture and sell. SDSs contain information on the potential health effects of exposure to chemicals or other potentially dangerous substances, and include safe handling and personal protective equipment information for those chemical products. SDSs are available at our production facilities, during product transport, at our Retail locations, and on our [website](#).
- Our product labels and SDSs are compliant with local laws and regulations where we sell our products (for example, US EPA, Canada Pest Management Regulatory Agency (PMRA), European REACH, Fertilizer Act and Chemical Labelling and Packaging (CLP), and Canadian Food Inspection Agency (CFIA)).
- We provide online and telephone technical support for retailers, customers, and employees on the interpretation of SDSs and labels, on the appropriate use of chemicals (for example, reactivity with other chemicals) and medical emergency situations.
- Our product stewardship team periodically reviews and updates the information on our labels and in our wholesale and retail data systems.

Safe application of agricultural

products: Pesticides and herbicides are highly regulated products in the markets where we operate. We comply with all applicable regulations and have policies and procedures in place to help ensure the safe and appropriate use of the products we sell. Policies and procedures include:

- A retail system that enforces licensing and certification for pesticide product handling and use. This system regulates which pesticide products can be sold in which regions, which Retail locations are certified to sell which products, and which customers have the appropriate license or permit to purchase a product.
- Formalized regulatory change monitoring and participation in industry-regulator working groups.
- Enhanced job descriptions to identify regulatory compliance responsibilities.

Training: We ensure our employees, contractors and contracted service providers (that is, applicators) have the required industry and regional training and qualifications to handle and apply our products (for example, Pest Control Advisor, Qualified Applicator License or Certificate), and our technical services include training and advice on best practices for products sold through our Retail business unit.

Additional Social Topics

Unions and labor relations

Maintaining positive relations with unions is important to our business. Our employees can join an employee association or trade union, consistent with national or regional laws and practices. We strive for productive relationships with the unions representing our employees. Nutrien has entered into 16 collective bargaining agreements with labor organizations representing 17 percent of our total employees. Seven of these are currently under negotiation.

Learn more in the 2019 [Nutrien Annual Information Form](#), page 20.

Conflict zones

Nutrien is committed to responsible sourcing. We do not knowingly procure materials from conflict zones (see page 39 for a statement on Western Sahara). Our *Supplier Code of Ethics* (Supplier Code) prohibits supplier procurement from conflict zones. The Supplier Code applies to suppliers that provide products or services to Nutrien around the world. Commitment by our suppliers to the principles of the Supplier Code is significant in Nutrien's decision-making process. Where suppliers refuse to follow the principles of the Supplier Code or show signs that they are not committed to improving their practices to comply

with its principles, Nutrien will review its relationship with the supplier. Where contractual commitments and local law permits, this review may include termination of our relationship with the non-compliant supplier.

Animal testing

We strive to reduce use of animal-based testing and, where feasible, employ scientifically valid alternative methods that reduce, refine or replace the use of animals.

Learn more on [Nutrien's position on animal testing](#).



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✓ SASB EM-MM-310a.1

✓ SASB EM-MM-210a.3

[Supplier Code of Ethics](#)

Governance

TOPICS IN THIS SECTION

- 44 Corporate Governance
- 45 Governance of ESG and Climate-Related Risks
- 47 Ethics and Anti-Corruption
- 48 Cybersecurity and Data Privacy
- 49 Additional Governance Topics

We embed strong corporate governance systems and principles in our business through a diverse and independent Board of Directors, strong ethical principles that inform our activities, and rigorous systems for cybersecurity and data privacy.

2019 Highlights

33%

OF BOARD MEMBERS
ARE WOMEN

88.45%

OF SHAREHOLDERS APPROVED
OUR "SAY ON PAY" EXECUTIVE
COMPENSATION APPROACH

1,200

EMPLOYEES ATTENDED ONLINE TRAINING
ON CYBERSECURITY RISKS

Corporate Governance

Performance	2019
BOARD AND GOVERNANCE INFORMATION	
Total Number of Directors	12
Number of Independent Directors	11
Separate Chair and CEO	Yes
Independent Chair (required)	Yes
Annual Board Evaluation Process	Yes
Board Meetings Held in 2019	6
Average Meeting Attendance	97%
BOARD RENEWAL AND DIVERSITY	
Annual Election of Directors	Yes
Majority Voting Policy	Yes
Average Age of Directors	58
Mandatory Retirement Age	72
Average Director Tenure	2 yrs ¹
Women Board Members (after 2019 AGM)	33%
Board Diversity Policy	Yes
SHAREHOLDER RIGHTS	
Proxy Access	Yes
Say on Pay Advisory Vote	Yes
Votes in Favor of Compensation Approach at the 2019 AGM	88.45%

¹ All of our directors previously served as a director of one of Nutrien's legacy entities commencing in the following years: Mr. Burley (2009); Ms. Clark (2016); Mr. Everitt (2013); Mr. Girling (2006); Ms. Hubbs (2016); Ms. Laberge (2003); Ms. Madere (2014); Mr. Magro (2013); Mr. Martell (2007); Mr. Regent (2015); Mr. Schmidt (2013).

Why is this topic relevant to our business?

Corporate governance that is aligned with Nutrien's purpose and focused on creating long-term value reduces risk exposure and increases our competitiveness as a company.

Our approach

Nutrien's corporate governance framework includes policies and processes that define the roles of the Board and the ELT. It also ensures that our business practices meet high ethical standards. The Board oversees prudent management of every aspect of Nutrien's business.

Board diversity

Having a mix of directors on the Board from varied backgrounds and with a diverse range of perspectives and insights fosters enhanced decision-making capacity and promotes better corporate governance. Our *Board Diversity Policy* includes a target that women comprise no fewer than 30 percent of the Board members. Nutrien is also a member of the [30% Club](#), an international group of Chairs and CEOs promoting gender diversity on Boards and senior management teams. Our Board diversity

criteria formally acknowledge the groups designated under recent amendments to the *Canada Business Corporations Act*, including women, Aboriginal Peoples, persons with disabilities and members of visible minorities.

Of our current directors, four are women (33 percent of the total number of directors), one is an Aboriginal person (eight percent of the total number of directors) and one is a member of a visible minority (eight percent of the total number of directors). None of our current directors self-identify as a person with a disability.

Board renewal

While director term limits can assist with Board refreshment, there may be circumstances where the Board does not want to lose the deeper business knowledge and experience of a longer serving director. We therefore do not limit the time that a director can serve on the Board. Under the Board's *Corporate Governance Framework*, a director's

retirement age is generally 72, but the Board may also request a director extend his or her term of service beyond the retirement age.

Executive compensation

Nutrien's compensation framework is based on a pay-for-performance philosophy. Currently, 88 percent of CEO compensation is at-risk, and 74 percent of named executive officers' compensation is at-risk. We include an advisory "say on pay" vote at our annual meetings (in line with 2019 amendments to Bill C-97).

There were no changes to our executive compensation framework in 2019, except the CEO long-term incentive target was increased from 600 percent to 625 percent of his salary to maintain a competitive level. For 2020, a component of leadership compensation is tied directly to Nutrien's ESG performance during the year to demonstrate our focus on key ESG risks and progress across our sustainability strategic pillars.



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[Corporate Governance Framework](#)
[2020 Management Proxy Circular](#)
[Meet our leaders](#)

Governance of ESG and Climate-Related Risks

Why is this topic relevant to our business?

As ESG risks and opportunities are generally longer term in nature, incorporating them into our strategic and business planning activities helps enhance our planning, decision making and resilience. Understanding emerging trends, regulations and societal expectations allows us to capitalize on opportunities for growth and mitigate potential risk.

Our approach

Risk management is governed by our Board and Board committees, who oversee our ELT in understanding the principal risks to our business, including ESG and climate-related risks. Responsibility and accountability for risk management is embedded in all levels of our organization, and we strive to integrate risk management into key decision-making processes and strategy.

To further demonstrate our commitment to sustainability, we established the role of Executive Vice President and Chief Sustainability Officer effective May 1, 2020, reporting directly to the CEO.

Board oversight

The Safety, Health, Environment and Security (SHE+S) Committee has responsibility for the oversight of our activities with respect to safety, health, the environment, security, and sustainability. This includes overseeing our general strategy and policies relating to sustainability matters such as climate change-related risks and opportunities. It directly reports to and advises the Board on these matters. The SHE+S Committee met four times in 2019.

SHE+S Committee's responsibilities and activities

Within the increased focus on sustainability, safety and security remains a top priority and SHE+S oversees our safety and security activities and policies including the company's first ever global virtual *Safety, Health & Environment Summit* held in 2019, the completion of a safety culture assessment, and a review of the maturity of our cybersecurity system, including our plans and processes under the *National Institute of Standards and Technology (NIST) Cybersecurity Framework*.

See page 48 for details.

As part of the mandate to oversee significant policies and management systems, the SHE+S Committee:

- Oversaw the SHE+S vision and strategy and reviewed the five-year strategy and annual objectives.
- Oversaw policies relating to sustainability and progress toward sustainability goals.
- Oversaw Nutrien's Sustainability Report.
- Oversaw Nutrien's climate risk and GHG emissions strategy.

- Reviewed safety, health, environmental and security performance summaries to identify any performance issues.
- Reviewed safety, health, environment and security audit plan for the current and upcoming year.
- Reviewed with management the safety, environmental and security emergency response planning processes.

As part of the risk and compliance requirements of its mandate, the SHE+S Committee:

- Reviewed our remediation projects, environmental provisions and significant legal and regulatory developments.
- Reviewed risks (including insurance risks) related to safety, health, environment (including climate-related, physical, technological, regulatory and social risks) and security.
- Studied cybersecurity risk in conjunction with the Audit Committee.
- Reviewed disclosure containing significant information within the Committee's mandate.



✓ TCFD Governance a)

Governance of ESG and Climate-Related Risks

(continued)

Management's role

Under the oversight of the SHE+S Committee, management of our organization has the responsibility of ensuring the company's key risks are being appropriately addressed.

Key groups that play an important role in the management of ESG-related risks include:

ELT: is responsible as part of their ongoing duties for ensuring climate-related risks are being properly managed and potential opportunities evaluated. The ELT approves the overall ESG and climate-related strategy.

ESG Steering Committee: is responsible for overseeing ESG and climate-related disclosures and communications to external stakeholders.

Climate Steering Committee: is responsible for oversight of the strategic development of the risk mitigation and opportunities related to the reduction of Nutrien's GHG and aligning appropriate reduction targets and performance metrics.

Management's activities

In 2019, notable sustainability efforts by management included undertaking climate change-related risk and opportunity assessments. As part of this process, management engaged an external climate-risk consulting firm to assess Nutrien's GHG emissions inventory and engaged KPMG to provide limited assurance on Nutrien's 2018 Scope 1 and 2 baseline emissions (see our website for [KPMG's Limited Assurance Statement](#)). We are also assessing climate-related mitigation opportunities for potential targeted GHG emissions reduction. Management anticipates reporting the results of this assessment and its recommendations to the SHE+S Committee in 2020.

We also issued our Sustainability Report in 2019. Starting in 2020, we intend to focus on sustainability reporting for the investment community and other stakeholders by issuing this ESG report.

How we identify ESG and climate-related risks

Our approach to risk management is guided by the *Committee of Sponsoring Organizations of the Treadway Commission* (COSO) Enterprise Risk Management Framework (2017) and ISO 31000 Risk Management Guidelines. When considering ESG and climate-related risks, we also look to COSO's guidance on *Applying Enterprise Risk Management to ESG-Related Risks* and cross-reference our identified risks with SASB Chemicals and Metals and Mining Sustainability Accounting Standards along with TCFD recommendations.

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- ✓ TCFD Governance b)
- ✓ TCFD Risk Management a) c)

[KPMG Limited Assurance Statement](#)

Ethics and Anti-Corruption

Why is this topic relevant to our business?

Maintaining our reputation as an ethical company reduces our legal and financial risk and is essential to building trusting relationships with stakeholders.

Our approach

Ethics training

All employees, directors and officers must complete mandatory online *Code of Ethics* training annually. We update training content every year to address new or changing legal and ethical risks. The 2019 training included the following: Nutrien's purpose and values; fostering our *Speak Up* culture; cybersecurity; data privacy; respect in the workplace (including diversity, inclusion and anti-harassment); conflicts of interest; safety; anti-corruption, gifts and entertainment; and competition law. In addition, we provide targeted risk-based in-person training for employees in higher risk roles. In 2019, more than 1,000 employees in higher risk roles received in-person anti-corruption training, and more than 600 employees received competition law training tailored to their role.

Embedding ethics in everyday work

We rolled out an initiative called *Integrity Moments* in 2019 to foster and normalize discussions about ethics and integrity in our everyday work. *Integrity Moments* are opportunities to share personal or media examples or stories about ethical values in action at the start of meetings, including at Nutrien Board meetings. To build engagement, we posted *Integrity Moments* shared by some of our executives on Nutrien's intranet, then invited employees to submit their own as part of a contest. Top *Integrity Moments* were posted on our intranet and employees voted on their favorites.

Fostering a Speak Up culture

Nutrien provides an anonymous externally administered [Compliance Hotline](#) for employees and the public to ask questions and report ethical concerns, with service available in six languages. All reports are forwarded to our Compliance and

Ethics department, investigated where appropriate, and appropriate action taken.

Each year, we have a theme for our ethics communications to employees. The 2019 theme focused on enhancing our *Speak Up* culture. Leaders are also expected to adhere to and promote our "open door" policy. This means that they are available to anyone with ethical concerns, questions or complaints, and encourage an environment where our employees feel comfortable asking questions or raising concerns.

Integrating ethics after acquisitions

Nutrien continues to grow through acquisitions. We integrate ethics assessments and training into our due diligence and integration process for new acquisitions to mitigate ethical risks as the business grows. Ethics integration activities are risk-based and range from deployment of Nutrien policies, alignment of key processes with Nutrien's programs to a staged training process.

Key Ethics and Anti-Corruption Metrics

	2019	2018
Employees who have completed Code of Ethics training	All	All
Employees who have received in-person anti-corruption training	1,010	580
Employees who have received in-person competition law training	610	500
Employees who have received an online anti-corruption refresher	20,770	19,120
Calls to compliance hotline (detailed breakdown in the Performance Table, page 58)	164	156
Reserves/production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	0	0

+ ANALYST CORNER

- ✓ SASB EM-MM-510a.1
- ✓ SASB EM-MM-510a.2

[Code of Ethics](#)

[Ethics, Integrity and Human Rights](#)

Cybersecurity and Data Privacy

Why is this topic relevant to our business?

Advances in digital technology afford us significant business opportunities. However, our interconnectedness and reliance on digital systems also expose us to the potential for digital piracy and the release of sensitive information.

Our approach

Cybersecurity

Nutrien's cybersecurity measures include multiple layers of control and are intended to protect our data, systems, assets, and identities. Specific activities to ensure cybersecurity include:

Robust systems: Our cybersecurity systems and processes follow the NIST framework, a voluntary framework created by industry and the United States government to promote the protection of our infrastructure from cybersecurity risks. The system is audited yearly by a third party.

Cyber risk identification: We work with our business units and employees to identify risks by conducting cybersecurity reviews of new initiatives and cyber

process hazard assessments for Nutrien's NPK sites. We also conduct threat modeling to simulate potential threats and inform changes that are expected to make business processes more resilient to cyberattacks.

Training: We provide training on managing digital risks in three ways: a cybersecurity module in our mandatory *Code of Ethics* annual training, tabletop exercises to practice responding to cybersecurity events, and focused training for groups with higher risk business processes.

Accountability: We regularly test employees' cybersecurity awareness through phishing campaigns. Leaders receive testing results for their team and, where needed, receive coaching to improve team awareness.

Data privacy (employee or customer)

We are continuously updating our regional data privacy policies to align with regional regulations regarding the protection of employee and customer digital information (for example, the *General Data Protection Regulation* in Europe and the *California Consumer Privacy Act*). All employees receive data privacy training through a module in our yearly *Code of Ethics* training. Human Resources and IT personnel complete in-person training to help them manage the increased data privacy risks related to their roles.

Key Cybersecurity Training Metrics

	2019	2018
Employees who have received cybersecurity training (as part of Code of Ethics)	20,770	19,120
Tabletop exercises to practice responding to cybersecurity events	3	1
Employees who have participated in focused cybersecurity training for higher risk business areas	7,900	6,700
Employees who have received in-person data privacy training	165	NPR
Employees who have received an online data privacy refresher (as part of Code of Ethics)	20,770	NPR

NPR not previously reported



Additional Governance Topics

Anti-competitive behavior

For a business the size and scale of Nutrien, anti-competitive behavior can expose individuals and our business to significant penalties and impair our reputation in the marketplace. We are committed to the principles of fair competition and compliance with all global antitrust and competition laws applicable to our operations. Anti-

competitive behaviors with competitors or customers and other third parties (for example, governments) are prohibited, including price fixing, agreements to limit production, exchanging competitive information and predatory pricing.

We work to prevent anti-competitive behavior in the following ways:

- **Competition Law Policy:** Our policy requires mandatory compliance and

outlines Nutrien's expectations of all employees, officers and directors, as well as third parties such as distributors, agents, resellers and contractors.

- **Training:** In 2019, all employees, officers and directors received a refresher on fair competition as part of our annual *Code of Ethics* training. In addition, more than 600 employees in higher risk roles received in-person training on competition law.

Tax Policy

At Nutrien, we strive to grow our world from the ground up. This means continuing to invest in our business and the communities in which we operate in order to create sustainable value for all of our stakeholders. We believe that tax regimes should be stable, efficient, and competitive in order to attract and promote this investment and value creation.

Nutrien's Retail, Potash, Nitrogen and Phosphate businesses pay a significant amount of tax across multiple jurisdictions, including income taxes, potash production taxes, royalties, property taxes and indirect taxes. In addition, Nutrien collects and remits employment taxes from our more than 22,000 employees.

Our tax policy is comprised of the following four key elements:

- Tax Compliance
- Engagement with Tax Authorities
- Tax Risk Management and Governance
- Prudent and Responsible Tax Planning

Taxes and Earnings by Country (\$million)

Country	Income tax expense ^{1,2}		Earnings (loss) before income taxes ³	
	2019	2018	2019	2018
Canada	241	(261)	765	(1,195)
United States	50	104	315	619
Australia	11	29	27	96
Trinidad	(7)	37	(28)	98
Other	21	(2)	229	258
Total	316	(93)	1,308	(124)

¹ Income tax expense (recovery) included in net earnings (loss) from continuing operations.

² In 2018, includes an income tax expense of \$951 on \$4,555 of net earnings from discontinued operations that were primarily in Chile.

³ Earnings (loss) from continuing operations before income taxes.



Tax Policy

Additional Content

TOPICS IN THIS SECTION

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SH&E Management Approach

Our approach

The Nutrien *Safety, Health and Environmental Management System* (SH&E Management System) provides a framework, direction, governance and tools which support our collective goal of excellence in safety, health, environment, and process safety across our operations and supply chain. Nutrien is continuing to integrate legacy company standards in the development of a consistent Nutrien *SH&E Management System*. We have committed substantial capital, technology and Human Resources efforts to lay the groundwork for a collaborative, consistent enterprise SH&E management system.

Nutrien recognizes the diversity of our business considering season, customer, operation, market, change and human capital. As a result, the *SH&E Management System* offers empowerment for specific business units, regions and facilities to evolve specific standards aligned to their needs from the consistent baseline of policy, management system elements and global standards.

Nutrien's *SH&E Management System* is a collection of SH&E standards and procedures supporting safe work across our organization, including *Global Standards* defining high-level SH&E requirements and supporting standards and procedures tailored to suit business units, regions, and facilities.

SH&E policies and standards

The following essential standards are in place as part of our *SH&E Management System*:

SH&E Policy: A Safety, Health and Environmental Policy is active and endorsed at all levels of Nutrien, focusing on commitment, care, and protection of people, environment, community and customers.

Global Standards: We have established *Life Critical Global Standards* for activities where potential for serious injury or fatality exists in Nutrien operations or industry such as confined space, engulfment, fall protection and energy isolation. *Global Standards* are also in place providing direction, expectations and stewardship for incident notification, serious injury and fatality classification, process safety management, injury and illness recordkeeping (OSHA) and crisis management.

Alignment with regulations and standards

Our *SH&E Management System* currently exceeds the minimum legislated requirements and industry expectations, and leverages learning and best practices from legacy organizations, industry members, associations and legislation. Specifically:

1. Safety requirements align with state and provincial requirements such as *Occupational Safety and Health*

Administration (OSHA), *Canada Labour Code* (CLC), *The Federal Motor Carrier Safety Administration* (FMCSA), and *Mine Safety and Health Administration* (MSHA).

2. Environmental obligations align with state and provincial requirements in addition to the EPA and *Environment and Climate Change Canada* (ECCC).
3. We leverage industry learning and guidance from sources such as *American National Standards Institute* (ANSI), *Canadian Standards Association* (CSA), *American Society of Mechanical Engineers* (ASME), *American Petroleum Institute* (API), and the *National Fire Protection Association* (NFPA).

Entities covered

The scope of our *SH&E Management System* includes 1) our production operations and business facilities, 2) suppliers, service providers and contractors and 3) other key business partners (for example, non-managed operations, joint venture partners, licensees, outsourcing partners).

Contractor management: Contractors are responsible for a significant number of Nutrien work hours and are managed at multiple levels by a cross-functional team of Nutrien employees. To ensure our contractors align with our safety and environmental expectations, we conduct an initial screening using ISNetwork and measure their performance at the site level.

SH&E Management Approach (continued)

Mergers and acquisitions due diligence:

A cross-functional team of environmental, safety, legal, and operations conducts SH&E diligence related to mergers and acquisitions to explore, identify, evaluate and report on real or potential risk(s).

Environmental and safety topics covered

As part of a holistic, consistent approach, our management system includes:

- **Safety:** employee and contractor
- **Process safety:** management, process hazard analysis and mitigation
- **Health:** employee mental health, wellness, injury, case management and return to work arrangements
- **Environment:** climate, chemicals, water, air, waste and land
- **Product stewardship:** regulatory compliance, chemical classification, supply chain risk, environmental and sustainability impacts, safe use information

Governance, roles and responsibilities

Our management system includes expectations and a governance structure that ensures execution:

- A network of subject matter experts to develop and sustain the *SH&E Management System* globally and to support Nutrien workers, contractors, service providers, as well as customers
- SH&E professionals at central, regional and site locations providing subject matter expertise, support, and advice

Measurement, communication and continual improvement

We measure our safety performance using industry recognized safety metrics (LTIF, TRIF) and our environmental performance by tracking our GHG emissions (according to the GHG protocol), air emissions, water use and waste generation.

Externally, we share our safety and environmental performance through the annual publication of this report. Internally, we use a variety of

communication methods to regularly share safety and environmental information.

In 2019, our internal team conducted 655 SH&E audits to ensure the implementation of our current safety and environmental practices across the business and to identify opportunities for improvement. The key improvements to our safety practices are described in pages 30-34.

Emergency management approach

Nutrien has a corporate emergency management program and a *Crisis Management Team* (CMT) that guides, coordinates and directs the company's response to major incidents or crises. The CMT includes participation from leaders in operational business units and critical corporate functions to coordinate incident management, manage internal and external stakeholders, and maintain business continuity. The priority of CMT activity is ensuring the health and safety of our employees and communities, preservation of the environment and protection of assets.

CASE STUDY: Nutrien's response to the COVID-19 crisis

In March 2020, Nutrien activated our CMT to address the risks associated with the COVID-19 virus on our operations, employees, and grower customers. As agriculture was designated an essential service in the regions where we operate, we implemented risk mitigation protocols to maintain business continuity so that we could deliver products and services to our grower customers in the middle of the North American spring planting season. Safety is a top priority at Nutrien, and the wellness of our employees is critical to business continuity and helping to put food on tables. We continued to provide services to our customers and communities with more than 95 percent of our corporate employees working remotely and our operations maintaining production and sales while implementing prudent measures to protect our employees and performance.

About This Report

Terms and Measures

This report focuses on Nutrien's material ESG topics, performance and key initiatives for 2019.

- Performance for the year ended December 31, 2019 is included, unless otherwise noted, for Nutrien Ltd., and our subsidiaries and joint ventures in which we have a majority position. Any exceptions are explicitly noted with the relevant data. When available, historical data for 2018 is provided for comparison.
- For any asset we acquire, environmental, safety and community

performance data is first provided for the year after acquisition to enable full integration of data systems. Therefore, this report excludes data for the assets from Ruralco, Actagro and Van Horn.

- We continually strive to better define performance indicators and improve our measurement systems. Any reporting limitations and exceptions are noted with the data.
- Financial data in this report is stated in US dollars, unless otherwise stated, and product and environmental data is stated in metric units. Please refer

to our 2019 Annual Report for more details on our financial performance.

- References to Nutrien, our, we, or the company mean Nutrien Ltd., our subsidiaries and our share in significant equity and joint venture investments, unless the context indicates otherwise.
- Please see the cautionary statement on forward-looking information on page 65.
- Materiality is used in a sustainability context for this report and refers to our ESG priorities determined with input from our stakeholders.

SCIENTIFIC TERMS

KCl	potassium chloride
P ₂ O ₅	diphosphorus pentoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CH ₄	methane
N ₂ O	nitrous oxide
CO	carbon monoxide
NO _x	nitrogen oxides
SO _x	sulfur oxides
PM ₁₀	particulate matter that is 10 micrograms per cubic meter or less in diameter
VOCs	volatile organic compounds
NH ₃	ammonia (anhydrous)
GHG	greenhouse gas
Scope 1	direct GHG emissions
Scope 2	indirect GHG emissions associated with the generation of electricity, heating/cooling, or steam purchased for own consumption
Scope 3	indirect GHG emissions other than those covered in Scope 2

PRODUCT TERMS AND MEASURES

tonne	metric ton
Kmt	thousand metric tonnes
gigajoules	one billion joules
terajoules	one trillion joules
MAP	monoammonium phosphate
UAN	urea and ammonium nitrate solution
CAD	Canadian dollar

Performance Table

ENVIRONMENT	Units	2019	2018	Footnote	SASB Reference
Emissions				<i>Data in this section include statistics for our Potash, Nitrogen, and Phosphate manufacturing and legacy Agrium terminals, and Retail operations, unless specifically noted.</i>	
GHG - Scope 1 Direct	million tonnes CO ₂ e	10.53	11.19	Direct (Scope 1) emissions occur from sources such as combustion in owned or controlled facilities or fleet or emissions from chemical production. GHG emissions from 2018 have been restated since the publication of our 2018 Sustainability Report to reflect KPMG limited assurance values. Scope 1 GHG emissions are calculated based on actual usage and the operational control approach. Emissions are quantified in accordance with requirements in applicable regulatory quantification and reporting programs, including the Alberta Carbon Competitiveness Incentive Regulation (CCIR), the Canada Greenhouse Gas Reporting Program (GHGRP) and US EPA 40 CFR Part 98 Mandatory Greenhouse Gas Reporting. Emission quantification for facilities not under a regulatory reporting scheme follow similar quantification protocols. Reported emissions include CO ₂ , CH ₄ , and N ₂ O. Emissions exclude CO ₂ produced in the ammonia production process and subsequently captured and used to produce urea or transferred to a third party. Global Warming Potentials used are from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4).	RT-CH-110a.1 EM-MM-110a.1
GHG Intensity - Scope 1 (company-wide)	tonnes CO ₂ e per tonne product (weighted average)	0.51	0.53		
Potash	tonnes CO ₂ e per tonne KCl produced	0.04	0.04		
Nitrogen	tonnes CO ₂ e per tonne N produced	1.73	1.81		
Phosphate	tonnes CO ₂ e per tonne P ₂ O ₅ produced	0.35	0.31		
Specialty Product (feed plants, Loveland Products, Inc. and Rainbow facilities)	tonnes CO ₂ e per tonne saleable product (weighted average)	0.12	0.10		
Scope 1 emissions covered under emissions-limiting regulations	percent	27	NPR		RT-CH-110a.1 EM-MM-110a.1
GHG - Scope 2 Energy Indirect	million tonnes CO ₂ e	2.85	3.05	Indirect (Scope 2) emissions relate to emissions from the generation of purchased electricity, heat or steam. GHG emissions from 2018 have been restated since the publication of our 2018 Sustainability Report to reflect KPMG limited assurance values. Scope 2 GHG emissions are calculated based on actual usage and the operational control, location-based approach. Emission factors for imported electricity are region-specific as published in 2018 Canadian National Inventory Report (NIR), the US EPA Emissions & Generation Resource Integrated Database (eGRID), or the World Bank Group Greenhouse Gas Emissions Inventory Plan for Internal Business Operations 2016. Emission calculations include CO ₂ , CH ₄ , and N ₂ O. Global Warming Potentials used are from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4).	
GHG Intensity - Scope 2 (company-wide)	tonnes CO ₂ e per tonne product (weighted average)	0.14	0.15		
CO ₂ Captured and Sold	million tonnes CO ₂	1.22	1.13		
Criteria Air Contaminants				Includes CO, NOx, SOx, VOCs, and particulates as required by the Canadian National Pollutant Release Inventory.	
Carbon monoxide	thousand tonnes	8.6	8.0		EM-MM-120a.1
Oxides of nitrogen	thousand tonnes	7.7	8.8		RT-CH-120a.1 EM-MM-120a.1
Sulfur dioxide	thousand tonnes	3.4	6.9	2019 values are lower due to a turnaround and production changes at our Redwater, AB facility.	RT-CH-120a.1 EM-MM-120a.1
Total particulate matter	thousand tonnes	7.0	8.3		EM-MM-120a.1
Volatile organic compounds	thousand tonnes	1.5	1.6		RT-CH-120a.1 EM-MM-120a.1
Other Air Emissions	thousand tonnes	10.2	11.7	Includes non-criteria air contaminants reported to the National Pollutant Release Inventory (NPRI) or Toxic Release Inventory (TRI), including ammonia, methanol, nitric acid, sulfuric acid and hydrogen fluoride. Emissions are determined for each emission source at each manufacturing facility using either source emission tests, published emission factors, or engineering estimates. For 2019, excludes substances classified as EPA Hazardous Air Pollutants.	

NPR not previously reported

Environment (continued)	Units	2019	2018	Footnote	SASB Reference
Hazardous Air Pollutants	thousand tonnes	1.6	NPR	Includes substances classified as EPA Hazardous Air Pollutants. In 2018, Hazardous Air Pollutants were included in "Other air emissions".	RT-CH-120a.1
Energy					
Total Energy Use	thousand terajoules	279.7	284.8	Energy use from 2018 has been restated since the publication of our 2018 Sustainability Report. Includes natural gas, fuel, and electricity use at our facilities. The majority of our energy use is from natural gas as feedstock.	RT-CH-130a.1 EM-MM-130a.1
Natural gas consumed as feedstock	thousand terajoules	152.3	151.0		
Fossil fuels consumed	thousand terajoules	107.8	114.1	Includes energy that was recovered from waste heat to produce self-generated electricity.	
Electricity purchased	thousand terajoules	15.6	15.3		
Imported steam	thousand terajoules	4.0	4.4		
Self-generated electricity	thousand terajoules	1.3	1.3	Included in "Fossil fuels consumed" above.	RT-CH-130a.1
Renewable energy	gigajoules	0	NPR		RT-CH-130a.1 EM-MM-130a.1
Energy Intensity (company-wide)	gigajoules per tonne of product (weighted average)	13.5	12.0		
Water					
Total water intake, by source	million m ³	217	208		RT-CH-140a.1
Groundwater	million m ³	48	33		
Mine dewatering/depressurization	million m ³	47	48		
Surface water	million m ³	106	109	Includes ocean water.	EM-MM-140a.1
Industrial/municipal water	million m ³	16	18		
Water intake in regions with High or Extremely High Baseline Water Stress	million m ³	3.4	3.8		RT-CH-140a.1 EM-MM-140a.1
Percentage water intake in regions with High or Extremely High Baseline Water Stress	percent	1.6	1.8		RT-CH-140a.1 EM-MM-140a.1
Total water discharge, by destination	million m ³	224	262		
Surface water	million m ³	223	261		
Municipal treatment	million m ³	1	1		
Effluents and Waste					
Discharges to onsite disposal wells	million m ³	15	15		
Total non-hazardous waste					
Mining waste or byproducts disposed	million tonnes	26	31	Includes potash mining tailings and phosphogypsum byproduct.	EM-MM-150a.1 EM-MM-150a.2
Non-mining waste disposed	thousand tonnes	123	90		
Hazardous waste disposal	thousand tonnes	7	5		RT-CH-150a.1
Recycled materials	thousand tonnes	35	39	Includes hazardous and non-hazardous materials.	

NPR not previously reported

Environment (continued)	Units	2019	2018	Footnote	SASB Reference
Environmental Incidents					
Total Environmental Incidents	count	23	22	Includes release quantities that exceed the US Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) thresholds and, in Potash, any release in exceedance of the Saskatchewan Environmental Code.	RT-CH-140a.2 EM-MM-140a.2
Reportable Quantity Releases	count	22	20		
Water-Related Reportable Quantity Releases (included in Reportable Quantity Releases above)	count	1	NPR		
Non-Compliances	count	0	1	Includes non-compliance incidents that exceed \$10 thousand in capital and/or non-manpower fixed costs to prevent, correct, or mitigate the non-compliance incident.	RT-CH-140a.2 EM-MM-140a.2
Enforcement Actions	count	1	1		
Water-Related Enforcement Actions (included in Enforcement Actions above)	count	0	NPR		
Environmental Incident Frequency	per 200,000 hours worked (employee + contractor)	0.07	0.07	Includes the total of Environmental Incidents (Reportable Quantity Releases, Non-Compliances, and Enforcement Actions) per 200,000 hours worked by employees and contractors.	
Non-Accidental Ammonia Release Rate	releases per thousand railcar movements	0.00	0.07	Includes the unintentional release of ammonia while in transit, including loading and dispensing of the product, which is not caused by a derailment, collision or other rail-related accident.	
Environmental Fines and Penalties	\$ thousand	176	441	Amounts settled in a particular year often relate to activities in prior years. This data are reported company-wide.	
Environmental Remediation Liabilities	\$ million	544	534	Calculated on a discounted basis. This data are reported company-wide.	
Internal SH&E Audits	count	655	27	Increase in 2019 is due to the scope of corporate auditing expanding to include the Retail business unit.	
SOCIAL	Units	2019	2018	Footnote	SASB Reference
Workplace					
Total Employees	count	22,540	22,060	Includes full-time and part-time permanent, temporary and casual employees as of Dec. 31.	
Permanent Employees	count	22,300	20,300		
Temporary and Casual Employees	count	240	1,760		
Permanent Employees by Region					
North America	count	18,060	18,090	Includes Canada, US, and Trinidad and Tobago.	
South America	count	860	630		
Australia	count	3,340	1,550		
Europe	count	40	30		
Total Employee Turnover Rate	percent	13	14	Numbers from 2018 have been restated since the publication of our 2018 Sustainability Report. Includes the number of permanent employees who left the company due to voluntary and involuntary terminations, including retirements and deaths, as a percentage of average permanent employees for the year.	
Voluntary Employee Turnover Rate	percent	9	9		
Involuntary Employee Turnover Rate	percent	4	5		

NPR not previously reported

Social (continued)	Units	2019	2018	Footnote	SASB Reference
Employee Learning and Development					
Average learning and development spend per employee	\$ per employee	435	300	2018 data includes training expenditures limited to North American Retail and Wholesale for permanent full-time employees. 2019 results include all business units globally and the implementation of a Learning Management System.	
Average hours of training per employee	hours per employee	18	NPR		
Total Employees Covered by Collective Bargaining or Belonging to Unions	percent	16.7	16.5	Based on permanent full-time and part-time employees as of December 31.	EM-MM-310a.1
US Employees	percent	4.8	NPR		EM-MM-310a.1
Non-US Employees	percent	31.4	NPR		EM-MM-310a.1
Diversity					
Women at Various Levels					
Board	percent	33	33		
Vice President and above	percent	25	19		
Senior Leaders	percent	15	17		
Junior Management	percent	16	10		
All Management	percent	14	11		
All Employees	percent	19	17		
Permanent Employee Age Profile				Based on permanent full-time and part-time employees as of December 31.	
Under 25	percent	5	6		
25-34	percent	22	21		
35-44	percent	24	23		
45-54	percent	23	22		
55-64	percent	21	22		
Over 65	percent	5	6		
Safety					
Total Recordable Injury Frequency	cases per 200,000 hours worked	1.34	1.28		RT-CH-320a.1
Employee Recordable Injury Frequency		1.52	1.50		
Contractor Recordable Injury Frequency		0.69	0.51		
Total Lost-Time Injury Frequency	cases per 200,000 hours worked	0.34	0.34		
Employee Lost-Time Injury Frequency		0.41	0.41		
Contractor Lost-Time Injury Frequency		0.08	0.07		
Employee Lost-Time Severity Frequency	# days lost due to injuries/ illnesses per 200,000 hours worked	26.8	26.0	Rates may change as the number of days lost can be incurred outside of calendar year. The 2018 value is restated to reflect updates.	
Employee Fatalities		1	0		RT-CH-320a.1 EM-MM-320a.1
Contractor Fatalities		0	0		RT-CH-320a.1 EM-MM-320a.1

NPR not previously reported

Social (continued)	Units	2019	2018	Footnote	SASB Reference
Tier 1 Process Safety Incidents	count	6	NPR	Includes Tier 1 process safety events (i.e., loss of primary containment with the greatest consequence) as described in the American Petroleum Institute Recommended Practice 754.	RT-CH-540a.1
Tier 2 Process Safety Incidents	count	23	NPR		RT-CH-540a.1
Tier 1 Process Safety Total Incident Rate	cases per 200,000 hours worked	0.02	NPR		RT-CH-540a.1
Tier 2 Process Safety Total Incident Rate	cases per 200,000 hours worked	0.07	NPR		RT-CH-540a.1
Stewardship of Chemicals					
Percentage of products by revenue that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances	percent	49	48	The percentages identified for this parameter only reflect Nutrien NPK manufactured products. Our fertilizer-feed-industrial Category 1 and 2 products generally fall into the corrosive (acids and ammonia) or irritancy (urea, UAN, nitrate solutions, polyphosphates) categories.	RT-CH-410b.1
Percentage of GHS Category 1 and 2 products by revenue that have undergone a hazard assessment	percent	40	45		RT-CH-410b.1
Percentage of products by total Nutrien revenue that contain genetically modified organisms (GMOs)	percent	8	8		RT-CH-410c.1
Communities					
Number of non-technical delays	count	2	NPR	Includes the total number and aggregate duration (in days) of site shutdowns or project delays due to non-technical factors including, but not limited to, those resulting from pending regulatory permits or other political delays related to community concerns, community or stakeholder resistance or protest, and armed conflict. Excludes delays due to strikes and lockouts.	EM-MM-210b.2
Duration of non-technical delays	days	60	NPR		EM-MM-210b.2
Procurement from Aboriginal suppliers	\$ million	29	19		
GOVERNANCE	Units	2019	2018	Footnote	SASB Reference
Ethics					
Net production in countries that have the 20 lowest rankings in <i>Transparency International's Corruption Perception Index</i>	tonnes, saleable	0	0		EM-MM-510a.2
Total Compliance Hotline Calls	count	164	156		
Accounting	count	2	3		
Discrimination	count	22	21		
Harassment (other than discrimination)	count	32	14		
Human Resources (other than discrimination and harassment)	count	66	75		
Legal	count	6	11		
Safety, Health, Environment and Security	count	17	21		
Other	count	19	11		
Participants in Anti-Corruption Training					
Online refresher (as part of Code of Ethics)	count	20,770	19,120		
Online course	count	130	30		
In-Person	count	1,010	580		

NPR not previously reported

Governance (continued)	Units	2019	2018	Footnote	SASB Reference
Anti-competitive behaviour					
Participants in Anti-Trust/Competition Law Training					
Online refresher (as part of Code of Ethics)	count	20,770	N/A		
Online course	count	N/A	N/A		
In-Person	count	610	500		
Cybersecurity					
Tabletop exercises to practice responding to cyber-security events	count	3	1		
Employees who received cybersecurity training (as part of Code of Ethics)	count	20,770	19,120		
Employees who participated in focused cybersecurity training for higher risk business areas	count	7,900	6,700		
Data privacy					
Employees who received in-person data privacy training	count	165	NPR		
Employees who received an online data privacy refresher (as part of Code of Ethics)	count	20,770	NPR		
ECONOMIC	Units	2019	2018	Footnote	SASB Reference
Economic Value Generated				Other value generated is not material (such as earnings of equity accounted and dividends).	
Sales	\$ million	20,023	26,046	For 2018, includes \$6,410 million in proceeds from the sale of investments. See Nutrien's 2018 Annual Report, Note 10.	
Economic Value Distributed					
Operating Costs	\$ million	15,423	13,355	Includes freight, transportation and distribution, cost of goods sold, selling expenses, general and administrative expenses, additions to property, plant and equipment and intangibles, and other expenses. Current year depreciation and amortization is deducted.	
Wages and Benefits	\$ million	2,268	1,949	Includes employee benefits, share-based compensation and gain on curtailment of pension plan. See Nutrien's 2018 Annual Report, Note 5.	
Interest Payments, Dividends Declared and Share Repurchases	\$ million	3,186	3,663	Includes finance costs plus dividends declared, plus share repurchases on accrual basis.	
Taxes and Royalties Paid	\$ million	628	1,614	Includes corporate income, property, sales, excise and production taxes.	
Community Investments	\$ million	17	17	Represents cash disbursements, matching of employee gifts and in-kind contributions of equipment, goods and services, and employee volunteerism (on corporate time).	
Coverage of Defined Benefit Retirement Obligations	percent	79	79	Calculated on an accounting basis for registered defined benefit pension plans, and other post-employment benefit plans. In 2019, fewer than 19 percent of our employees are active members of defined benefit pension plans. In 2018, this is applicable to approximately 22 percent of North American employees.	
Political Donations in Canada	CAD \$	8,000	14,450		
Political Donations in US	USD \$	0	34,250		
COMPANY CONTEXT	Units	2019	2018	Footnote	SASB Reference
Potash production (as KCl tonnes produced)	thousand tonnes	11,700	12,842		
Nitrogen production (as NH ₃ tonnes produced)	thousand tonnes	6,164	6,372		
Phosphate production (as P ₂ O ₅ tonnes produced)	thousand tonnes	1,514	1,551	Excludes production from our Redwater, AB facility.	

N/A not applicable

NPR not previously reported

SASB Index

SASB REFERENCE	METRIC	PAGE
ENVIRONMENT		
GHG Gas Emissions		
RT-CH-110a.1 EM-MM-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	54
RT-CH-110a.2 EM-MM-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	14-15*
Air Quality		
RT-CH-120a.1 EM-MM-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	54
EM-MM-120a.1	Air emissions of the following pollutants: (1) CO, (2) NO _x (excluding N ₂ O), (3) SO _x , (4) particulate matter (PM ₁₀), (5) mercury (Hg), (6) lead (Pb), and (7) volatile organic compounds (VOCs)	54
Energy Management		
RT-CH-130a.1 EM-MM-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	55
Water Management		
RT-CH-140a.1 EM-MM-140a.2	1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	55
RT-CH-140a.2 EM-MM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	56
RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	21
Hazardous Waste Management		
RT-CH-150a.1 EM-MM-150a.1	Amount of hazardous waste generated, percentage recycled	55
EM-MM-150a.2	Total weight of tailings waste, percentage recycled	55
EM-MM-150a.2	Total weight of mineral processing waste, percentage recycled	55
Biodiversity Impacts		
EM-MM-160a.1 EM-MM-160a.3	Description of environmental management policies and practices for active sites	28*
EM-MM-160a.3	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	28*
SOCIAL		
Safety & Environmental Stewardship of Chemicals		
RT-CH-410b.1 RT-CH-410b.2	(1) Percentage of products by revenue that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products by revenue that have undergone a hazard assessment	58
RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	40-41

* Partially meets the disclosures suggested by the SASB Standards.

SASB Index

(continued)

SASB REFERENCE	METRIC	PAGE
Workforce Health & Safety		
RT-CH-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	30, 57
RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	30
EM-MM-320a.1	(1) MSHA all-incidence rate, (2) fatality rate, (3) near miss frequency rate (NMFR) and (4) average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees	30, 57*
Operational Safety, Emergency Preparedness & Response		
RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	58*
Community Relations		
RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	37
EM-MM-210b.1		
EM-MM-210b.2	Number and duration of non-technical delays	58
Labor Relations		
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, broken down by US and foreign employees	42, 57
Security, Human Rights & Rights of Indigenous Peoples		
EM-MM-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	37-39, 42
Genetically Modified Organisms		
RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	40, 58
GOVERNANCE		
Management of the Legal & Regulatory Environment		
RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	17, 40
Business Ethics & Transparency		
EM-MM-510a.1	Description of the management system for prevention of corruption and bribery throughout the value chain	47, 38-39
EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	47

* Partially meets the disclosures suggested by the SASB Standards.

GRI Index

GRI INDICATOR	PAGE
Disclosures for All Organizations	
Organizational Profile And Strategy	
102-1	Company name 1
102-2	Primary brands, products and services 5
102-3	Headquarters 2019 Annual Report, page 81
102-4	Locations 2019 Annual Report, page 81
102-5	Legal form Note 1 (below)
102-6	Markets served 5
102-7	Scale of the company 5
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Note 1: Nutrien is a publicly traded company, our common shares are traded on the Toronto Stock Exchange and the New York Stock Exchange under the ticker symbol "NTR".

Note 2: Although we have not formally adopted the precautionary principle (as described in the UN Rio Declaration of 1992), our sustainability practices and performance demonstrates our commitment to proactively identify, and prevent or mitigate negative impacts.

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Forward-Looking Statements

Certain statements and other information included in this report constitute "forward-looking information" or "forward-looking statements" (collectively, "forward-looking statements") under applicable securities laws (such statements are often accompanied by words such as "anticipate", "forecast", "expect", "believe", "may", "will", "should", "estimate", "intend" or other similar words). All statements in this report, other than those relating to historical information or current conditions, are forward-looking statements, including, but not limited to: expectations regarding our ESG initiatives and strategy; expectations regarding our climate-related initiatives and strategy, including GHG reduction targets, and the timing of our publication thereof; expectations regarding carbon taxes and our compliance costs for 2020 and beyond; our plans and strategies regarding the development of environmentally sustainable products and services, including emissions reduction targets in respect thereof; our asset retirement obligations, including the cost and timing of future reclamation expenditures; and expectations regarding our safety initiatives, including the future reporting of results and performance in connection therewith. These forward-looking statements are subject to a number of assumptions, risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from such forward-looking statements. As such, undue reliance should not be placed on these forward-looking statements.

All of the forward-looking statements are qualified by the assumptions that are stated or inherent in such forward-looking statements, including the assumptions referred to below and elsewhere in this document. Although we believe that these assumptions are reasonable, this list is not exhaustive of the factors that may affect any of the forward-looking statements and the reader should not place an undue reliance on these assumptions and such forward-looking statements. The additional key assumptions that have been made include, among other things, our ability to successfully implement and execute on our sustainability strategies, initiatives and targets, including the ability to otherwise access and implement all technology necessary in connection therewith, the development and performance of technology and technological innovations and the future use and development of technology and associated expected future results; assumptions with respect to our ability to successfully complete, integrate and realize the anticipated benefits of our already completed and future acquisitions, and that we will be able to implement our standards, controls, procedures and policies at any acquired businesses to realize the expected synergies; that future business, regulatory and industry conditions will be within the parameters expected by us, including with respect to prices, margins, demand, supply, product availability, supplier agreements, availability and cost of labor and interest, exchange and effective tax rates; the completion of our expansion projects on schedule, as planned and on budget; assumptions with respect to global economic conditions and the accuracy of our market outlook expectations; the adequacy of our cash generated from operations and our ability to access our credit facilities or capital markets for additional sources of financing; our ability to identify suitable candidates for acquisitions and divestitures and negotiate acceptable terms; our ability to maintain investment grade ratings and achieve our performance targets; and the receipt, on time, of all necessary permits, utilities and project approvals with respect to our expansion projects and that we will have the resources necessary to meet the projects' approach.

Events or circumstances that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to: our ability to develop, access or implement some or all of the technology necessary to efficiently and effectively operate our assets and meet our sustainability strategies and targets; impediments generally influencing our business which may impact our ability to implement and execute on our sustainability strategies, initiatives and targets; general global economic, market and business conditions; failure to complete announced and future acquisitions or divestitures at all or on the expected terms and within the expected timeline; climate change and weather conditions, including impacts from regional flooding and/or drought conditions; crop planted acreage, yield and prices; the supply and demand and price levels for our products; governmental and regulatory requirements and actions by governmental authorities, including changes in government policy (including tariffs, trade restrictions and climate change initiatives), government ownership requirements, changes in environmental, tax and other laws or regulations and the interpretation thereof; political risks, including civil unrest, actions by armed groups or conflict and malicious acts, including terrorism; the impact of extraordinary external events, such as the current pandemic health event resulting from the novel 2019 coronavirus disease (COVID-19), and their collateral consequences, including extended disruption of economic activity in our markets; the occurrence of a major environmental or safety incident; innovation and cybersecurity risks related to our systems, including our costs of addressing or mitigating such risks; regional natural gas supply restrictions; counterparty and sovereign risk; delays in completion of turnarounds at our major facilities; gas supply interruptions; any significant impairment of the carrying value of certain assets; risks related to reputational loss; certain complications that may arise in our mining processes; the ability to attract, engage and retain skilled employees, and strikes or other forms of work stoppages; and other risk factors detailed from time to time in Nutrien reports filed with the Canadian securities regulators and the Securities and Exchange Commission in the United States.

Nutrien disclaims any intention or obligation to update or revise any forward-looking statements in this report as a result of new information or future events, except as may be required under applicable Canadian securities legislation or applicable US federal securities laws.



We welcome and value your feedback on this report and all of our sustainability and ESG initiatives.

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