



Global Sustainability Report

for the year ended December 31, 2023

 **Nutrien**[®]

Letter from our President and CEO



Ken Seitz
President and Chief Executive Officer

Welcome to Nutrien's 2023 Global Sustainability Report, demonstrating our 2023 progress towards our sustainability targets, programs and initiatives.

At Nutrien, we are committed to fulfill our purpose of *Feeding the Future* in a way that achieves economic prosperity, supports resilient food systems, improves environmental stewardship and enables positive workplaces. As I reflect on 2023, what I am most proud of is our ability to adapt to an ever-changing global landscape. From world conflicts to extreme weather events, our talented teams and partners continue to demonstrate resilience, innovation and adaptation. We also continue our collaborative effort to support growers who are striving to sustainably provide the food, fuel and fiber the world needs. Without a doubt, 2024 will be full of new and difficult challenges, but we believe that sustainability is not a straight line with a clear beginning and end, it is a journey.

Driving environmental performance

If you follow Nutrien, you have likely heard us say many times that the challenge to produce more food for a growing world needs to be tackled in tandem with perhaps the even more significant challenge to do so sustainably. We strive to provide sustainable solutions that increase crop productivity while also improving environmental performance – and believe this can be achieved. An example of this balance comes in our Nitrogen operating segment, where we have implemented a suite of projects designed to reduce greenhouse gas (“GHG”) emissions. While nitrogen is a critical crop nutrient, producing it does create emissions, leaving opportunity for us to innovate. To address this opportunity, at our Redwater facility in Alberta, we have been capturing and exporting CO₂ into the Alberta Carbon Trunk Line for almost five

¹ We define “sustainably engaged acres” as acres participating in programs that track field-level data, which can be analyzed for sustainability metrics and/or acres participating in sustainable agriproducts programs that incentivize growers to adopt additional sustainable practices and products resulting in quantifiable, incremental benefits which may be verified and used for reporting purposes.

2M

sustainably engaged acres



years. In 2023, we successfully commissioned a project that increases the volume of CO₂ captured and exported into this carbon pipeline by approximately 40 percent.

I am also encouraged by the work our Nutrien Ag Solutions team has done in collaboration with farmers and value-chain partners to progress our target of adopting sustainable and productive agricultural products and practices on 75 million acres globally by 2030. Our team leverages whole-acre solutions designed to help growers further their current environmental stewardship efforts through the use of products, services and programs that take advantage of digital technology and analytics. Reaching 2 million sustainably engaged acres¹ at the end of 2023, we've made significant progress, but we have a long road ahead. With more value-chain and government incentives for the adoption of these practices coming, we remain very optimistic about this programming.

Also with regards to our Nutrien Ag Solutions business, very few of the programs in the marketplace on soil management have achieved a verified and tradeable carbon outcome based on farmer data. However, I am proud to report that Nutrien's program has done just that. In 2023, Nutrien achieved the first validated pathway and

verified GHG outcomes for grain crops in Canada, and in the US, Nutrien achieved verified GHG offsets based on improved nitrogen management and verified GHG insets.

Focusing our efforts

From a financial sustainability perspective, we continue to take a prudent approach to new initiatives. Nutrien's focus on disciplined capital allocation and prioritizing business initiatives that are core to our long-term vision and strategic direction sometimes results in the need to make difficult choices. One such decision made in 2023 was to suspend work on our Geismar clean ammonia project due to escalation in capital cost estimates and uncertainty on the timing of emerging demand for low-carbon ammonia. We continue to monitor how this market evolves with the objectives of preserving value and optionality for the project. Nutrien needs financial stability to drive sustainability in agriculture, as with financial stability comes the opportunity for us to invest in innovative projects that will lead to positive environmental outcomes.

We know that to move the industry forward towards these positive outcomes will require strong partnerships and

Letter from the President and CEO (continued)

collaboration. This is why Nutrien is building strategic, shared-value partnerships to advance sustainable agriculture. We need the help of the full value chain to truly make a measurable impact, and with our size, scale and position as a leader in agriculture, Nutrien has the unique ability to serve as a global convener. We have an important role to play in driving partnership across the food system to amplify positive impacts for farmers and our planet. One example of this is the Canadian Alliance for Net Zero Agrifood (“CANZA”), which we co-launched with Canadian business leaders in the agri-food value chain in 2023. Through CANZA, we will explore innovative options and lend our experience working directly with farmers through our Nutrien Ag Solutions business to help reduce GHG emissions in Canada.



Living our purpose and values

All of us at Nutrien continue to deepen our understanding of and commitment to our purpose of *Feeding the Future* and our core values of Safety, Inclusion, Integrity and Results. We test ourselves against these values in the thousands of decisions we make each year, and while we can always strive to be better, the need to send our employees home safe, every day, is not an area where incremental improvement will suffice. This year, I was deeply saddened at the loss of a Nutrien Ag Solutions co-worker, friend and family member. We are committed to doing better and continue to take steps to prevent similar incidents from happening again. It is critical that we continue to prioritize the training, processes and systems that keep our people and communities safe.

With regards to Inclusion, we made measurable progress against our targets in 2023, but we still have work to do. To support our commitment of 30 percent women representation in leadership roles by 2030, we continued to expand leadership development programs for women, identify and remove systemic barriers, and drive cultural change to foster an inclusive workplace for all employees. Also, since the launch of our Indigenous Content Playbook in 2015, we have seen continued growth in the capacity of the non-Indigenous-owned businesses we are partnered with to engage and include Indigenous peoples. In 2023, 100 percent of our Master Supply Agreements with suppliers for our Potash operating segment had Indigenous inclusion commitments. In addition, our target of a minimum of 25 percent of local spend in our Potash business having direct Indigenous economic impact was met two years ahead of our target. Finally, an example of living our value of Integrity is in South America, where we are taking steps to help address deforestation through a digital tool that automates screening of both new and existing customers for indications that they may be engaged in illegal activity.



100%

of Potash suppliers contracted under a Master Supply Agreement have Indigenous inclusion commitments

Continuing our journey

These are just a handful of the countless projects my Nutrien colleagues across our business have progressed this year against our sustainability strategy, but this report will tell more of our story. All of us at Nutrien share a great sense of pride that we are striving to do what is right not only for the environment, but for our people, customers, supply chain partners, shareholders and future generations, and the agriculture sector as a whole.



With deep Canadian roots, our story now reaches across the world. Nutrien has grown into a global company with substantial reach and impact. With that growth comes responsibility, and we will continue to prioritize being a responsible company, looking after our farmers and our people, caring for the environment that nourishes us, and creating value for our shareholders by having a sustainable business. The opportunity we have before us today is truly inspiring, and with continued creativity, innovation and collaboration, I know we will progress on this critical journey – keeping our farmer customers at the heart of the pursuit.

Sincerely,

Ken Seitz
President and Chief Executive Officer
March 2024

Contents

01

Overview



02

Environmental



03

Social



04

Governance



05

Additional Content



Geotags

Geotags are used throughout this report to highlight locations where Nutrien has operations or activities.

Letter from our President and CEO ————— 01

01 | Overview ————— 04

- About Nutrien ————— 05
- Our Global Profile ————— 06
- Our Commitments, Targets and Goals ————— 07
- Our Materiality Process for Sustainability Topics ————— 11
- Our Contributions to the SDGs ————— 12

02 | Environmental ————— 13

- Grower Solutions ————— 14
 - Spotlight** - Strategic partnerships designed to amplify our impact ————— 17
 - Spotlight** - Harnessing nature's own tools to enhance and protect crops ————— 20
 - Spotlight** - Nutrien's Carbon Program in action ————— 24
- GHG Emissions and Climate Change ————— 25
- Product Stewardship ————— 30
- Biodiversity ————— 33
 - Spotlight** - Protecting and promoting biodiversity across Nutrien's value chain — 35
- Water Stewardship ————— 36
- Non-Mining Waste ————— 39
 - Spotlight** - Reducing plastic waste across our global locations ————— 40
- Mining Tailings and Byproducts ————— 41
- Air Emissions ————— 43

03 | Social ————— 44

- Safety, Health and Wellness ————— 45
- Equity, Diversity and Inclusion ————— 52
 - Spotlight** - Promoting gender diversity in the ag and mining sectors ————— 55
 - Spotlight** - Taking steps towards reconciliation with Indigenous People in Canada — 57
- Responsible Supply Chain ————— 59
- Human Capital ————— 62
- Community Relations and Investments ————— 65
 - Spotlight** - Community investments around the world ————— 67

04 | Governance ————— 68

- Corporate Governance ————— 69
- Governance of Sustainability ————— 71
- Integrity ————— 74
- Cybersecurity and Data Privacy ————— 77
- Additional Governance Topics ————— 79
- Nutrien Climate-Related Disclosures ————— 80

05 | Additional Content ————— 86

- Interactions with Stakeholders in 2023 ————— 87
- About This Report ————— 89
- Terms and Measures ————— 89
- ESG Ratings Profile ————— 90
- Performance Table ————— 91
- SASB Index ————— 101
- GRI Index ————— 103
- TCFD Index ————— 105
- VCMDA Disclosure ————— 106
- Forward-Looking Statements ————— 107



Overview

01

Topics in this section

- About Nutrien ————— 05
- Our Global Profile ————— 06
- Our Commitments, Targets and Goals ————— 07
- Our Materiality Process for Sustainability Topics ————— 11
- Our Contributions to the SDGs ————— 12

Victoria, Australia

Canola is Australia's major oilseed crop. Grown in Australia's Grain Belt, canola production has increased significantly to an average 3 million tonnes per year. Nutrien has 385 Retail selling locations in Australia to support growers of many different crops, including canola.



About Nutrien

Nutrien’s purpose, “Feeding the Future”, is grounded in leading the agriculture industry with innovative and sustainable solutions to help feed a growing population of nearly 10 billion people by 2050.

Nutrien is a leading provider of crop inputs and services, helping to safely and sustainably feed a growing world. We operate a world-class network of production, distribution and ag retail facilities that positions us to efficiently serve the needs of growers. We focus on creating long-term value by prioritizing investments that strengthen the advantages of our integrated business and by maintaining access to the resources and the relationships with stakeholders needed to achieve our goals.

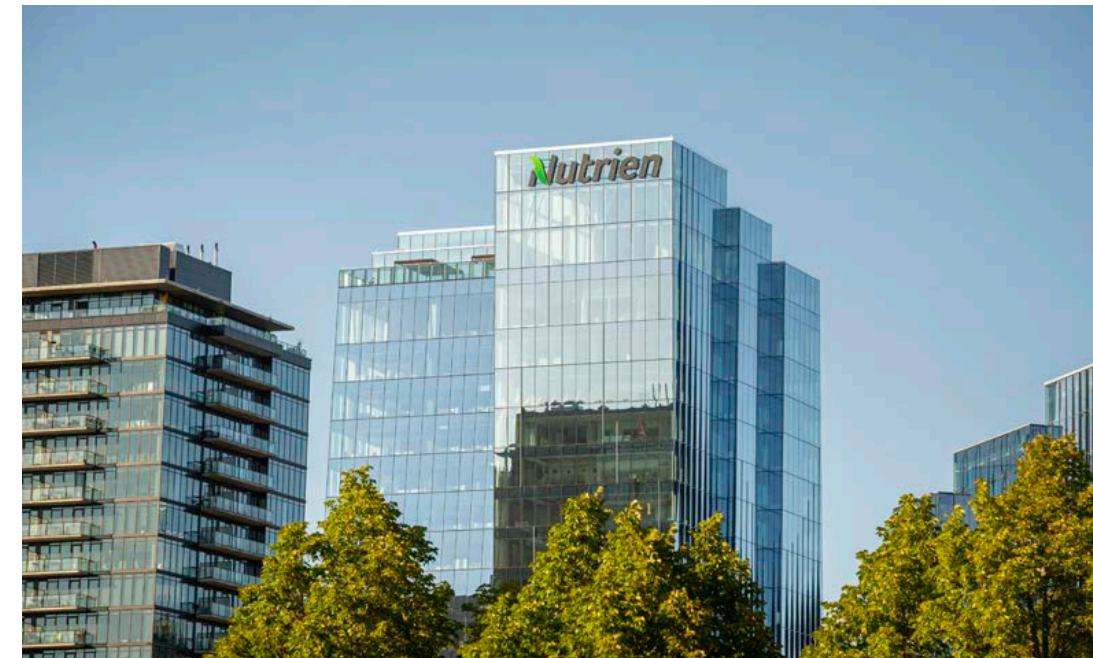
Our integrated business model is designed to provide a number of advantages compared to our competitors, including operational, financial and sustainability opportunities.

We have four reportable operating segments: Nutrien Ag Solutions (“Retail”), Potash, Nitrogen and Phosphate. As the largest global ag retailer, we distribute crop nutrients, crop protection products, seed and merchandise, and provide services directly to growers through a network of Retail selling locations in North America, South America and Australia. The Potash, Nitrogen and Phosphate segments are differentiated by the chemical nutrient contained in the products that each produces. In 2023, we sold approximately 26 million tonnes of manufactured fertilizer (potash, nitrogen and phosphate) worldwide. To learn more about Nutrien’s reportable operating segments, please see our [2023 Annual Report](#), pages 16-17.

Nutrien is committed to delivering results for our stakeholders and pursuing our purpose of *Feeding the Future*.

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

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



Nutrien’s head office in Saskatoon, SK has received the distinguished the LEED Platinum certification in the category of Interior Design + Construction: Commercial Interiors. The building’s additional “Two-star Fitwel Certification” was obtained for its employee-engaging wellness amenities like a tech-free zone, wellness studio and gym, reflection room for prayer and/or meditation, and a smudging room that recognizes the Indigenous people of the surrounding lands and the history of the area. [Learn more.](#)

Our Global Profile

Our world-class fertilizer manufacturing assets are primarily located in North America, with access to high-quality resources, lower cost inputs and an extensive distribution network to efficiently supply our customers. Our Retail business serves growers in key agricultural markets in North America, South America and Australia.



R Retail	K Potash	N Nitrogen	P Phosphate
\$19.5B	\$3.8B	\$3.8B	\$1.7B
Net sales ¹	Net sales ^{1,2}	Net sales ^{1,2}	Net sales ^{1,2}
\$1.5B	\$2.4B	\$1.9B	\$0.5B
Adjusted EBITDA ¹	Adjusted EBITDA ¹	Adjusted EBITDA ¹	Adjusted EBITDA ¹
17,000	3,200	1,700	1,500
Number of employees ³	Number of employees ³	Number of employees ³	Number of employees ³

¹ For the fiscal year ended December 31, 2023.
² Related to manufactured products for Potash, Nitrogen and Phosphate.
³ As at December 31, 2023.

Land acknowledgement
 Nutrien acknowledges and pays respect to the traditional lands where, and near where, our global operations are located. We affirm and honor our commitment to Indigenous communities and support stewardship of the lands that we all inhabit. Learn more about our Indigenous relations [here](#) and [here](#).



Our Commitments, Targets and Goals

Our *Feeding the Future* Plan includes sustainability-related commitments, targets and goals (collectively referred to as “targets”) which aim to create positive economic, social and environmental outcomes. Our targets are intended to manage our key sustainability risks and opportunities that we have identified. These targets aim for completion within specific time frames and may be revised as our business, technological advancement and operating environment evolve in order to continue to support tangible and

meaningful impact. Our targets and progress are overseen by our Sustainability and ESG Governance Framework. We continue to refine our approach to our targets through collaboration, innovation and continuous improvement.

Here is a high-level summary of our *Feeding the Future* Plan target performance in 2023:







	Topic	Status	Targets	2023 Progress highlights	Read more
	Sustainable agriculture	In progress	2030 commitment: Enable growers to adopt sustainable and productive agricultural products and practices on 75 million acres globally, by 2030	We measured, documented and calculated outcomes on 2 million sustainably engaged acres in North America, South America and Australia by leveraging our digital platforms, including Agrible®, to track and measure factors such as crop quality, soil health, GHG emissions, water quality and biodiversity. Our efforts to date have focused on the development of financially attractive sustainability programming and solutions for our grower customers, which includes capabilities to support grower onboarding, data management, and environmental performance measurement and verification. Our ability to reach our long-term commitment is dependent upon grower participation in these initiatives, emphasizing the importance of continued industry collaboration and engagement on the topic of sustainability.	Page 15
		In progress	2030 commitment: Launch and scale a comprehensive Carbon Program ¹ , empowering growers and our industry to accelerate climate-smart agriculture and soil carbon sequestration while rewarding growers for their efforts, by 2030	We enabled emissions reductions on approximately 900,000² sustainably engaged acres in North America , working with growers and collaborating with 15 suppliers and downstream partners. We established a validated pathway and verified GHG outcomes in Canada and verified GHG offsets and insets in the US, based on grower data. Update This goal directly contributes to our 75 million acres target as our Carbon Program has evolved to be considered within a suite of comprehensive sustainable agriculture programs. Going forward we will no longer view this goal independently and progress will be reported under our 75 million acres target (“75 million acres”). We will continue to report on our Carbon Program and how it and other ecosystem services and their outcomes collectively contribute to our 75 million acres. We will continue our efforts to seek to empower growers and our industry to accelerate sustainable agriculture and soil carbon sequestration, while rewarding growers for their efforts.	Page 23
	Climate³	In progress	2030 commitment: Achieve at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018, by 2030	As of 2023, we achieved a 10 percent reduction in GHG emissions intensity (Scope 1 and 2) per tonne of our products produced, compared to our 2018 baseline. We completed a number of abatement projects, including N ₂ O abatement projects, energy and emission efficiency upgrades, and tied in our second Redwater, AB Ammonia Plant to the Alberta Carbon Trunk Line to allow additional CO ₂ to be permanently sequestered (collectively, the “GHG Phase 1 abatement program”). The GHG Phase 1 abatement program contributed towards our target, and we continue to evaluate other strategic emissions abatement projects on technical and economic feasibility in pursuit of this commitment.	Page 26

¹ Our Carbon Program is also referred to as a Sustainable Agriproducts Program. Sustainable agriproduct acres involve agronomic solutions leading to measurable outcomes such as carbon, soil or water, with the ability to validate and verify those outcomes.

² These acres are included in our 75 million acres target.

³ The reduction in GHG intensity (Scope 1 and 2) per tonne of our products produced, compared to our 2018 baseline, was primarily due to an increase in potash production volumes relative to nitrogen volumes in 2023 as compared to 2018 as well as modest reductions in GHG emissions intensity from emissions abatement projects. Our progress on this commitment may vary on a year-over-year basis due to changes in product mix, operating rates, progress on emissions abatement projects, technology implementation and other factors set out in this Report. We continue to assess various options as we strive to achieve our ambitions.

Our Commitments, Targets and Goals (continued)





	Topic	Status	Targets	2023 Progress highlights	Read more
	Climate	In progress	2030 commitment: Invest in new technologies and pursue the transition to low-carbon fertilizers, including low-carbon and clean ammonia, ¹ by 2030	<p>We continued to evaluate opportunities to invest in low-carbon ammonia technologies. As of December 31, 2023, Nutrien has annual production capability for 1.2 million tonnes of low-carbon ammonia at our Geismar, LA, Redwater, AB and Joffre, AB Nitrogen facilities. We decided to suspend work on our proposed Geismar clean ammonia project due to an increase in expected capital costs compared to our initial estimates, continued uncertainty on the timing of emerging uses for clean ammonia and the prioritization of strategic capital allocation.</p> <p>Update This goal directly contributes to our 30 percent GHG emissions (Scope 1 and 2) intensity target. Going forward we will no longer view this goal independently and progress will continue to be shared on how these programs collectively contribute to our 30 percent reduction in GHG emissions intensity target.</p>	Page 27
		Partially achieved	Reduce GHG emissions in nitrogen production by 1 million tonnes CO ₂ e by the end of 2023 ²	<p>Nutrien completed the final projects in our GHG Phase 1 abatement program, which resulted in a GHG emissions reduction from nitrogen production of over 300,000 tonnes of CO₂e on an intensity basis in 2023. We anticipate the emission reductions from this suite of projects and a return to expected nitrogen operation rates to result in a reduction of 1 million tonnes CO₂e by the end of 2024.</p>	Page 26
		Withdrawn	Deploy self-generated wind and/or solar energy at four Potash facilities by the end of 2025	<p>Nutrien continued to assess renewable energy opportunities for our Potash facilities. Our Potash sites are located in Saskatchewan, Canada, where power is provincially regulated. It was initially anticipated that we could deploy self-generated wind and/or solar energy by the end of 2025 but given that adding renewable energy to the grid needs to be considered in conjunction with the regulator's decarbonization strategy and the capital required to implement physical assets, we no longer expect to achieve this target. Overall, this target represented a small portion of our Scope 2 emissions footprint and our 30 percent GHG emissions (Scope 1 and 2) intensity target. We continue to work to better understand challenges and opportunities related to renewable electricity and the Saskatchewan grid and evaluate additional strategies to reduce our Scope 2 emissions.</p>	Page 27
	Product stewardship	Achieved	Complete risk evaluation profiles of nitrogen, phosphate and potash ("NPK") (fertilizer) manufactured products by 2024	<p>We completed risk profiles and established a profile database for over 200 NPK products across our North American and European wholesale business. The internal digital profiles include information on product identity, hazard classification, chemical class, substances of concern, jurisdiction-specific information and security-related factors. This goal was completed, and the Product Stewardship team continues to explore the next phase in product stewardship.</p>	Page 31
	Water stewardship	On track	Reduce annual freshwater use in current operations at higher-risk and higher-use manufacturing facilities by 3.0 million cubic meters by 2025, which cumulatively is expected to reduce freshwater use by 30 million cubic meters by 2030 ³	<p>In 2023, we reduced our freshwater use by nearly 2.7 million cubic meters, a cumulative reduction of approximately 9 million cubic meters since 2018.</p> <p>Revision Target improvement is on an absolute basis, not an intensity basis.</p>	Page 37
	Biodiversity	Achieved	Determine how digital on-farm tools can identify and track opportunities to enhance biodiversity conservation on agricultural landscapes by the end of 2023	<p>We continued to use our internally developed framework to characterize and measure grower performance on various metrics developed by Cool Farm Alliance and Field to Market®. Our Agrible® platform includes Field to Market's Habitat Potential Index ("HPI") to assess on-farm habitat for plants and animals. We also progressed on an internal nature assessment as part of the Taskforce on Nature-related Financial Disclosures ("TNFD") pilot program.</p>	Page 34

1 Low-carbon ammonia is ammonia made with direct GHG emissions typically reduced by approximately 60 percent but up to 80 percent compared to a conventional process, produced primarily utilizing carbon capture, utilization and storage ("CCUS") or other low-emission production technologies; this definition does not include end product use. Clean ammonia is ammonia made with direct GHG emissions reduced by at least 90 percent compared to a conventional process, produced from hydrogen obtained using the next generation of ammonia production technology such as auto-thermal reforming or water electrolysis with renewable power; this definition does not include end product use.

2 On an intensity basis vs. 2018 baseline emissions intensity.

3 Water target is supported by a series of projects executed and maintained between 2018 and 2030. Reductions are calculated on an absolute basis at a project level on a before/after basis and assumes such projects are maintained through 2030 and/or the life of the project.

Our Commitments, Targets and Goals (continued)





	Topic	Status	Targets	2023 Progress highlights	Read more
	Waste	On track	Retail will continue to broaden and implement our Global Waste Minimization Standard, with a focus on improving our data management system and analytics with an aim to set a target by 2025	Retail sites continued to implement our Global Waste Minimization Standard. We completed a waste hierarchy mapping and began building a company-wide digital data management tool to collect, monitor and report waste management at a global level. Improved data collection is a necessary next step for effective target setting.	Page 39
	Workplace safety	On track	Achieve top-quartile safety performance across all operating segments by the end of 2025	In 2023, we achieved our best record for Total Recordable Injury Frequency (“TRIF”) and maintained our best record for Lost Time Injury Frequency (“LTIF”) since Nutrien formed in 2018. Retail and Phosphate TRIF performance exceeded the Bureau of Labor Statistics top-quartile performance for their related industry. Further, Nitrogen made positive progress, nearly achieving TRIF and LTIF performance targets. Comparing to peers, in 2023, Phosphate and Potash exceeded their peers’ average performance in both TRIF and LTIF, and Retail exceeded their peers in LTIF performance. Measuring against industry and globally recognized metrics ensures we evaluate our performance for Nutrien as an enterprise, as well as individual operating segments.	Page 46
		Not achieved	Zero Serious Injury and Fatality (“SIF”) incidents annually ¹	In 2023, Nutrien had five SIF incidents. Regrettably, one incident resulted in a fatality. Nutrien is determined to learn from these incidents and to take steps to try and prevent similar incidents from happening again. We are committed to building a strong safety culture where employees go home safe, every day.	Page 46
	Environmental incidents	On track	Reduce the three-year moving average Loss of Containment (“LOC”) ² Index ³ from 1.52 in 2022 to 1.25 by 2030	Our three-year moving average LOC Index is 1.39 in 2023, which is 10 percent lower than our 2022 baseline. In 2023, there were 23 environmental incidents, compared to 44 in 2022. As part of our LOC Reduction Strategic Plan, we identified 34 actions, of which 19 have been implemented, in 2023.	Page 50
	Equity, Diversity and Inclusion (“EDI”)	In progress	2030 commitment: Leverage our farm-focused technology partnerships and investments to drive positive impact in industry and grower innovation and inclusion, by 2030	We participated in the Radicle Growth Inclusion Challenge and selected two ag-tech entrepreneur companies for potential investment. The challenge was a pitch competition from ag-tech entrepreneurs around the globe who are committed to diversity and inclusion while advancing a sustainable food value chain.	Page 56
		Withdrawn	2030 commitment: Create new grower financial solutions to strengthen social, economic and environmental outcomes in agriculture, by 2030	We have evaluated how Nutrien Financial can support growers through a lens of sustainability and inclusion. Our approach focused on internal training, and increased collaboration and targeted informational campaigns for diverse grower groups.	Page 56
				Update Going forward we will no longer view this goal independently under Inclusion. Nutrien Financial’s programs and offerings are inclusive, and we will continue to support growers, as financing is often a key enabler to the broad adoption of sustainable agricultural practices.	
		Achieved	Women comprise no fewer than 30 percent of the Board of Directors (maintain annually)	We exceeded our target with 33 percent women on our Board of Directors as of December 31, 2023. This is a consistent annual achievement since our baseline of 2018.	Page 70

¹ Target includes work-related fatality or life-altering injury/illness experienced by an employee or directly supervised contractor conducting work on behalf of Nutrien.

² An unplanned release of material from its process that has the potential to impact human health and/or the environment.

³ Index is calculated from the number of LOC incidents and normalized to production/sales data. This target will be approximately an 18 percent reduction from 2022 baseline in LOC incidents.

Our Commitments, Targets and Goals (continued)

	Topic	Status	Targets	2023 Progress highlights	Read more
	Equity, diversity and inclusion (“EDI”)	Under review	Thirty percent women in leadership (director and above) by 2025	<p>The percentage of women in senior leadership positions across the Company was 23 percent at the end of 2023, representing continued improvement compared to 21 percent in 2022, especially compared to 13 percent in 2018.</p> <p>Update Our goal will not be achieved by 2025 and is under review. While we have seen a significant increase since 2018, we believe a single numerical measure of this nature may not drive the most effective progress against the fundamental purpose for diversity at our Company. Our core value of Inclusion reflects our commitment to create and sustain a sense of belonging and respect, and leverage the best in each other. Diversity of thought and perspectives through contributions from a varied group of people, enabled by an inclusive environment, is the objective and remains a priority.</p>	Page 53
		Achieved	By 2025, 25 percent of local spend in our Potash business has direct Indigenous economic impact	<p>Our Potash operating segment exceeded the target, reaching an approximate 32 percent spend in 2023 with local direct Indigenous economic impact. This reflects approximately CAD\$324 million of contract opportunities that support direct positive impact with Indigenous communities and Peoples.</p>	Page 56
		Achieved	Annually, 100 percent of potash suppliers contracted under a Master Supply Agreement (“MSA”) have local Indigenous inclusion commitments	<p>One hundred percent of all signed MSAs with suppliers for the Potash operating segment in 2023 included commitments to local Indigenous inclusion as a requirement to engage in our bidding process.</p> <p>Update Going forward we will no longer report on this target as it is now an operational component as part of our strategic approach. Annually, we expect all suppliers for the Potash operating segment contracted under an MSA will have local Indigenous inclusion commitments.</p>	Page 61
	Community relations	Achieved	Develop and implement a targeted approach to measure the impact of our sustainability and community investments in 2023	<p>Our new internal Investing for Impact framework is complete and currently being implemented. We developed a training program for community partners and Nutrien’s community investment representatives. The framework and impact measurement data will be tested, evaluated and refined in the coming years. No new target is expected.</p>	Page 66
		Achieved	Employees volunteer at least 25,000 hours by 2025 ¹	<p>Nutrien employees volunteered more than 26,700 hours, representing a 52 percent increase over 2022. In 2023, we offered eligible employees three paid volunteer days during work hours and reward dollars for eligible charities if volunteering outside of work hours.</p>	Page 66
	Integrity	Achieved	All employees, directors and officers complete mandatory Code of Conduct training annually	<p>All employees, directors and officers have completed mandatory Code of Conduct training. We update and rotate topics from year to year, adding new content as required to address new or changing legal and compliance risks.</p>	Page 75
	Cybersecurity	Achieved	Host quarterly education and training on cybersecurity for our community partners and stakeholders	<p>We hosted five external cybersecurity sessions in 2023. The sessions are a combination of virtual and in person events connecting with Nutrien stakeholders to bring awareness to the importance of cybersecurity.</p>	Page 78

¹ Volunteering during work and outside of work are counted towards this target.

Our Materiality Process for Sustainability Topics

Nutrien has aligned our material sustainability topic assessment process with our Enterprise Risk Management (“ERM”) process. Our annual material sustainability topic assessment, overseen by both our Executive Sustainability Committee and the Safety and Sustainability Committee of the Board (“S&S Committee”), includes internal and external stakeholder surveys (including Nutrien’s senior management, Nutrien and non-Nutrien customers and growers, and community leaders) analysis of industry risks and global trends (including non-profit organization (“NGO”) and media activity, sustainability reporting, and the evolving regulatory and policy landscape) to guide our decision making on material topics. The process leverages qualitative and digital tools such as artificial intelligence

(“AI”) and machine learning to help clarify stakeholder expectations and potential risks or opportunities for Nutrien.

We classify our material sustainability topics into two levels that reflect the degree of associated risk and/or level of significance to Nutrien. We provide the most extensive content on Priority Topics and less content on Additional Key Topics. Nutrien’s material sustainability topics are listed below.

Our sustainability disclosures are informed by best practices including metrics from the Sustainability Accounting Standards Board (“SASB”) Standards and recommendations from the Task Force on Climate-related

Financial Disclosures (“TCFD”), which now form part of the IFRS Foundation’s International Sustainability Standards Board (“ISSB”). In addition, we report with reference to the Global Reporting Initiative (“GRI”) Standards and the World Business Council for Sustainable Development (“WBCSD”) ESG Disclosure Handbook.

Materiality is used in a sustainability context for this report and is different than how we address materiality for disclosure requirements under applicable securities laws or accounting standards.

We reassess Nutrien’s material sustainability topics annually. In 2023, we began with our previous list of topics and completed the following process:

Read about our key enterprise risks and megatrends in [Nutrien’s 2023 Annual Report](#) and about our risk factors in [Nutrien’s 2023 Annual Information Form](#).

Frameworks Used ¹	Index
SASB disclosures for the Chemicals and Metals & Mining Standards	Page 101
GRI disclosures	Page 103
TCFD disclosures, with consolidated reporting in the Governance section	Page 105
California Voluntary Carbon Market Disclosures Act (“VCMCA”) disclosures	Page 106
The International Business Council Stakeholder Capitalism disclosures	Learn more

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

Step 1 – Identify ¹		Step 2 – Assess and prioritize		Step 3 – Validate	Step 4 – Communicate			
					Sustainability report coverage	Material sustainability topics	Read more	
Internal and external stakeholder surveys and engagement Digital stakeholder and reputation monitoring	<ul style="list-style-type: none"> Potential to affect Nutrien’s value, reputation or operations Of interest to stakeholders 	<ul style="list-style-type: none"> Regulatory environment Industry and peer benchmarking 	Priority topics	<ul style="list-style-type: none"> Risks that can have broad impact on financial performance, operations or reputation, or have legal implications Significant interest to stakeholders and opportunities for Nutrien 	<ul style="list-style-type: none"> Internal cross-functional working group review Executive leadership team review 	<ul style="list-style-type: none"> Extensive discussion of management approach Data in graphics Performance discussion 	<ul style="list-style-type: none"> Climate-related risks and climate-related opportunities GHG emissions and energy use Soil health Product stewardship Worker health and safety Equity, diversity and inclusion Responsible supply chain Integrity 	Page 80 Page 25 Page 14 Page 30 Page 45 Page 52 Page 59 Page 74
Megatrends analysis								

¹ These criteria align with SASB’s criteria for a material topic. The inclusion of information or references in this report, including the use of “materiality” or similar terms, should not be construed as a characterization regarding the materiality of such information to our business or financial results or that such information is necessarily material to investors or other stakeholders for purposes of applicable securities laws.

Our Contributions to the SDGs

The United Nations Sustainable Development Goals (“SDGs”) are a universal call to address 17 global challenges. Adopted by all United Nations Member States in 2015 to be achieved by 2030, these goals aim to end poverty, protect the planet, and ensure peace and prosperity by 2030.

While our sustainability efforts connect to many of the goals, our primary focus is SDG 2: Zero Hunger. Other SDGs that are relevant to Nutrien are as follows:

Relevance to Nutrien	Associated SDG
Nutrien’s purpose, <i>Feeding the Future</i> , drives progress towards SDG 2: Zero Hunger through sustainable and productive agriculture.	
Nutrien promotes inclusion, fosters climate resilience, and develops multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources to help advance sustainable agriculture.	
Conducting business safely and responsibly with inclusion and integrity are foundational activities at Nutrien.	

Learn more about how Nutrien’s activities align with these SDGs and indicators in our online [SDG Impact Assessment](#).



Environmental

Promoting sustainable agriculture and environmental stewardship

02

Topics in this section

Grower Solutions	14
GHG Emissions and Climate Change	25
Product Stewardship	30
Biodiversity	33
Water Stewardship	36
Non-mining Waste	39
Mining Tailings and Byproducts	41
Air Emissions	43

Alberta, Canada

Wheat is a staple food for 35 percent of the world's population. Canada is a top exporter of wheat to more than 80 countries worldwide. Nutrien operates ten fertilizer production facilities in Western Canada and serves growers from our 275 Retail selling locations on the Canadian prairies.

Grower Solutions

We are committed to developing products and innovative solutions that help our business and growers profitably tackle challenges facing the agriculture industry.

How is this topic relevant to our business?

Nutrien’s grower solutions — our “whole-acre” products, services and programs — aim to help increase agricultural productivity and improve grower economic and environmental outcomes through the promotion of sustainable and precision¹ farming practices.

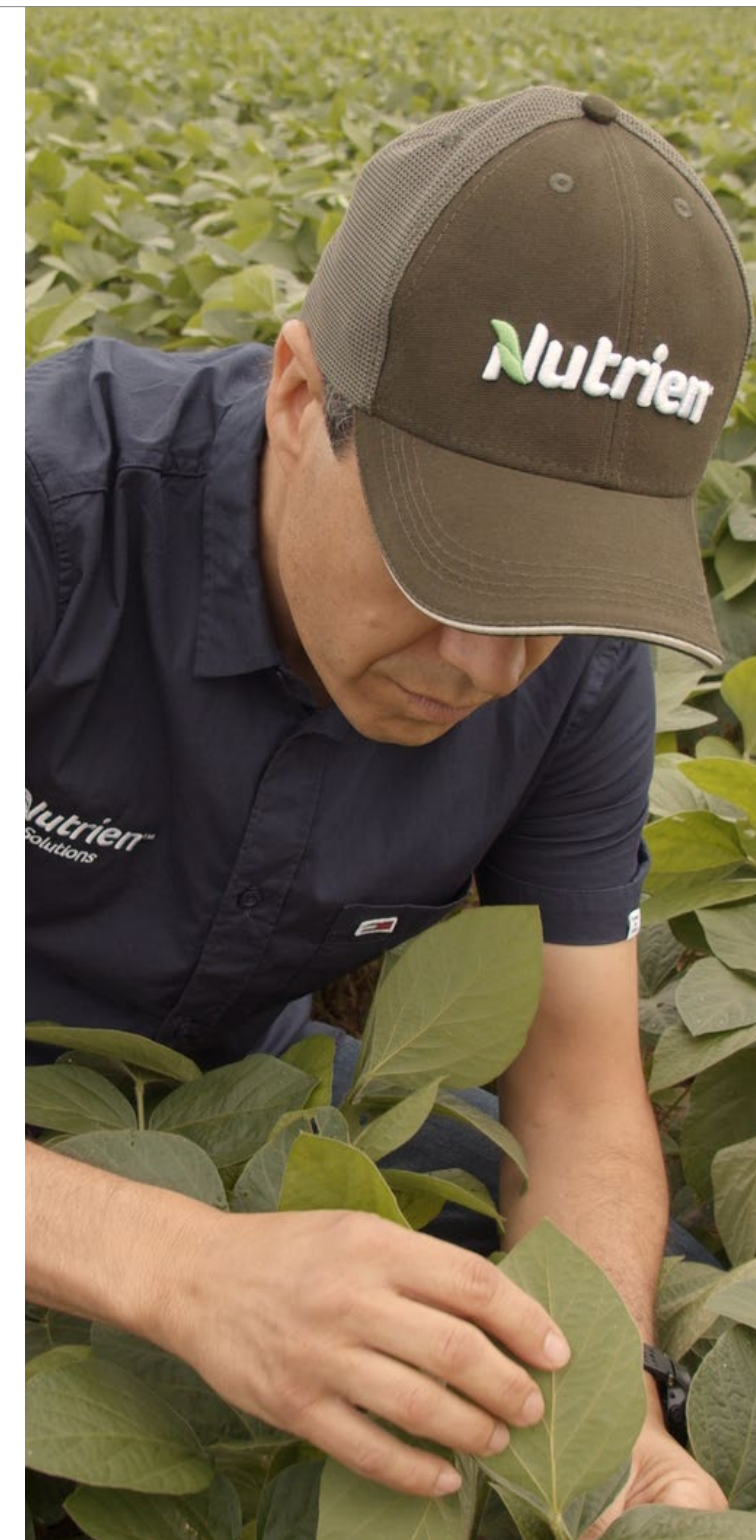
Growers around the world face ever-changing conditions with each acre requiring a unique and optimum use of crop inputs to maximize production. Efficient and appropriate input application at the farm level can lead to decreased GHG emissions, positive impacts to land and water, and

profits. Maximizing positive economic, environmental and social outcomes takes experience, technology and the right suite of products, services and practices.

As the world’s largest provider of crop inputs, Nutrien has an opportunity to help growers feed a growing population while providing the right solutions for their most pressing challenges, promoting safe and responsible product use, and improving the environmental and social impacts of agriculture.

Targets

- **In progress** – Enable growers to adopt sustainable and productive agricultural products and practices on 75 million acres globally, by 2030.
- **In progress** – Launch and scale a comprehensive Carbon Program, empowering growers and our industry to accelerate climate-smart agriculture, reduce GHG emissions and impact soil carbon sequestration while rewarding growers for their efforts, by 2030.



Key links:



Global alignment and standards

Nutrien’s sustainable and productive agriculture approach aligns with the [United Nations Food and Agriculture Organization \(“FAO”\) principles](#).



Nutrien’s contributions to the SDGs



[Learn more](#)



Nutrien’s policies, positions and disclosures

- [Soil Health Position](#)
- [Grower Support Position](#)



Governance for this topic

- [Board Committee responsibilities for sustainability](#)
- [Executive responsibilities for sustainability](#)
- [Management responsibilities for sustainability](#)
- [Biodiversity Strategic Issue Team](#)
- [Climate Scope 3 Strategic Issue Team](#)
- [Soil Health Strategic Issue Team](#)

¹ Precision agriculture refers to the usage of technologies including sensors, GPS location systems, drones and artificial intelligence on the farm.

Our approach

Our goal is to develop and offer products and innovative solutions that help our business and growers profitably tackle challenges facing the agriculture industry. To do so, we provide our grower customers with whole-acre solutions and aim to deliver improved environmental outcomes, from pre-season planning to facilitating post-harvest verification, which help growers increase production in a sustainable manner (see figure below).

We have documented 2 million sustainably engaged acres of the 2023 crop harvest, and we expect to significantly increase these in the years ahead with our extensive grower and partner networks.

Our global approach helps define whole-acre solution outcomes and measurements to execute on our 75 million sustainable and productive acre target. Core activities include measurement programs such as field-level data analyses and sustainable agriproducts programs (also referred to as our Carbon Program) that aim to

incentivize growers to adopt sustainable products and practices. Our programs are supported by education and training, thought leadership, industry advocacy, and product and services innovation. By working with value-chain partners, we seek to collectively advance global agriculture sustainability goals for the broader supply chain. Each of our regions tailors our global approach to their regional needs and tools. [Read more on page 16.](#)

Our whole-acre solutions

How Nutrien’s whole-acre solutions are made available to help growers promote a more sustainable and productive industry



Planning

Our whole-acre solution service offering begins with agronomic analysis and strategic field planning, sometimes years in advance of planting the field. Our field staff create a customized plan for implementation, including precise application and efficient use of crop inputs (fertilizer, seed and crop protection products) and conservation practices to minimize resource use and nutrient loss.

Application

We offer products and services tailored to meet growers’ needs based on the crop, local geography, climate, soil and agricultural market. Our staff provide agronomic advice throughout each growing season and across multiple crop rotations, including best practices in nutrient management such as the 4R Nutrient Stewardship System and Fertcare®. Our precision agriculture platform, Echelon™, provides variable rate recommendations to help improve yields and soil health while reducing nutrient loss to the environment.

Measurement

Our digital platforms, such as Agrible® in North America, are available to establish baselines for sustainability performance and to track and measure outcomes (including yield, emissions, soil health, water quality and biodiversity impacts) over time.

Where possible, we aim to collect field-level data for every practice on the field and then analyze the outcomes using the Cool Farm Tool or the Field Print Calculator in North America, and Greenhouse Gas Accounting Framework (“GAF”) tools in Australia.

Facilitate verification

Nutrien manages the validation and verification of carbon outcomes through third-party verifiers such as SustainCERT or our execution partners utilizing industry accepted protocols and standards. There is potential to certify additional field-level sustainability metrics in the future.

2 million sustainably engaged acres: We are gaining momentum towards our target of enabling growers around the world to adopt sustainable and productive agricultural products and practices on 75 million acres, by 2030. In 2023, we measured 2 million sustainably engaged acres in North America, South America and Australia, doubling the number of measured acres from 2022.



We define “sustainably engaged acres” as acres that participate in programs that track field-level data that is, or can be, analyzed for sustainability metrics and/or acres that participate in sustainable agriproducts programs that incentivize growers to adopt additional sustainable products and practices resulting in quantifiable, incremental benefits that may be verified and used for reporting purposes.

Our approach (continued)

Our whole-acre solutions focus on grower needs. To remain responsive to those needs Nutrien focuses on key enabling activities:



Education and training:

Nutrien personnel are trained (where applicable to their role) in nutrient stewardship, crop protection, seed and best management practices to make recommendations that help drive crop production and sustainable outcomes for our growers. Many have earned designations including Certified Crop Advisor, Certified Professional Agronomist and Pest Control Advisor. In Australia, where mixed farming (growing crops and raising livestock at the same time) is common, we also have livestock and animal health specialists. Across our retail network, we offer various forms of educational materials and training to share this knowledge with our growers.



Industry advocacy:

Nutrien has representation on many fertilizer industry and retail association boards and committees, which creates opportunities to engage industry and others on agricultural issues and collaborate in addressing challenges.



Services innovation:

We continue to harness advances in digital technology and computational analytics. Incorporating these technologies into our grower offerings has allowed us to reach new levels of confidence in our recommendations for seed selection, plant nutrition, crop protection and resource use.



Industry-leading partnerships:

We seek out external partnerships to amplify our impact across our value chain and in the agriculture sector. Together with our partners, we can expect to promote sustainable progress across the agricultural supply chain. Read [our list of partnerships](#).



Thought leadership:

Nutrien has established two independent Academic Councils of world-class scientists from Canada, the US and Australia, one for soil and one for sustainability. The Councils help steer our research focus and peer review our results and approach to sustainable agriculture. Nutrien representatives also serve on a variety of sustainable agriculture organization boards with the goal of learning and collaborating on initiatives to advance the industry.



Product innovation:

Nutrien draws on our internal research and development (“R&D”) capabilities and seeks out external expertise to develop solutions to agronomic challenges. We develop and test our innovations in real farm operating environments that we own or lease.

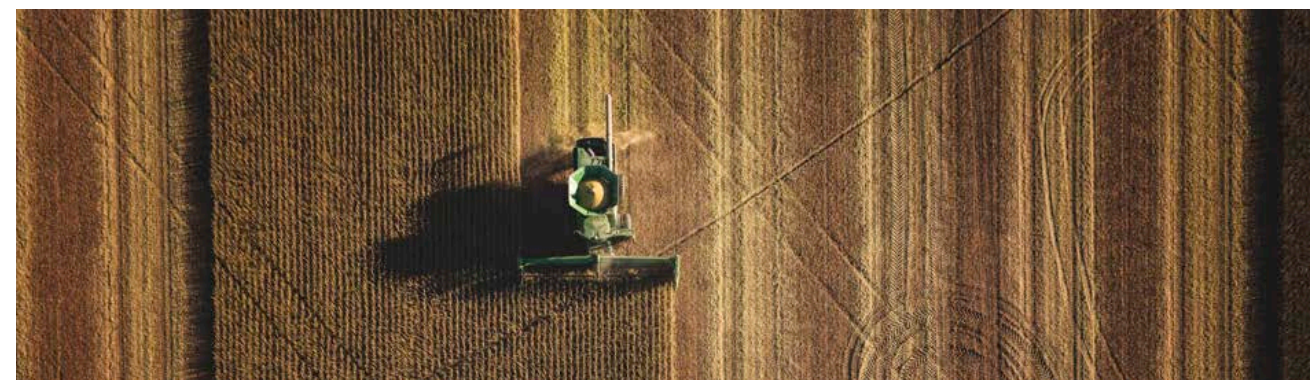
2023 Activities

In North America, we leverage our digital platforms, including Agribile®, to track and measure outcomes such as crop quality, soil health, GHG emissions, water quality and biodiversity. Leveraging this data, we aim to independently verify sustainability outcomes, such as GHG emission changes. Our combined 2023 US and Canada GHG insets and offsets resulted in approximately 1,500 tonnes CO₂e of emissions reductions and removals from improved agricultural practices in three unique projects. [Read more on page 24](#). They are as follows:

- Working with Climate Action Reserve and a third-party verifier, following the US Nitrogen Management Protocol Version 2.1, our Carbon Program in the US achieved verified GHG emission reduction offsets from the 2021 crop season based on improved nitrogen management with credits being sold to Royal Bank of Canada.
- Working with Ecosystem Service Market Consortium (“ESMC”) and SustainCERT, in the US, we achieved verified GHG insets.
- Working with SustainCERT, in Canada, we established a validated pathway and verified GHG outcomes being shared with Maple Leaf Foods.

In Australia, we conducted GHG emission assessments and invested in our digital measurement capabilities, planned for release to customers in 2024. We have assessed GHG emissions across over 800,000 acres. In cropping, pasture and horticulture systems, we are trialing the use of Enhanced Efficiency Fertilizer (“EEF”) products including nitrification and urease inhibitors to reduce nitrous oxide emissions and assess their impact on yield and quality. In livestock systems, we are piloting opportunities to reduce methane emissions while endeavoring to maintain productivity through animal nutrition, improved management practices and emerging methane-reducing technologies. These assessments and pilots have informed our investment in digital, advisory and product solutions that aim to support growers to reduce GHG emissions and environmental impacts while growing productivity and profitability.

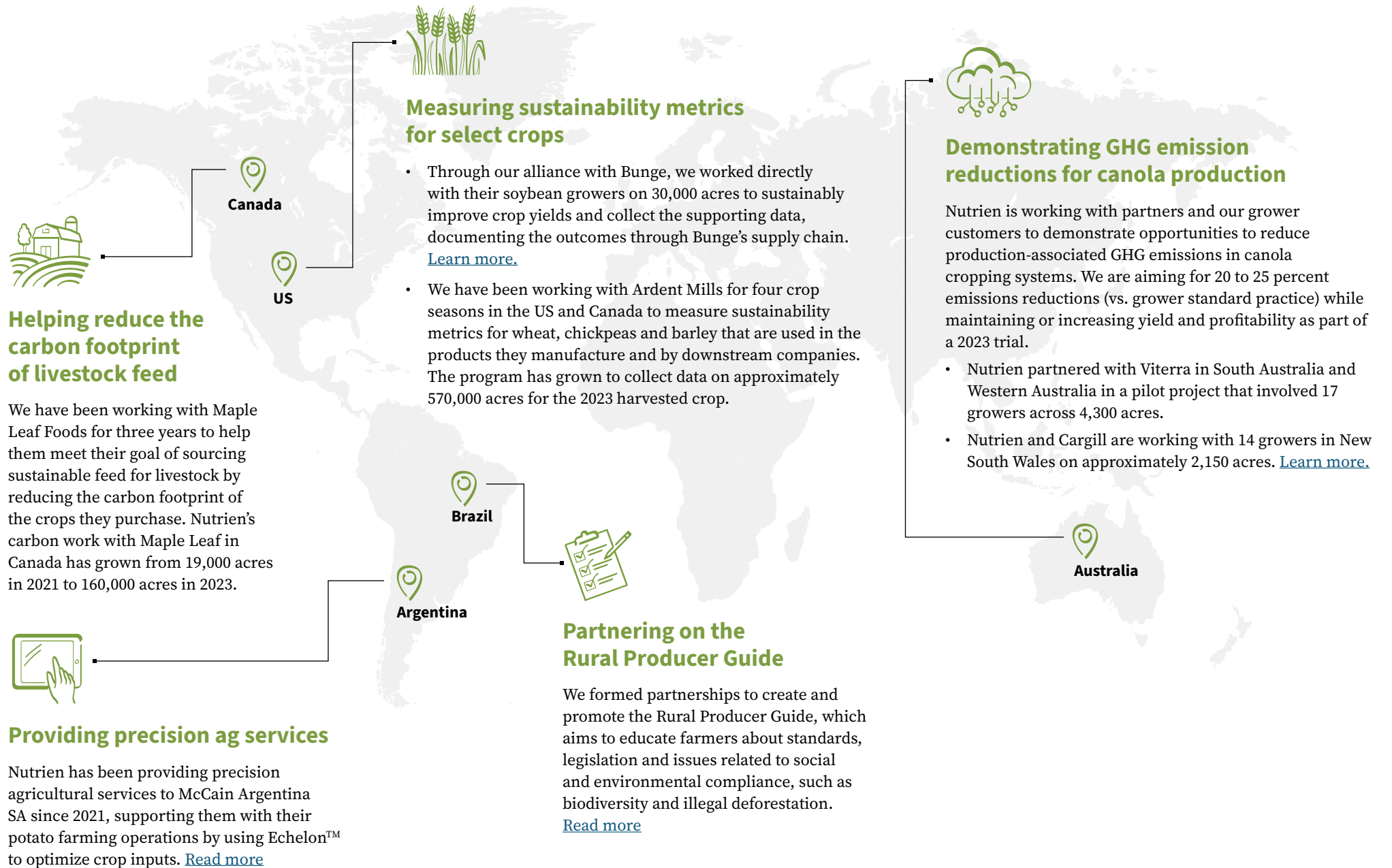
In South America, we leverage our digital capabilities to support our grower customers in improving their yields and profitability by better understanding soil needs and optimizing fertilizer use. Nutrien Recomenda (Nutrien Recommends) is a digital platform that we piloted in 2023 which offers crop input recommendations based on agronomic data and soil health information. It provides customized recommendations to farmers based on the specific needs of their crops and soils, and allows continuous monitoring throughout the cultivation cycle, helping farmers to make informed decisions. This also helps farmers to avoid wasting agricultural inputs and to mitigate possible environmental impacts.



Spotlight

Strategic partnerships designed to amplify our impact

Strong partnerships are the base of achieving sustainable progress across the agricultural supply chain. Nutrien participates in a variety of partnerships. Here are some examples.



Nutrien’s whole-acre solutions include products, services and programs

Our whole-acre solutions continue to evolve with our investment and advancement in methodologies, technology and partnerships. Learn more on pages [15-16](#). Learn about the farm-level impacts to air, water and land related to crop input application [on our website](#).

		Key targeted environmental benefits				
Products	Products that aim to improve productivity and environmental performance include:	Carbon	Water	Soil Health ¹	Biodiversity	Productivity
1. Advanced plant nutrition	Nutrition products including enhanced efficiency fertilizers (“EEFs”) that aim to provide environmental benefits.	●	●	●	●	●
2. Crop protection	Herbicides and pesticides that aim to reduce crop loss (due to diseases, weeds and pests) and maximize crop yield.					●
3. Seed	Pest- and drought-resistant seeds that can help maximize crop yields.		●		●	●
4. Livestock solutions	Products that improve feed efficiency and liveweight gains and/or reduce methane emissions from livestock.	●				●
Services	Our services that support improved outcomes include:					
1. Agronomic advice	Recommendations following best practices in nutrient application such as 4R Nutrient Stewardship (“the 4Rs”, the Right Source of plant nutrients at the Right Rate, Right Time and Right Place) and Fertcare®.	●	●	●	●	●
2. Digital agronomic solutions/tools	Digital platforms, soil testing and other data technologies that measure the impacts of agricultural practices and inform customized recommendations for each grower. Our precision agriculture tool(s) help improve yields and soil health and reduce nutrient loss to the environment.	●	●	●	●	●
3. Nutrien Financial	Financial services to help growers access Nutrien’s products and services when they need them.					
4. Irrigation management and water conservation practices	Design services to optimize irrigation, especially in dry zones (for example, Australia).		●			
5. Vegetation, forestry and aquatics management	Specialized services for non-agricultural managed lands across the US.	●	●	●	●	
Programs	Our programs facilitate sustainable practices and include:					
Sustainable agriculture programs²	A suite of comprehensive programs offered, including Nutrien’s measurement and sustainable agriproduct programs, which establish baselines, identify opportunities for improvement, and connect growers to downstream value-chain partners to explore and scale initiatives that create value.	●	●	●	●	●

1 Soil health is the continued capacity of soil to function as a vital living system, within ecosystem and land-use boundaries, to sustain biological productivity, maintain environmental quality, and promote plant and animal health. Improving soil health results in enhanced water and air quality, soil structure, biodiversity, soil organic carbon sequestration, disease suppression, and greater productivity of food, feed, fiber and fuel. Soil health is critical to define long-term productivity, sustainability and profitability of agro ecosystems in a changing climate.

2 In 2023, we decided to pause our sourcing and traceability programs to focus our efforts and resources on the core of our sustainable agriculture programs.

Products

We offer innovative products designed to improve crop quality, yield and nutrient use efficiency, while minimizing nutrient loss and supporting agriculture and food safety.

1 | Advanced plant nutrition

Although all fertilizers provide nutrients that are essential for growing healthy crops, advanced plant nutrition products enhance crop nutrition and at the same time may improve environmental outcomes. Nutrien develops EEFs and advanced nutrition products including our controlled-release ESN[®], nitrogen inhibitors and stabilizers, our C² Technology and our naturally derived biocatalyst technologies. These products aim to provide environmental benefits including reduced nitrous oxide emissions from applied fertilizer, reduced leaching to ground and surface waters, reduced ammonia loss to air and improved nitrogen-use efficiency. [See page 23](#) and our [website](#) for details. Nutrien's Smart Nutrition™ MAP+MST[®] integrates micronized elemental sulfur in the manufacturing of Mono-Ammonium Phosphate ("MAP") granules for uniform distribution of each granule, providing maximum soil to fertilizer contact and increased oxidation rate for quick crop use. [Learn more](#). In 2023, Nutrien launched several new nutrition and nutrient efficiency products. For example, ReaX Plus is a new liquid micronutrient designed to maximize nutrient efficiency while also improving crop tolerance to environmental stress. This leads to healthy crop growth even in sub-optimal conditions.

2 | Crop protection

Crop protection products and practices are designed to maintain crop quality and minimize yield losses by managing plant diseases, weeds and pests. We carry a complete line of products from leading crop protection manufacturers, including Nutrien's Loveland Products, which are described on our website. We

continue to develop products that are derived from naturally occurring microorganisms and aim to provide environmental benefits. See [page 20](#) and our [website](#) for details. Nutrien determines crop protection product suitability based on scientific evidence, regulatory requirements and a holistic product rating system. We promote the safe and responsible use of products. Learn more in the [Product Stewardship](#) section of this report.

3 | Seed

We offer customers a broad portfolio of high-quality seed options. Seed hybrids and varieties combined with the latest trait technology are tested across geographies and environments to help Nutrien deliver increased yield and yield stability to our customers. Learn about Nutrien's seed breeding programs and our innovative seed treatment technologies [on our website](#).

4 | Livestock solutions

Mixed farming is common practice in Australia. Nutrien's Australian livestock business connects clients with buyers and provides products and services to manage and improve animal health, productivity and efficiency in the livestock, dairy and equine industries. Our staff includes livestock agents, animal production specialists and genetic specialists. Our role as a trusted advisor and provider of inputs for the Australian livestock industry means we are well placed to assist in the advancement of industry decarbonization efforts, including through the sale of emerging methane-reducing feed supplement and reduction technologies. [Learn more](#)



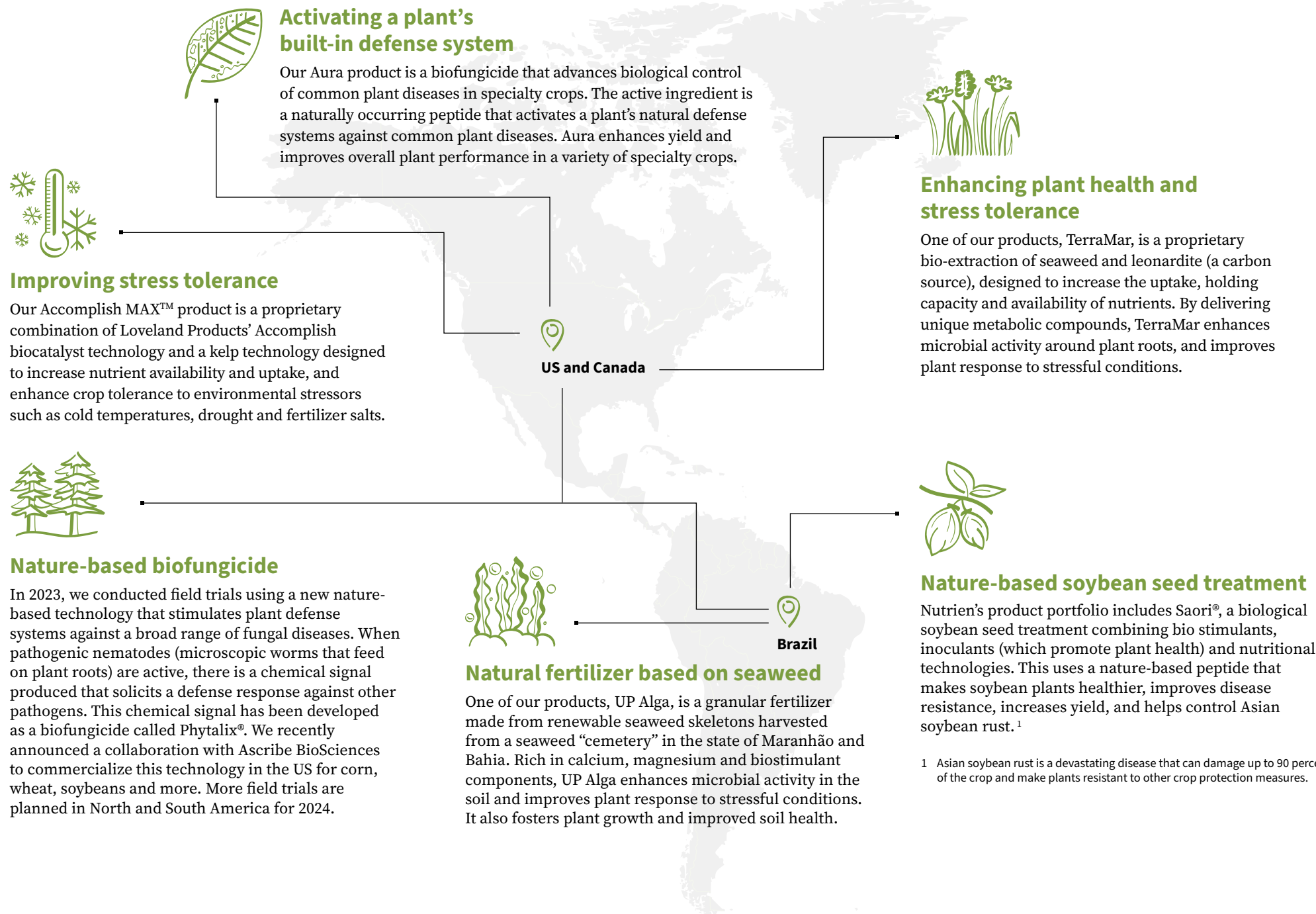
Right: Our staff in Australia includes livestock agents, animal production specialists and genetic specialists.



Spotlight

Harnessing nature's own tools to enhance and protect crops

Nutrien is working to develop and offer innovative biologically derived products that improve plant and soil health. Here are examples of products inspired by nature that are helping growers feed the future.



¹ Asian soybean rust is a devastating disease that can damage up to 90 percent of the crop and make plants resistant to other crop protection measures.

Services

We offer a variety of services that promote agronomic best practices including:

1 | Agronomic advice

One of the greatest assets is our people who work to understand the individual challenges our grower customers face in order to deliver customized solutions. Through our Retail business, we have more than 4,000 crop consultants working directly with our grower customers from more than 2,000 global locations.

We provide agronomic advice in many forms. New to select US Retail selling locations, we provide soil health grower reports, which provide insight into biological nutrient cycling and the impact of nutrient input applications and outcomes on key regional crops. We expect to launch the reports across our retail network in 2024. Growers can also access our [digital platforms](#) on their own or through an advisor for customized seed and input recommendations based on regional and field-level data.

Our crop advisors promote best practices in fertilizer application, including

- **The 4R Nutrient Stewardship:** An international program promoting the application of the “Right Source of plant nutrients at the Right Rate, Right Time and Right Place.” Our North and South American retail operations provide recommendations that are aligned with the 4Rs. [Learn more.](#)
- **Ferticare®:** An Australian-based program that offers training and advice for fertilizer application to optimize productivity and minimize environment and food safety risks. [Learn more.](#)



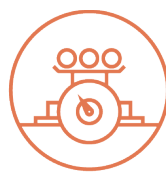
Right Source

Matches fertilizer type to crop needs



Right Time

Makes nutrients available when crops need them



Right Rate

Matches amount of fertilizer to crop needs



Right Place

Keeps nutrients where crops can use them.



We also participate in fertilizer industry initiatives to advance nutrient management, including

- **Sustainable Phosphorus Alliance:** North America’s central forum and advocate for the sustainable use, recovery and recycling of phosphorus in the food system. [Learn more.](#)
- **International Fertilizer Association (“IFA”) and University of Nebraska-Lincoln Sustainable Potash Project:** An initiative to compile and analyze comprehensive global data on potassium¹ deficiencies in cropping systems, which are poorly understood and may be limiting crop yield and quality in many regions. Nutrien is participating to help drive sustainable intensification through improved nutrient management and fertilizer recommendations. [Learn more.](#)

¹ Potassium plays an important role in the growth and development of plants by activating enzymes, enhancing photosynthesis, aiding nitrogen uptake and helping the plant withstand stress. It also aids in water retention and improves the quality of crops. Potassium chloride (KCl) is commonly called potash.

2 | Digital agronomic solutions/tools

Nutrien’s digital solutions combine location, agronomic information (crop physiology, soil characteristics and pest or disease impact), environmental data (such as precipitation and temperature), GPS data, weather forecasting and data science to make field-specific recommendations for growers. Our digital solutions help growers get better results by combining local knowledge with timely, actionable data, giving growers the confidence to make better decisions in both planning and execution. Some of our key digital tools are

- **Agrible®:** This digital agronomy tool uses information growers collect from their fields and combines it with decades of Nutrien’s agronomic data to inform and optimize crop production planning. Agrible® is also used to help growers track improvements in nutrient use efficiency, soil health and environmental impacts, including carbon emission reductions for verification and potential sale. See [page 24](#) for an example of Agrible® in use.
- **NutriScription/Nutrien Recomenda:** NutriScription in the US and Nutrien Recomenda in Brazil take soil, water and plant tissue analysis data and create agronomically correct and field-specific fertilizer recommendations. Our sales representatives and growers can use NSPro, the NutriScription® app, to easily access NutriScription recommendations.
- **Echelon™:** Nutrien’s precision agriculture platform uses geospatial data processing analytics to help growers precisely apply seed and fertilizer to their fields. Working with our crop advisors, growers create a precise map of their fields using GPS data, targeting inputs on the areas that need it most. See the sidebar on the next page for an example of Echelon™ in use to optimize potato farming.



Above: Nutrien’s Experience Center in Uberlândia in the state of Minas Gerais, Brazil.

Brazil

Experience centers for growers

Nutrien has 56 Experience Centers in Brazil, designed to deliver more personalized interactions with our grower customers. Our staff at the Experience Centers provide practical field recommendations, access to financing, access to a digital platform that helps with detailed agricultural planning and agronomic recommendations, and technologies that can help increase crop profitability. In 2023, three new centers received Gold certification by LEED (Leadership in Energy and Environmental Design) due to their high standards of sustainable construction.

Superbarter

We built on regional bartering practices in Brazil to launch a new tool called Superbarter in 2023. The tool allows growers to negotiate prices for crop inputs and pay in grains produced, helping them mitigate the costs of production and providing a buffer to protect from market volatility. To participate, growers must be in socio-environmental compliance and those with recognized third-party sustainability certifications can negotiate better rates and conditions.

Services (continued)

3 | Nutrien Financial

We pair agronomic and financial knowledge to help growers optimize production through convenient access to capital and innovative cash management strategies. Financing is often a key enabler to broad adoption of sustainable agricultural practices. In December 2023, in collaboration with Scotiabank, we launched a promotional financing offer for qualified Canadian customers that participate in the [Sustainable Nitrogen Outcomes program](#). Those customers are provided with a lower promotional financing rate relative to the standard financing annual percentage rate. This subsidized financing offer is intended to support growers who participate in a measured outcome program aimed at reducing their carbon emissions.

4 | Irrigation management and water conservation practices

Irrigation management involves infrastructure and technology to efficiently water crops in dry regions, minimizing evaporation and improving yields. Our growers rely on water for product blending and irrigation in arid growing environments. Their water dependency can vary from year to year based on weather patterns. We provide services and advice, such as the 4Rs, that promote water use efficiency and reduce nutrient loss to groundwater and surface water. Some of our water-related activities include

- In 2023, we launched a new product, Aqua Express, which is designed to be used primarily through drip irrigation. It aims to support water infiltration, distribution and retention, improving water use efficiency especially in drought-prone areas or regions with challenging soils.
- Nutrien Water is one of the largest retail water businesses in Australia. Learn more [on our website](#).



- We continued to implement the Programa AWA (AWA Program) in Chile which combines three of Nutrien's products (Accomplish™, Waterlock® and Acidos humicos, or Enersol® in Chile) as a soil conditioner that aims to improve nutrient- and water-use efficiency. Read more in the sidebar.

5 | Vegetation, forestry and aquatics management

Our Nutrien Solutions team (a division of Nutrien Ag Solutions) specializes in vegetation management for non-agricultural managed lands (that is, the forestry, aquatics, range and pasture, roadside, railroad and utility markets) in the US. We aim to help keep these lands healthy with our local knowledge and wide range of products and value-added services. For example, our forestry team advises landowners regarding forest management to support wildlife and optimize biological CO₂ sequestration while maximizing their financial returns, and our aquatics specialists work with customers to maintain the functionality of irrigation canals and the water quality of recreational water bodies. [Learn more](#).



Argentina

Using Echelon™ to optimize potato farming

Nutrien has been providing precision agricultural services to McCain Argentina SA since 2021, supporting them with their potato farming operations by using Echelon™ to optimize crop inputs.

A worldwide challenge is to optimize phosphorus nutrient efficiency. Nutrien worked with McCain's crop team to create a detailed map of the phosphorus levels of their growing areas in Echelon™ to guide targeted fertilizer application rates. Nutrien is currently sampling, prescribing and making variable fertilizer applications on 5,400 acres of farmland located Southeast of Buenos Aires. We aim to improve phosphorus nutrient use efficiency to not only fulfill yield, quality and costs but also sustainability indicators.

Chile

Collaborating to develop local water management solutions

Chile is going through one of the most extreme droughts in recent history, especially in the country's northern region. This drought has driven a reevaluation of local agricultural production schemes. Nutrien's Retail team in Chile has developed and implemented the Programa AWA with the aim of improving nutrient- and water-use efficiency to achieve outcomes such as greater plant root growth and better vegetation health and density. This program is specifically aimed at fruit crops under precision irrigation, and it has allowed production levels to be maintained even with limited water resources.

Sustainable agriculture programs

Nutrien's sustainable agriculture programs are designed to leverage our position as the world's largest provider of crop inputs and services. Whether they are related to carbon, water or biodiversity, our grower programs are centered on two key features. The first is our ability to drive change through the incentivization and adoption of best management and sustainable practices throughout the agricultural value chain. The second is our role as an intermediary and facilitator, connecting growers to downstream value-chain partners.

Benefits of our programs

Together with our program partners, we can build on and scale growers' existing efforts. There are many **environmental benefits** of connecting growers with downstream value-chain partners, environmental groups and regional partners, which include

- improving soil health and optimizing nutrient-use efficiency
- reducing GHG emissions, increasing soil organic carbon¹ ("soil carbon") sequestration and expanding the protection of existing carbon sinks
- improving water quality and soil water retention
- conserving and improving biodiversity by increasing crop yields, building soil organic matter,² enhancing nutrient recycling and reducing land conversion

For growers, our programs offer an opportunity to expand on current stewardship practices, differentiate their product and potentially add a new revenue stream to their operations.

For Nutrien, our programs are an opportunity to amplify and document the value of sustainable agricultural practices.

Two types of programs

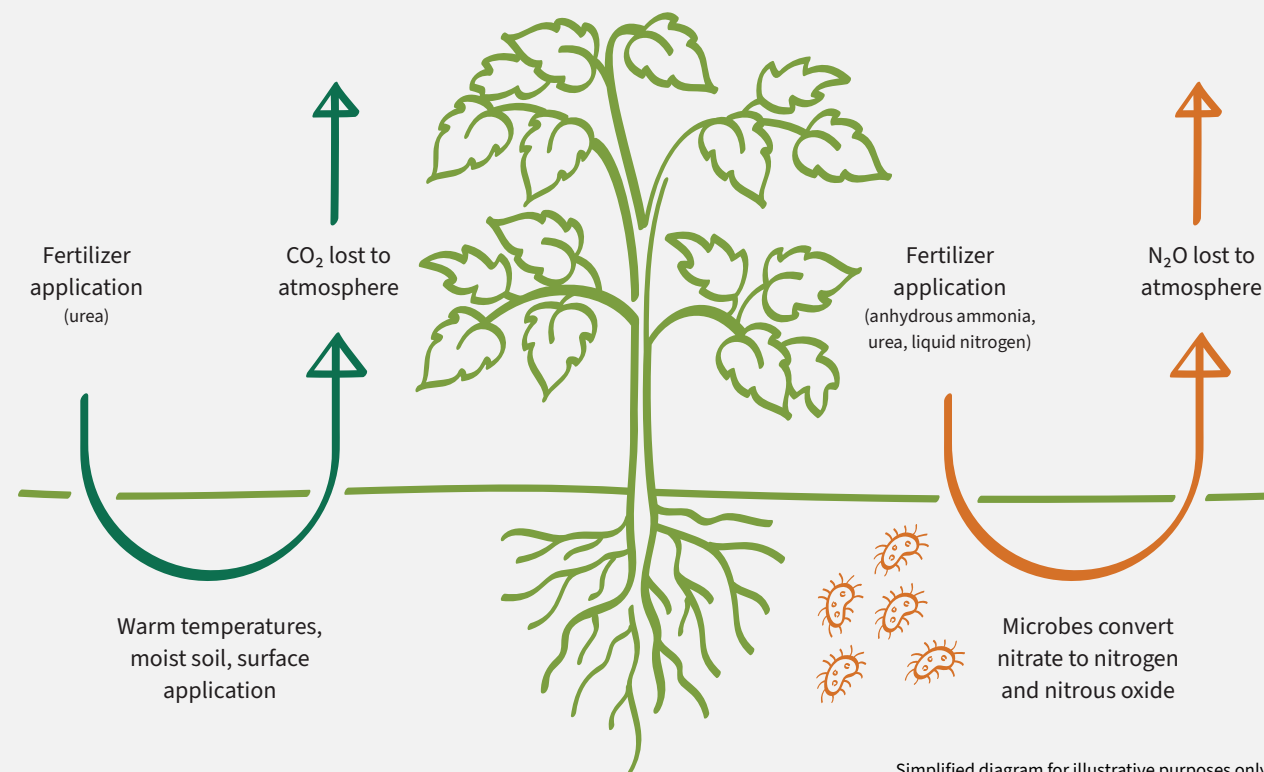
Measuring outcomes from current practices: Many growers had long-standing sustainable agricultural practices in their operations but lacked a way to demonstrate their value. We use our digital platforms, such as Agribile®, to measure baseline and intervention outcomes of sustainable practices at the farm level and help growers document the environmental and economic value of these existing practices using key metrics from recognized global standards. See [page 24](#) for early results from our Carbon Program.

Measuring outcomes from sustainable interventions: In addition to measuring outcomes from current agricultural practices, our agronomic field teams are working with some growers to improve their environmental performance by recommending whole-acre solutions, tracking improvements from baseline performance, and connecting them with downstream certification bodies and customers. Read more on [page 15](#).

Our vision for the sustainable agriculture programs, once fully operational, is to generate long-term value for growers by making each acre more profitable as a result of more sustainable farming practices. It also offers Nutrien and our value-chain collaborators the opportunity to reduce a source of Scope 3 emissions, while maintaining crop production and quality, and supporting global food security.

We expect to have this program fully operational by 2030, and we are well on our way. With approximately 900,000 acres enrolled in the program in North America, we sold our first offsets³ from our US program in 2023. We also enabled Maple Leaf Foods to claim their first GHG outcomes from our Canadian Carbon Program. See [next page](#) for details.

How does nitrogen fertilizer application generate GHG emissions?



Nitrogen fertilizer application can produce two types of GHG emissions: carbon dioxide (CO₂) and nitrous oxide (N₂O), a potent GHG with a significantly higher global warming potential compared to CO₂. CO₂ is released from urea forms of nitrogen fertilizer because it is part of the urea molecule.

N₂O is released when nitrate forms of nitrogen fertilizer are converted by microorganisms in the soil. In both cases, managing nitrogen fertilizer is critical to reducing emissions from agriculture. Learn more about the [nitrogen cycle](#) or watch a [video here](#).

¹ Soil organic carbon is derived from the decomposition of plant and animal materials. Increasing the input of plant residues, plant roots and manure can increase the amount of organic carbon in soil. The terms "total organic carbon", "organic carbon" and "soil carbon" are used interchangeably to represent soil organic carbon.

² Soil organic matter is the portion of the soil that contains plant or animal tissue in various stages of decomposition. Soil organic matter contributes to soil productivity.

³ Carbon offsetting is a way for entities to reduce their carbon footprint by paying another entity to reduce their emissions. Carbon insetting (also referred to as "GHG outcomes") refers to the actions taken by an organization to reduce emissions within its own supply chain.

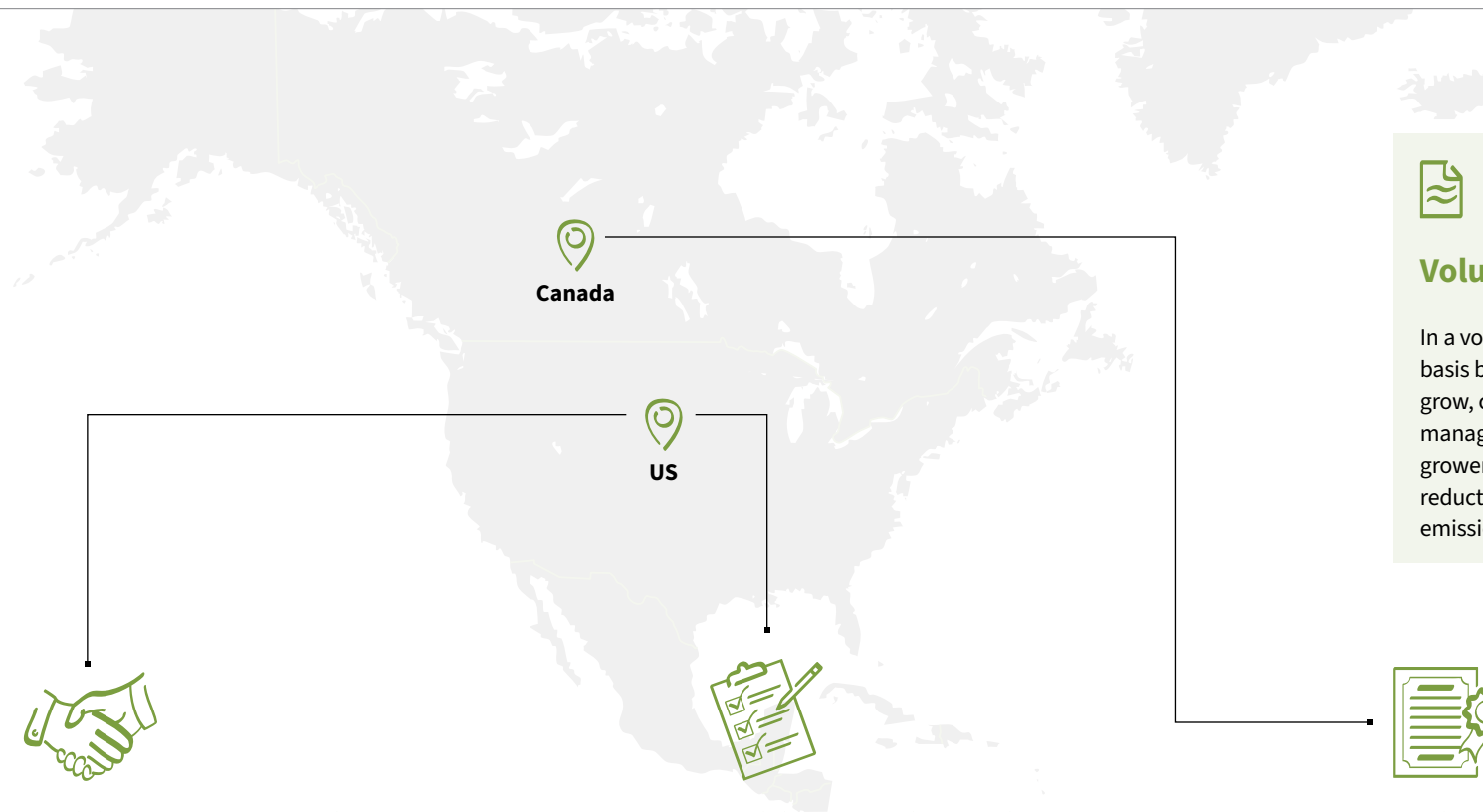
Spotlight

Nutrien's Carbon Program in action

Our Carbon Program aims to empower growers and our industry to accelerate sustainable agriculture and soil carbon sequestration while rewarding growers for their efforts. Together with our value-chain partners, Nutrien incentivizes practices and offers products and services that support the creation of carbon offsets or insets. Nutrien uses our digital platforms, such as Agrible®, to measure and track the results that growers share.

In 2023, we successfully demonstrated proof of concept for verified and tradeable carbon outcomes. Our combined US and Canada insets and offsets resulted in approximately 1,500 tonnes CO₂e of emissions reductions and removals from improved agricultural practices. The groundwork accomplished a new validated pathway in Canada and verified GHG outcomes, which positions us to continue to support increasing grower accessibility and potential scale moving forward.

Here are three highlights from our Carbon Program in 2023.



Verified GHG offsets in the US

Working with growers since 2021, Nutrien verified GHG offsets based on improved nitrogen management by growers in the US.

Following the Climate Action Reserve's US [Nitrogen Management Protocol Version 2.1](#), growers' emission reductions from the 2021 harvest were third-party verified for sale. Credits were issued into the voluntary offset market in August of 2023 and purchased by Royal Bank of Canada in November.

This first sale of emission reduction offsets from in-field practices is a potential path for a scalable offset program that is accessible to farmers across the US.

Verified GHG insets in the US

Nutrien is a Founding Circle member of the ESMC. Nutrien sponsored ESMC's Eco-Harvest Pilot Program, and acted as enrollment specialist and crop advisor to collect data and support the verification of removals and reductions from growers. Reductions were the result of changing nutrient management, reducing tillage or establishing new cover crops in the midwestern US.

This pilot program began in 2021 and the results now provide a roadmap to scale future agricultural carbon projects. [Learn more.](#)



Voluntary carbon markets explained

In a voluntary carbon market, trading is on a voluntary basis but still structured with verified credits. As crops grow, carbon is sequestered into soil and with improved management of nitrogen inputs there is an opportunity for growers to also measure, track and verify GHG emission reductions. Both carbon sequestered in the soil and GHG emission reductions qualify as carbon credits.



Validated pathway and verified GHG outcomes in Canada

We are the first company in Canada to achieve validated pathway and verified GHG outcomes with SustainCERT, a globally recognized climate impact verifier.

Our Canadian Sustainable Nitrogen Outcomes program is modeled on Alberta's [Nitrous Oxide Emissions Reduction Protocol](#) ("NERP"), which uses field-level data to measure, track and validate CO₂e reductions from nitrogen fertilizer application.

In 2023, SustainCERT verified the GHG emission reductions from this value-chain intervention that involved a collaboration of farmers, Nutrien, Maple Leaf Foods and others. The reduction will enable Maple Leaf Foods to inset a reduction against their Scope 3 emissions. Projects like these can help reduce Nutrien's Scope 3 emissions in the future.

GHG Emissions and Climate Change

We are committed to reducing GHG emissions across our operations and supporting growers with emission reduction solutions.

How is this topic relevant to our business?

Fertilizer production and use have complex and conflicting impacts on GHG emissions across the agricultural value chain. Fertilizer is critical to healthy and productive crops, enhancing soil carbon (the level of carbon that is directly tied to the level of organic matter in the soil) and increasing yields, which helps to feed the growing population from the same amount of arable land.

However, nitrogen fertilizer also generates GHG emissions when it is produced and after it is applied to the soil.

[Read more](#). As the global population is expected to reach 10 billion people by 2050, growers will be challenged to increase production to meet the demand for food, feed, fiber and fuel, while also reducing GHG emissions from agriculture and maintaining existing arable land use. We believe that we can help our grower customers meet this challenge.

Our operations, facilities and fleet are associated with Scope 1 and 2 GHG emissions and our value chain generates our Scope 3 GHG emissions.

The potential impacts from climate-related risks have been identified as a top sustainability concern by our stakeholders. At the same time, we have a significant opportunity to help farmers mitigate and adapt to the changing climate as well as to increase efficiency and reduce emissions from our operations.

Targets

Our GHG emissions targets progress is not linear. We continue to assess various options as we strive to achieve our ambitions.

- **In progress** – Launch and scale a comprehensive Carbon Program, empowering growers and our industry to accelerate climate-smart agriculture and soil carbon sequestration while rewarding growers for their efforts, by 2030
- **In progress** – Achieve at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018, by 2030
- **In progress** – Invest in new technologies and pursue the transition to low-carbon fertilizers, including low-carbon and clean ammonia, by 2030
- **Partially achieved** – Reduce GHG emissions in Nitrogen production by 1 million tonnes CO₂e by the end of 2023*
- **Withdrawn** – Deploy self-generated wind and/or solar energy at four Potash facilities by the end of 2025

* On an intensity basis vs 2018 baseline emissions intensity

Key links:



Global alignment and standards

[World Resources Institute GHG protocol](#)
[Task Force on Climate-related Financial Disclosures](#)
[NERP protocol](#)
[Intergovernmental Panel on Climate Change \(“IPCC”\) Sixth Assessment Report \(AR6\)](#)



Nutrien's contributions to the SDGs



[Learn more](#)



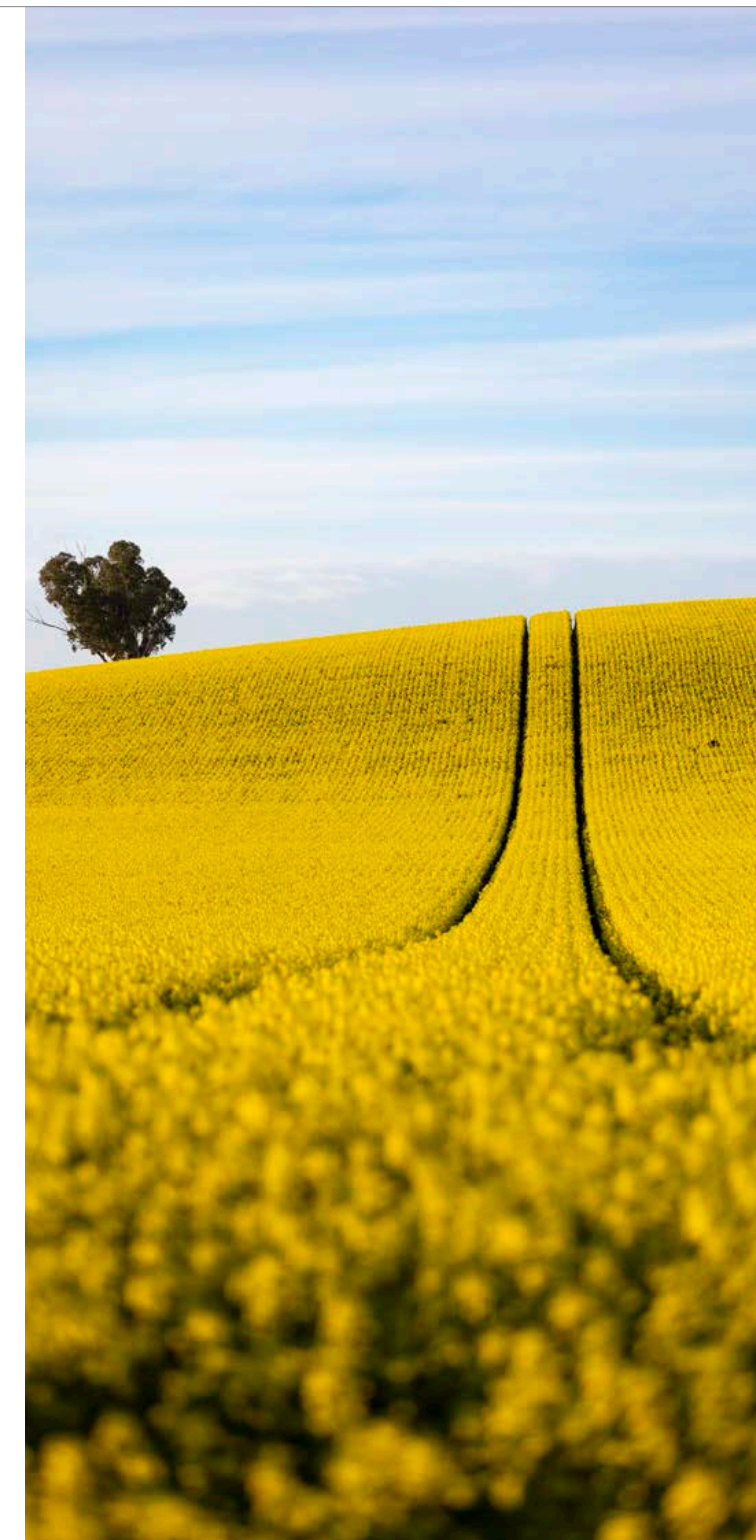
Nutrien's policies, positions and disclosures

[Safety, Health and Environment \(“SH&E”\) Policy](#)
[SH&E Management System](#)
[2023 CDP climate disclosure](#)
[GHG inventory management plan](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)
[Executive responsibilities for sustainability](#)
[Management responsibilities for sustainability](#)
[Nutrien's Climate Strategic Issue Teams](#)



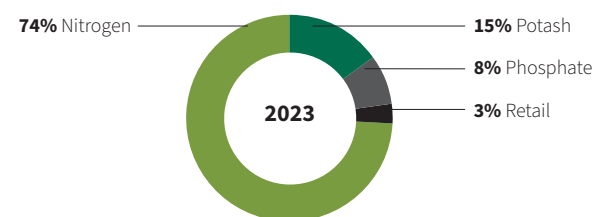
Our approach

We are committed to reducing GHG emissions across our operations and enabling positive climate action across the agriculture and agri-food sector. Some of our initiatives focus on reducing GHG emissions of our fertilizer production (primarily from nitrogen production), but we also partner with growers to reduce in-field GHG emissions and sequester increased carbon in the soil.

We incurred \$50 million of capital expenditures related to the completion of our GHG Phase 1 abatement program since 2021. We originally anticipated investing more than \$500 million to achieve at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018, by 2030. We continue to evaluate our strategic emissions abatement projects, including for technical and economic feasibility, as well as estimates on our expected capital expenditures to achieve our 2030 emissions intensity reduction target.

GHG Emissions by Operating Segment

(% of total Scope 1 and 2 emissions)



Our Nitrogen operating segment is the largest contributor to our overall GHG emissions and a key focus area of our reduction initiatives.

Emissions related to our operations

The manufacturing of fertilizer accounts for approximately 95 percent of our company-wide direct (Scope 1) and indirect (Scope 2) emissions. Direct emissions are generated on site, from the combustion of 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. The sources of GHG emissions related to the nitrogen, potash and phosphate fertilizer we produce are described in detail on our [website](#).

Measuring Scope 1 and 2 emissions

Nutrien measures and reports our GHG emissions in accordance with the GHG Protocol Corporate Accounting and Reporting Standard (2004) on an operational control basis. We continue to refine our control environment to ensure the completeness, consistency and accuracy of our GHG emissions data. KPMG LLP provided limited assurance over our 2023 Scope 1 and 2 GHG emissions and their assurance report can be found [here](#).

Reducing Scope 1 and 2 emissions

In order to achieve at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced by 2030, from a baseline year of 2018, our approach falls into the following four categories:

1 | Process improvements

Process improvements that allow us to reduce GHG emissions at our facilities, with a focus on our Nitrogen sites, include N₂O abatement, efficiency and reliability improvements. We estimate that N₂O abatement technology can remove over 90 percent of N₂O emissions from nitric acid production, an essential step in producing

certain nitrogen fertilizers. Since N₂O has a significantly higher global warming potential compared to CO₂, N₂O has a significant impact on our GHG emissions. Many factors can negatively impact the efficacy of our progress and emissions reduction efforts. For example, reliability and plant turnaround schedules can impact our energy efficiency and associated GHG emissions profile because plant start-ups and shutdowns consume energy without associated production.

Progress update on short-term nitrogen GHG emissions target

As we continue to work towards our goal of reducing 1 million tonnes of CO₂e from Nitrogen operations on a per tonne of products produced basis, compared to our 2018 baseline, we are proud to announce the successful completion of our GHG Phase 1 abatement program. These GHG reduction projects have been successful and have helped prevent the release of over 300,000 tonnes CO₂e per tonne of our products produced in 2023 compared to 2018. However, we have faced some operational challenges that have affected the overall improvement in emissions intensity. Despite these challenges, we expect that the progress we have made positions us to achieve this target from 2024 onwards.

- **Redwater, AB vent sweep project:** This project eliminated a source of methane emissions at the facility. Since methane has a global warming potential roughly 30 times higher than CO₂, we anticipate this project will have a quantifiable impact on our GHG emissions at Redwater.
- **N₂O abatement:** In late 2023, we completed our final project in our suite of N₂O abatement projects that included installing new equipment at our Geismar, LA site. Other projects were completed at Augusta, GA, Kennewick, WA, and Lima, OH in 2021 and 2022. We anticipate seeing the full impact from all these projects on our GHG inventory in 2024.



Right: Nutrien's Geismar, LA Nitrogen facility.



Emissions related to our operations (continued)

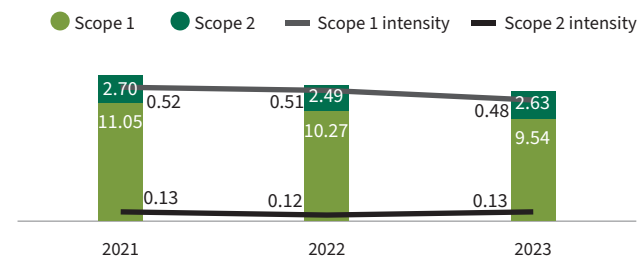
2 | Energy efficiency, cogeneration and renewable energy

We aim to continually improve our energy efficiency, which directly reduces our GHG emissions and improves production costs. Where feasible, as equipment is replaced for upgrades or due to end of life, it is upgraded to a more energy-efficient option. Reductions in Scope 2 emissions can be achieved at the point of energy production as well as at the point of consumption.

Progress

- **Energy efficiency:** Nutrien has centralized all ammonia plant operating data with a goal of using advanced analytical tools to support our Nitrogen facilities to run at their optimal production and energy efficiency points, minimizing our emissions intensity. [Learn more](#) about Nutrien’s Nitrogen Real-time Operations Center.

GHG emissions (million tonnes CO₂e) **GHG intensity** (tonnes CO₂e per tonne of product)



Our absolute Scope 1 and 2 emissions and emission intensities decreased in 2023 primarily due to a decrease in nitrogen production volumes, and an increase in potash production volumes relative to nitrogen production volumes, respectively. The implementation of certain emissions reduction projects, facility maintenance activities, and changes in electricity grid emissions also contributed to the change. For more details, please see the performance table on [page 91](#).

- **Cogeneration/power generation:** Our Carseland, AB Nitrogen facility and our Cory, SK Potash mine use cogeneration to efficiently combine heat and power generation. Nutrien is constructing a power generation facility at our Rocanville, SK Potash mine that is expected to meet the majority of that site’s power demand with lower-emission electricity than currently available from the grid. The Rocanville natural gas-based power generation facility is expected to be commissioned in 2024.
- **Renewable energy:** We continued to assess renewable energy opportunities for our Potash facilities, which are located in Saskatchewan, where power is provincially regulated. It was initially anticipated that we could deploy self-generated wind and/or solar energy by the end of 2025 but given that adding renewable energy to the grid needs to be considered in conjunction with the regulator’s decarbonization strategy and the capital required to implement physical assets, we no longer expect to achieve this target and have withdrawn it. Overall, this target represented a small portion of our Scope 2 emissions footprint and our 30 percent GHG emissions (Scope 1 and 2) intensity target. We continue to work to better understand challenges and opportunities related to renewable electricity and the Saskatchewan grid and evaluate additional strategies to reduce our Scope 2 emissions. [Read more in Nutrien’s Annual Information Form.](#)

3 | Fleet fuel efficiency and fleet electrification

We are exploring ways to reduce the carbon footprint of our North American Retail fleet, consisting of more than 30,000 trucks, forklifts, tractors, fertilizer and seed applicators, and other moving equipment.

Progress

- **Electric vehicles:** In 2023, we evaluated the feasibility of transitioning some of our light and medium-duty trucks, more than 10,000 vehicles, from internal combustion engine to electric vehicles (“EVs”). The evaluation included a pilot of testing two EVs in

California to determine asset effectiveness and charge coverage. We expect to incrementally invest in and expand our EV fleet, dependent upon feasibility, to reduce our carbon impact and to meet regulatory requirements in the jurisdictions where we operate.

- **Vehicle telematics:** We installed vehicle telematics in our Retail commercial and light-duty vehicle fleets in 2023. Telematics give us increased visibility into a vehicle’s health and utilization, as well as additional logistics, diagnostics and asset management needs. During the pilot, we observed meaningful fuel savings due to reduced idling time.

4 | Low-carbon and clean ammonia

Low-carbon and clean ammonia can be produced using one or a combination of technologies including renewable electricity and/or carbon capture utilization and storage (“CCUS”), the permanent storage of CO₂ underground using sequestration reservoirs or for use in a range of applications.

Progress

- **Low-carbon ammonia:** Our near-term focus is on using CCUS infrastructure and growing our low-carbon ammonia production. Our Redwater Nitrogen facility has been capturing and exporting CO₂ into the [Alberta Carbon Trunk Line](#) since late 2019. In 2023, an additional project was completed to increase the export capability to over 800 tonnes of CO₂ per day. As of December 31, 2023, Nutrien has annual production capability for 1.2 million tonnes of low-carbon ammonia at our Geismar, LA, Redwater, AB and Joffre, AB Nitrogen facilities.
- **Clean ammonia:** We are suspending work on our proposed Geismar clean ammonia project. This decision is due to an increase in expected capital costs compared to our initial estimates, continued uncertainty on the timing of emerging uses for clean ammonia and prioritizing strategic capital allocation.
- **Dual-fuel vessels:** As a result of suspending the Geismar clean ammonia project, we are currently evaluating our participation in EXMAR’s (our shipping partner) ammonia dual-fuel vessel.

What is low-carbon and clean ammonia?

Low-carbon ammonia production typically reduces direct emissions by approximately 60 percent but can achieve as much as an 80 percent reduction compared to a conventional process. It is typically manufactured by utilizing byproduct hydrogen (for example, at our Joffre, AB plant) or employing CCUS (for example, at our Geismar, LA or Redwater, AB plants) at a conventional ammonia plant.

We are actively participating with The Fertilizer Institute, and supporting the Ammonia Energy Association, in the development of low-carbon ammonia certification standards. This will help the North American industrial ammonia and fertilizer production sector accurately and consistently communicate the carbon intensity of these products, which is key to enabling decarbonization along the agriculture and energy value chains.

Clean ammonia production requires a direct emissions reduction of at least 90 percent compared to a conventional process, necessitating the use of next-generation ammonia production technology such as autothermal reforming with CCUS or electrolysis of water using renewable power.

1.2Mmt

annual low-carbon ammonia production capability

Emissions related to our operations (continued)

- **Other technologies:** Nutrien continues our partnership with the US Department of Energy (“DOE”) and other industry partners to develop a clean ammonia plant with technology developed from the Renewable Energy to Fuels Through Utilization of Energy-Dense Liquids (“REFUEL”) program.
- **Study and assessment:** Nutrien is conducting a study to assess the technological feasibility, develop preliminary engineering and create the overall business case for difficult-to-abate carbon emissions at the Redwater, AB ammonia production facility. [Read more.](#)

Emissions from our value chain

For Nutrien, GHG emissions from nitrogen fertilizer application are significant to our total carbon footprint. Approximately half of the fertilizer volumes we sell to our grower customers is nitrogen-based and has the potential to produce GHG emissions. See [How does nitrogen fertilizer generate GHG emissions?](#) Fertilizer management practices are an important way to reduce N₂O emissions and one of the reasons crop consultants at Nutrien provide farmers with nutrient-management planning advice.

1 | Understanding our Scope 3 emissions

In 2023, using high-level estimated emissions and criteria aligned with the GHG Protocol’s technical guidance for calculating Scope 3 emissions, we identified eight of the 15 Scope 3 categories as relevant to Nutrien (see table on this page). Our cross-functional project team continued working with an external consultant to build databases and calculation models, and refine our calculation methodologies. We updated global warming potential factors to the newest information available per the IPCC (AR6), consolidated Nutrien’s global data, refined emissions factors to be more representative of the

underlying data, and used agronomic insights to better represent our products and their associated emissions. The measurement of Scope 3 emissions is complex and iterative, and we anticipate the accuracy of our estimates will improve and evolve over time.

We currently estimate that Category 11 (Use of Sold Products) and Category 1 (Purchased Goods and Services) combined account for approximately 90 percent of the identified value-chain emissions. Category 11 is associated with nitrogen fertilizer use on field. In our original assessments, Category 11 was measured using a global Tier 1 approach and broad emission factors. Due to limitations in this approach, we have since collaborated with internal specialists to calculate this category using a Tier 2 approach which led to a more refined methodology more in line with accepted GHG accounting principles. There is still ongoing analysis regarding this approach, as accuracy of these emissions depends on data availability for the variables that influence their release. Our internal specialists continue ongoing research and exploration to increase precision and support decision making.

2 | Working towards sectoral decarbonization pathways

We remain focused on supporting the development of a science-based target methodology that is appropriate and specific to the fertilizer sector. In 2021, Nutrien set short-term and mid-term reduction targets for Scope 1 and 2 GHG emissions. We continue to work with the WBCSD, fertilizer peers and the Science Based Targets initiative (“SBTi”) to produce a sectoral decarbonization approach (“SDA”) for the fertilizer industry, which as of December 31, 2023 had not been published for public comment. The role of nitrogen in food production, soil health and optimization of land use are unique attributes differentiating nitrogen fertilizer manufacturing from other chemical industries and these attributes need to be considered in developing the SDA process. Any use of an SDA to set an emissions target will depend on several factors including its suitability to Nutrien’s operations and its technological and economic feasibility.

Nutrien’s relevant Scope 3 categories

Scope 3 category	Relevant to Nutrien	Examples of items being evaluated in the category
Category 1: Purchased goods and services	●	Purchased fertilizer, chemicals and seed. Upstream emissions of natural gas used as feedstock
Category 2: Capital goods	●	Equipment, machinery, buildings, vehicles
Category 3: Fuel- and energy-related activities	●	Upstream emissions of natural gas used as fuel, electricity and steam not included in Scope 1 and 2
Category 4: Upstream transportation and distribution	●	Internal movement of goods in vehicles not owned or operated by Nutrien
Category 5: Waste generated in operations		
Category 6: Business travel		
Category 7: Employee commuting		
Category 8: Upstream leased assets		
Category 9: Downstream transportation and distribution	●	Transportation of sold products in vehicles not owned or operated by Nutrien
Category 10: Processing of sold goods	●	Urea used in production of anti-icing agents, and ammonia used in production of adhesives
Category 11: Use of sold products	●	Nitrogen fertilizer applied to soils. See How does nitrogen fertilizer generate GHG emissions?
Category 12: End of life treatment of sold products		
Category 13: Downstream leased assets		
Category 14: Franchises		
Category 15: Investments	●	Canpotex, Profertil, Sinofert and insurance investments

Emissions from our value chain (continued)

3 | Collaborating for climate action

To address the agriculture industry's most pressing issues, we intend to use our role in the agriculture industry to advocate for action to transform the global food system. In 2023, we became a founding partner of the Canadian Alliance for Net-Zero Agri-food ("CANZA"). The goal of this new alliance is to foster collaboration and innovation to collectively support aspirations for Canada's agri-food system towards net zero. This alliance of stakeholders from across the Canadian agri-food system can help progress solutions to challenges experienced around the world. Nutrien is helping develop a regionally representative and scalable monitoring, measurement, reporting and verification framework for quantifying environmental outcomes of sustainable agriculture practices, as well as enabling agri-food corporations to report these outcomes as part of their Scope 3 emissions inventory. [Read more.](#)

In Australia, Nutrien is a partner in the Zero Net Emissions from Agriculture Cooperative Research Centre ("ZNE-Ag CRC"). The ZNE-Ag CRC has a goal to transition Australian agriculture to net zero, healthy, resilient and profitable food systems by 2040. In addition, we have submitted a response to the Australian Government's Agriculture & Land Sector Plan including recommendations to incentivize industry decarbonization including the development of pathways to recognize emissions reductions resulting from the use of enhanced efficiency fertilizers and from changes associated with ruminant livestock.

4 | Addressing Scope 3 GHG emissions through our Carbon Program

While we refine our Scope 3 measurement estimates, we continue working to help our grower customers reduce emissions from agriculture. Nutrien's Carbon Program is designed to help growers generate high-quality carbon outcomes (offsets or insets) that can be monetized in voluntary or compliance carbon markets. Growers use best practices to maintain or increase soil organic matter levels and/or optimize the application and efficiency of nitrogen fertilizer. Nutrien brings companies together from across the agricultural value chain to incentivize grower adoption of sustainable products and practices. [Read more.](#)



Product Stewardship

Nutrien strives for the safe and responsible handling and use of our products.

How is this topic relevant to our business?

Product stewardship refers to our efforts to manage risk and maximize the health, safety, environmental and social benefits of our products. Aiming to reduce potential negative impacts from the products we manufacture and sell is part of being a responsible business and can help our grower customers manage increasing environmental and societal pressures.

Targets

- **Achieved** – Complete risk evaluation profiles of NPK (fertilizer) manufactured products by 2024

Key links:



Global alignment and standards

[IFA Protect & Sustain](#)

[ResponsibleAg in the US](#)

[Agsafe in Australia](#)

[Chemical Facility Anti-Terrorism Standards](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[SH&E Policy](#)

[SH&E Management System](#)

[Product Stewardship Position](#)

[GMO Position](#)

[Pesticides Position](#)

[Existing and Emerging Product](#)

[Technology Position](#)

[Policy Statement on Animal Testing](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)

[Product Stewardship Strategic Issue Team](#)



Our approach

Nutrien strives for the safe and responsible handling and use of our products. Our product stewardship approach seeks to address product safety, and environmental and social areas of concern. We adhere to the principles of collaboration and evidence-based decision making throughout our product stewardship activities.

Our product stewardship team collaborates with our internal SH&E, procurement, product innovation and operational teams, industry peers and organizations, and other stakeholders to share best practices, manage health and environmental impacts, and promote sustainable solutions. We actively engage with NGOs and sustainability organizations on topics such as safer alternatives, green products and circular thinking to inform our sustainable products journey.

To make informed decisions about product suitability and use, we monitor research closely and follow product and ingredient 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. Nutrien may use animal-based testing to confirm human health safety assurance only on rare occasions when scientifically valid alternative methods are not feasible or if required by law. Read our [Animal Testing Statement](#) for details.

We care about the safety and environmental impact of our products. Nutrien’s product stewardship efforts are recognized through the IFA [Protect & Sustain program](#), which seeks to ensure products are responsibly developed, sourced, manufactured, stored, transported and applied.

Product stewardship activities

From product development and manufacturing to distribution, sales and use, we strive to minimize product risk and maximize the health, safety, environmental and social benefits of our products.

1 | Product development and manufacturing

Product stewardship starts in the early stages of product development and carries across the entire product lifecycle. We evaluate potential risks and disclose our efforts in the following categories of interest to our stakeholders:

Genetically modified organisms (“GMOs”)

While Nutrien does not own any GMO traits, we are directly involved in breeding canola, cotton, rice, wheat and soybean seeds 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 additional risk to people, animals or the environment¹. GMO crops provide benefits for growers, food security through higher yields, improved disease tolerance, insect resistance and better tolerance in drought conditions, as well as land use efficiency. In some cases, studies have shown that there are reduced GHG impacts from using such seeds because of the associated reductions in other required inputs. We continue to monitor GMO technology development and impact studies regarding health and environmental impacts when making future product decisions. [Learn more.](#)

Pesticides

Pesticide products are a part of the solution for many of our customers who have been challenged to grow more with less land. The use of pesticides makes food affordable, while protecting and sustaining our global food supply. Pesticides continue to draw public concern regarding their safety. Governmental agencies such as Health Canada and the US Environmental Protection Agency (“US EPA”) provide significant regulatory oversight for the safe use of these products. Based on available evidence, we believe that by strictly adhering to the approved label uses and applications, growers can continue to safely use pest management products. We support studies evaluating the possible impacts on non-target species and the modification of product labels to provide clear information regarding the prohibited uses of and directions for the effective use of the products to users.

2 | Procurement, storage and distribution

We work to ensure product safety and stewardship across our value chain, including upstream (when we are procuring feedstocks), in our operations (when products are stored) and downstream (when our products are being handled by customers).

Feedstock evaluation

Our Product Stewardship and Procurement teams are working together to operate and expand a vendor Product Stewardship program and joint feedstock evaluation process to confirm regulatory status, origin, and manufacturing quality of materials and chemicals before approval for incorporation into Nutrien’s manufactured finished products. This work is part of

the Procurement supplier risk screening initiative. Read more in the [Responsible Supply Chain section](#). We are also considering the integration of sustainable material parameters into this approval process as part of our product risk profile project.

Product risk profiles

We continue to align multiple best practices to identify and establish categories for our product risk profiles, which highlight the types of risk across our portfolio and inform priorities for improving product safety and sustainability.

In 2023, we created product risk profiles for more than 200 NPK (fertilizer) products, additives and unique components used in our North American and European wholesale business. Digital profiles were created for products such as anhydrous ammonia, potash, urea, ammonium sulfate and phosphoric acid. The profiles include information on product identity, hazard classification, and chemical class, and jurisdiction-specific information that will provide the foundation for more informed risk discussions and decision making.

Performance	2023	2022	2021
Percentage of Nutrien seed sales that contain GMOs	78%	86%	86%
Percentage of total Nutrien sales that contain GMOs	6%	5%	6%

1 Learned Societies and National Academies Endorsing Safety of Genetically Modified Crops. (2013)

Product stewardship activities (continued)

Product storage safety and security

Our Retail selling and storage facilities follow industry best practices for safe storage, including ResponsibleAg in the US and Agsafe in Australia.

- **Ammonia storage:** Secure storage of ammonia products is critical because a product release could cause a safety hazard in the local area. Nutrien employs multiple safety and security measures for ammonia storage in accordance with regulations that vary depending on the operation and location.
- **Fire prevention:** Some fertilizers are highly flammable. We conduct fire risk analyses and review our emergency response plans with local responders annually to confirm that they are aware of our flammable products and where they are stored.
- **Engulfment prevention:** We implement engineering and administrative controls in an effort 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.
- **Chemical Facilities Anti-Terrorism (“CFAT”) preparedness:** Chemical facilities are critical infrastructure subject to malicious intent and potential harm to people and the environment resulting from deliberate acts of terrorism, theft, sabotage and other release of chemicals. Nutrien’s Global Security department is embedded within our SH&E department and regularly evaluates and addresses actual and potential security issues and requirements associated with our operations in the US and elsewhere using approved security vulnerability methodologies. Nutrien’s CFAT Preparedness Manager coordinates the identification, evaluation, maintenance, reporting, registration and regulatory interaction of sites with chemicals of interest.

Safety data sheets and product labeling

Safety data sheets (“SDSs”) accompany all chemical products that Nutrien manufactures and sells. SDSs contain essential information about the properties of each chemical including any physical, health and environmental health hazards, in addition to any safety precautions required for handling, storing and transporting the chemical. SDSs are available at our production facilities, during product transport and at our Retail selling locations, and are accessible on our website or through third-party providers for our customers and the public 24 hours a day. Certain products and safety documents may be regulated by the US EPA, Canada Pest Management Regulatory Agency (“PMRA”), European REACH, Fertilizer Act and Chemical Labelling and Packaging (“CLP”), Canadian Food Inspection Agency (“CFIA”), and the US Occupational Safety and Health Administration (“OSHA”) or other agencies. Nutrien monitors changes to applicable laws as they impact SDSs and labels.

3 | End-use application

Nutrien promotes best practices that are designed to improve crop yields and farming economics while addressing potential environmental and/or human health impacts.

Minimizing nutrient loss

Nutrien is working to promote nutrient efficiency from production to harvest, which is where we have the largest influence and where the largest risk of nutrient loss occurs. To help keep products and nutrients where they are most effective, reduce losses to the environment and support economical product application, we promote best practices in nutrient application. [Read more.](#)

Safe product handling and application

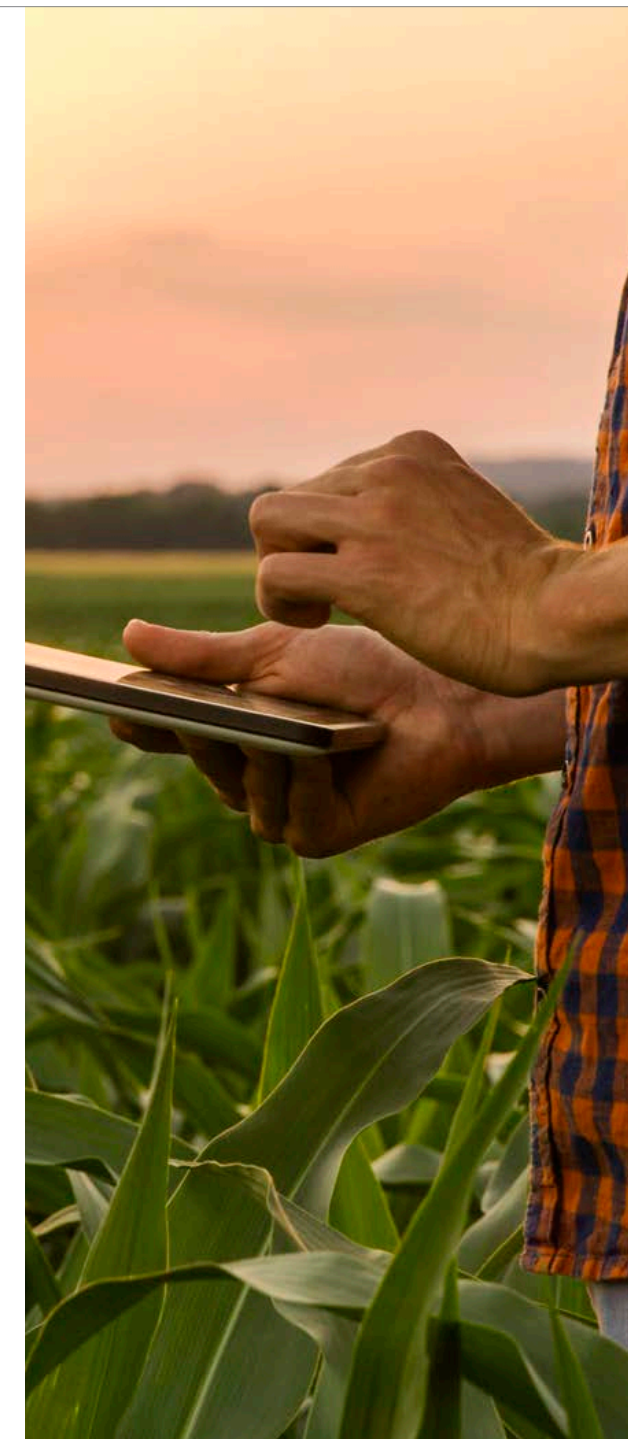
Many of the products that Nutrien produces or sells are developed for specific applications and uses. Product use outside of the mandated scope as defined on the label, in contravention of regulatory standards or misuse in general, has the potential to cause negative impacts. Pesticides and herbicides are highly regulated products in the markets where we operate. We comply with regulations applicable to our business and have policies and procedures for the safe and appropriate use of the products we sell. Some of these procedures include

- In North America (within the US and Canada) we utilize a third-party service to determine the status of pesticide products registration. This system regulates which pesticide products can be sold in which regions.
- Nutrien has a process in place to confirm Retail selling locations are certified to sell products, and, where applicable, that customers have the appropriate license or permit to purchase a product.

Training

Applicator employees, contractors and contracted service providers are required to have and maintain applicable license, certification, permit and training required for the handling and application of products (for example, Pest Control Advisor, Qualified Applicator License or Certificate). Our technical services include training and advice on best practices for products sold through our Retail selling locations.

Ammonia is a hazardous material that we produce and distribute. Read more about how we promote the safe handling of ammonia.



Biodiversity

We are evaluating our dependencies on and our impacts to nature, our associated risks, and the opportunities we have to mitigate those risks in ways that support our business, our customers and the agri-food value chain.

How is this topic relevant to our business?

Biodiversity is the variety of all living things and their interactions with each other and their environment to create a self-balancing ecosystem. Biodiversity is essential to agriculture and its long-term productivity. Biodiversity enhances ecosystem resilience, pollination, and natural resistance to pests and disease. Global agriculture depends on diverse and healthy ecosystems to sustain our food, feed, fiber and fuel supply.

As the world's largest provider of crop inputs and services, Nutrien has a role to play in supporting biodiversity and healthy ecosystems. Biodiversity is important to Nutrien, our customers and the agri-food value chain as an essential piece to maintaining and/or enhancing the productivity of agricultural and forestry lands.

Targets

- **Achieved** – Determine how digital on-farm tools can identify and track opportunities to enhance biodiversity conservation on agricultural landscapes by the end of 2023

Key links:



Global alignment and standards

[Taskforce on Nature-related Financial Disclosures framework](#)
[Natural Climate Solutions Alliance](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[SH&E Policy](#)
[SH&E Management System](#)
[Nutrien Deforestation Position](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)
[Executive responsibilities for sustainability](#)
[Management responsibilities for sustainability](#)
[Soil Health Issue Team](#)
[Biodiversity Strategic Issue Team](#)



Our approach

We are evaluating our dependencies on and our impacts to nature, our associated risks, and the opportunities we have to mitigate those risks in ways that support our business, our customers and the agri-food value chain.

In our operations

We believe that by increasing our understanding of biodiversity-related risks and opportunities we can reduce business risk and support sustainable agriculture. Our efforts are geared towards:

Taking steps to understand our impacts and dependencies

Since 2022, we have participated in the global Task Force on Nature-related Financial Disclosures (“TNFD”) pilot program. As corporate members of this program, Nutrien supported the development of the TNFD reporting framework, which provides companies with guidance for assessing and disclosing its dependencies and impacts on nature, and its associated operational and downstream risks and opportunities. See [page 37](#) for our water-related TNFD work. Although TNFD encourages companies to consider all physical realms of nature (from soil to the atmosphere), we focused our assessments on biodiversity and water. Our early participation allowed us to establish processes for internal biodiversity and water-related assessments that we trialed in 2023.

Minimizing the impact of our operations

We recognize the intrinsic value of protected areas and legally recognized areas of high biodiversity. 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 work through proper permitting measures to identify, and where possible, mitigate potential impacts. Nutrien participates in certain reclamation and remediation projects and we also work with environmental authorities to restore land used for mining with native plant varieties, which support biodiversity. [Read more.](#)

In our value chain

Nutrien’s agriculturally related products and services are designed to improve productivity on existing agricultural land. We offer agronomic services that build productive healthy soils for managed landscapes that help protect natural carbon sinks and support biodiversity. We increasingly promote agronomic services and pursue collaborations that optimize crop production on productive acres. In partnership with governments, NGOs and food companies, Nutrien is exploring ways to shift marginally productive agricultural land to acres that foster more biodiverse ecosystems on managed lands. By doing so, we can help enhance biodiversity conservation on agricultural landscapes while continuing to provide food and fuel for a growing population. [Read more.](#)



Pioneering TNFD

Nutrien has been an early supporter of the TNFD.

- 2022**
 - Reviewed early drafts of TNFD guidance
 - Developed rationales to determine applicable TNFD elements to our multi-sector company
- 2023**
 - Piloted the TNFD Framework as part of the land use working group with the WBCSD
 - Developed an internal assessment process to apply at site and operating segment levels
 - September 2023 TNFD recommendations published
- 2024**
 - Plan to complete assessment of our operational footprint for our operating entities and develop processes to assess downstream nature risks and opportunities
- 2025+**
 - Develop and implement plan to reduce nature risks and capitalize on opportunities

Spotlight

Protecting and promoting biodiversity across Nutrien’s value chain

Promoting biodiversity requires collaboration. We have projects dedicated to protecting biodiversity at our sites. Nutrien is also collaborating within our value chain to mitigate biodiversity-related risks and capture biodiversity-related opportunities. Here are some examples of these activities.



Balancing wetland impacts

Since 2021, we have worked with Ducks Unlimited Canada (“DUC”), in accordance with the provincial Ministry of Environment’s Wetland Mitigation Guideline, to protect and restore drained wetlands throughout Saskatchewan to balance the wetland impact of the Rocanville, SK Potash tailings area expansion. Already more than 20 wetland basins have been restored across 290 acres, with work ongoing. Lands purchased for restoration are either retained by DUC or sold with conservation easements to protect them in perpetuity, with plans for future monitoring.



Screening for deforestation

Our operations in Brazil are using a third-party digital tool to automate the screening of new and existing grower customers for indications of illegal deforestation activity and slave labor. If the database results indicate potential issues, we will work with that grower and a third party to bring expected change to their practices within a reasonable period. If the grower does not agree to this engagement or meet the compliance within an expected time frame, we will no longer do business with them.



At our sites



Cultivating forests

Nutrien is using phosphogypsum, a byproduct of the phosphate fertilizer production process, as a base to plant and cultivate thriving forests in Fort Saskatchewan, AB. [Learn more.](#)

Relocating tortoises

During the expansion of our White Springs phosphate mining operations in northern Florida, we worked with state officials to relocate gopher tortoises, a threatened species, to a 58-acre protected on-site reclaimed phosphate mine.



Pursuing natural climate solutions

Nutrien participates in the Natural Climate Solutions Alliance, which aims to scale up affordable natural climate mitigation solutions such as reforestation, protection and conservation, animal and land management, and coastal wetland and peatland restoration. [Learn more.](#)



Planting cocoa in deforested areas

Nutrien provides funding to the Cacau Floresta (Cocoa Forest) Project, coordinated by The Nature Conservancy Brazil, to encourage family farmers to plant cocoa and recover deforested or unproductive lands in the Amazon biome. Cocoa is a species native to the Amazon with high market value, which can help to improve farmers’ income and family food security. [Learn more.](#)



Supporting biodiversity along pipelines

Nutrien is working with Marathon Pipe Line LLC to improve biodiversity and enhance habitat for pollinators and wildlife along their pipeline rights of way and facilities. [Learn more.](#)



In our value chain

Incorporating soil biology into agronomic advice

Nutrien’s soil biology report uses DNA analysis of microorganisms that are a part of plant growth, nutrient cycling and a plant stress protection mechanism, to inform agronomic advice on the use of plant nutritional products. [Learn more.](#)



Converting marginal land

We are part of the Conservation Exchange Pilot, a partnership with Ducks Unlimited Canada, Maple Leaf Foods Inc., and Environment and Climate Change Canada, to understand the value creation to growers of converting marginal areas within annually cropped fields to perennial forages. The Conservation Exchange applies a science-based certification process to measure biodiversity benefits from the conversion process. [Learn more.](#)

Beyond our value chain

Water Stewardship

Nutrien strives for the efficient use and safe discharge of water from our operations, and we are actively working to address shared water-related challenges and opportunities.

How is this topic relevant to our business?

Water stewardship refers to the use of water in a way that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and watershed-based actions. Water is an essential input to Nutrien’s global operations, especially in mining and fertilizer production where water is needed for raw material transportation and milling in our Potash and Phosphate mining operations, and for steam generation and process cooling at our Potash and Nitrogen fertilizer production facilities.

Our growers are also highly dependent on water. With global agriculture responsible for the majority of annual freshwater withdrawals around the world, Nutrien has a role to play in supporting growers’ efficient use of this resource and protecting water quality for the communities and ecosystems that draw on this shared and finite resource. By using water efficiently and protecting water quality, Nutrien and our growers can support long-term operational and agricultural viability while continuing to meet the needs of a growing global population.

Targets

- **On track** – Reduce annual freshwater use in current operations at higher-risk and higher-use manufacturing facilities by 3.0 million cubic meters by 2025, which cumulatively is expected to reduce freshwater use by 30 million cubic meters by 2030*

* Water target is supported by a series of projects executed and maintained between 2018 and 2030. Reductions are calculated on an absolute basis at a project level on a before/after basis and assumes such projects are maintained through 2030 and/or the life of the project.

Key links:



Global alignment and standards

[Alliance for Water Stewardship \(“AWS”\) International Water Stewardship Standard](#)



Nutrien’s contributions to the SDGs



[Learn more](#)



Nutrien’s policies, positions and disclosures

[SH&E Policy](#)
[SH&E Management System](#)
[Global Water Position](#)

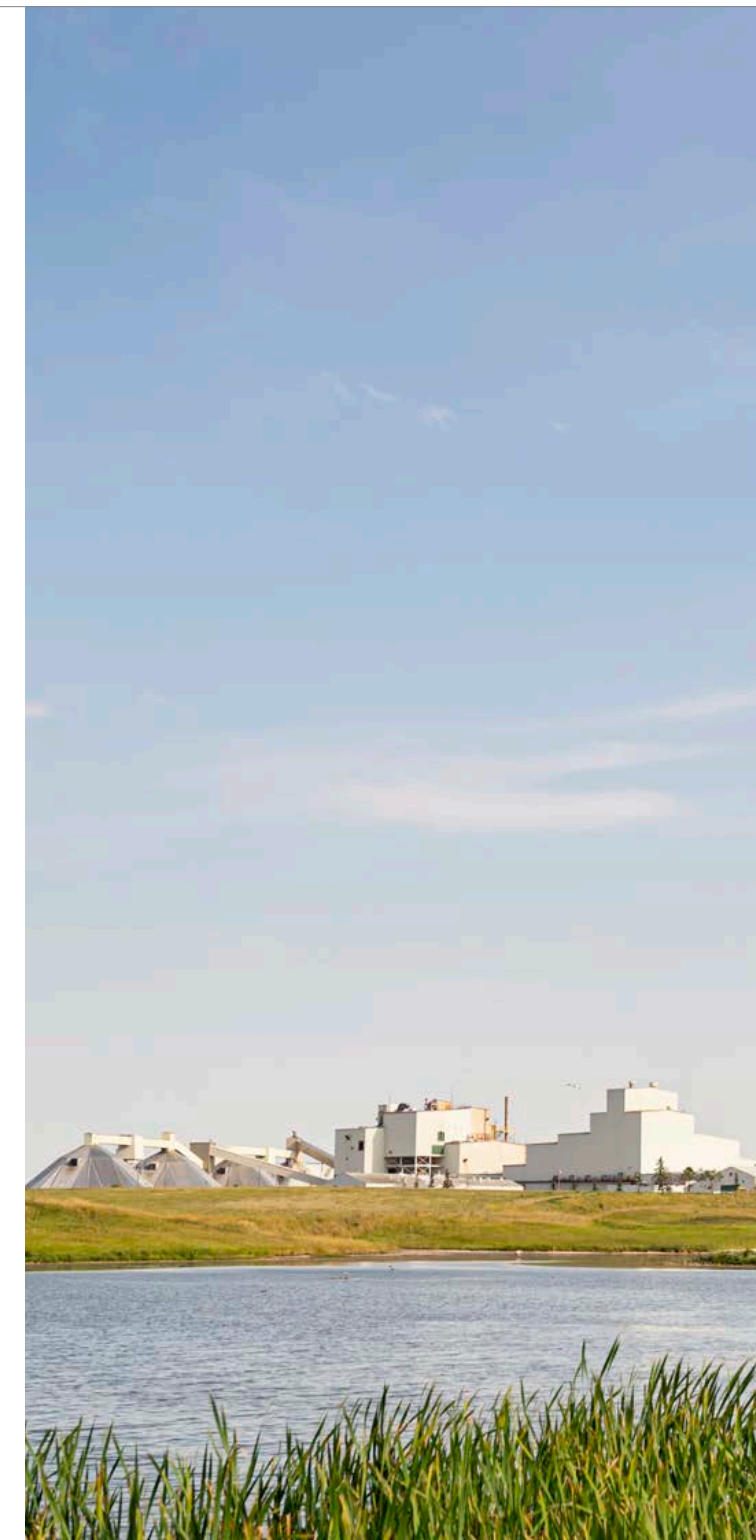


Governance for this topic

[Board Committee responsibilities for sustainability](#)
[Executive responsibilities for sustainability](#)
[Management responsibilities for sustainability](#)
[Water Stewardship Strategic Issue Team](#)



Right: Nutrien’s Patience Lake, SK Potash facility.



Our approach

Nutrien strives for the efficient use and safe discharge of water from our operations, and we are actively working to address shared water-related challenges and opportunities. Over the last few years, we have transitioned to an approach that focuses on water stewardship at a watershed level, looking outside our operational boundaries to understand the environmental and social aspects of the watersheds in which we operate.

Understanding our interactions with water

In 2022, Nutrien became one of the first companies to achieve [WAVE verification](#) for our water stewardship program. The Water Council's WAVE program provides companies with a six-step process to shift from water management to water stewardship and verifies the process has been followed. Nutrien's verification work included assessing water impacts and risks at 23 manufacturing sites and terminals across our North America and South America operations, identifying the most significant water-related impacts to our operations based on the context of the watersheds in which we operate, and ensuring best practices were being implemented to improve water stewardship performance in high-risk regions. We plan to continue in the WAVE program as our water stewardship efforts evolve.

Most recently, our participation in the development of the newly published TNFD disclosure framework (see [page 34](#) for details) informed our ongoing assessment of Nutrien's site- and enterprise-wide nature-related impacts, dependencies, risks and opportunities, focusing on biodiversity and water. We will use this deeper understanding of how Nutrien uses and impacts water to inform future risk mitigation strategies, and identify opportunities to create value for Nutrien, our growers and value-chain partners.

Key findings from the WAVE verification process and ongoing TNFD assessment include

- Less than two percent of Nutrien's water intake¹ is from regions with high or extremely high baseline water stress.²
- Many of Nutrien's higher-risk sites are engaged in water conservation and efficiency initiatives and continual improvement.

In our operations

Our primary uses of water in our operations are for producing nutrients, such as milling in mining operations, steam generation, and process cooling at our fertilizer production facilities. Water is also used to produce some of our liquid products. Nutrien's operational water stewardship activities focus on reducing freshwater use, increasing the amount of water we recycle, and protecting water quality in our watersheds.

Using water efficiently

While we withdraw significant volumes of water for use in our operations, approximately 2 percent of our water intake³ is from regions with high or extremely high baseline water stress.

Most of our fertilizer production facilities use freshwater resources (for example, rivers or groundwater) to supply the water needed for operations. At some locations we use alternative water sources, including gray water or ocean water. We recycle water where practical to reduce freshwater use and increase production efficiencies. For example, in our Potash operations, excess liquid from tailings piles (that is, saturated brine) is reused in the production process, and in our Phosphate operations, process water is reused in phosphoric acid production.

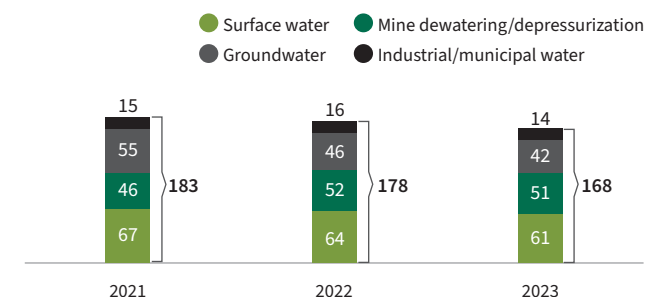
Over 20 projects across our North American wholesale operations are planned, in progress or completed to collectively reduce freshwater use. Read about two examples in the sidebar. Our estimated freshwater use reduction in 2023 was nearly 2.7 million cubic meters; and since 2018, a cumulative reduction was approximately nine million cubic meters or 3,600 Olympic-sized pools. Read about an additional water efficiency project at our Trinidad Nitrogen facility [here](#).



In 2022, Nutrien received The Water Council's [WAVE Verification](#), demonstrating our commitment to water stewardship in agriculture.

Freshwater intake by source

(million m³)



Our freshwater intake has stayed relatively consistent over the years. Mine dewatering and depressurization volumes are dependent on several factors related to mine conditions including but not limited to the location, surface area and direction of active mining operations.

Redwater, AB, Canada

Collaboration saves water and optimizes production

Nutrien's Redwater Nitrogen facility has collaborated with a vendor to solve spring runoff water treatment challenges. Many nitrogen plants use surface water for production processes, heating and cooling, but pretreatment is required before it can be used for high-pressure steam generation, especially during times of high sediment loading, such as spring runoff. The solution involved extensive testing, analytical work and trials over three years, leading to the optimization of water treatment chemicals with improved performance across the plant. Approximately 113,000 cubic meters less wastewater is now generated per year along with significant annual cost savings from reduced chemical treatment needs and the ability to sustain optimum plant production rates.

Aurora, NC, United States

Pump upgrades reduce process water intrusion and save treatment costs

A project is underway at Nutrien's Aurora Phosphate facility to upgrade the mechanical seals and pump packing for pumps across the phosphoric acid production process, which are used to transfer various materials and byproducts. The process uses many pumps that need water for effective operation, but this water can leak into the process stream ("intrusion") and require additional water treatment. The project has upgraded 45 pumps so far, saving over 780,000 cubic meters of water annually and reducing the associated treatment costs. Over the next two years, an additional 14 pumps are scheduled for upgrades.

¹ Water intake does not include our Retail facilities.

² Using the World Resources Institute's ("WRI") Aqeduct™ Water Risk Atlas.

³ Water intake does not include our Retail facilities.

In our operations (continued)

Protecting water quality

Communities with whom our operations share watersheds rely on access to sufficient quantities of clean water for health, quality of life, economic well-being and local environmental preservation. We design and operate systems and process controls to maintain the quality of our water discharges within permitted levels to protect receiving waters, lands and public works. We care for water quality in our watersheds by managing

Water discharges: We use engineering controls, testing and monitoring programs, and treatment when required, to maintain water quality of facility water discharges.

Storm water: Storm water can transport sediment and/or other constituents resulting from our operations. Our operations are permitted, constructed and maintained to protect receiving waters, lands and public works. For example, where necessary, some of our operations are engineered to manage large rain events during which excess storm water is routed to diversion channels and directed to storm water impoundments, permitted injection wells and/or storm water discharge facilities.

Gypstack water discharge and treatment: Process water within our gypstacks (stockpiles of phosphogypsum from phosphoric acid production) and storm water runoff from open gypstacks may be acidic. Process water that drains from closed gypstacks is collected and treated, or alternatively managed (reused), according to regulatory requirements before final discharge or disposition.

Closure and reclamation: See [page 42](#) for information about how we protect water during gypstack closure and mine reclamation.

In the agri-food value chain

Nutrien is working collaboratively to address shared water-related challenges and opportunities. Throughout Nutrien's extensive retail network, our agronomists and field experts promote agricultural management practices that meet the needs of the farm and make sense for the region in which they operate. These practices contribute to positive water, soil, climate and biodiversity outcomes, and enable economic and social benefits for the agri-food value chain. [Read about](#) Nutrien's Programa AWA in Chile.



Below: Water management infrastructure to support regional water needs in southern Manitoba.



Manitoba, Canada

Improved water practices to create social return on investment

The goal of the Lake Winnipeg Basin Project is to demonstrate how a creditable on-farm water stewardship planning process can create value to farmers and the agri-food value chain. It is a partnership among organizations spanning food, agriculture and environmental interests.

In 2023, four farms in the Lake Winnipeg basin, in Manitoba, implemented the first phase of the project. These farms span roughly 34,000 acres of potatoes, grains and oilseeds. Nutrien contributed financial and significant in-kind resources to help make the business case for investment in on-farm water stewardship.

The participating growers

- used the [AWS International Water Stewardship Standard](#) as a guide,
- identified current water stewardship actions and developed an understanding of the watersheds in which they operated,
- developed water stewardship plans, outlining additional practices that could be implemented, and
- submitted these strategies to a third party to evaluate the value from their current management practices, and potential value created from implementation of their water stewardship plans.

The publication of the results in August 2023 showed that the farms already bring value to the community under current operation and marked the end of phase one. Phase two officially started in October 2023 and is scheduled to run for approximately two years.

Non-Mining Waste

Nutrien aims to reduce its waste and is committed to the responsible management of non-mining waste.

How is this topic relevant to our business?

Nutrien produces non-mining waste from our 25 nitrogen, potash, and phosphate facilities, more than 2,000 Retail selling locations, and our corporate offices. Categorized as non-hazardous and hazardous waste, the vast majority (approximately 94 percent) of our non-mining waste is non-hazardous. Non-hazardous waste typically consists of construction and demolition debris, municipal waste, and paper, cardboard and plastic.

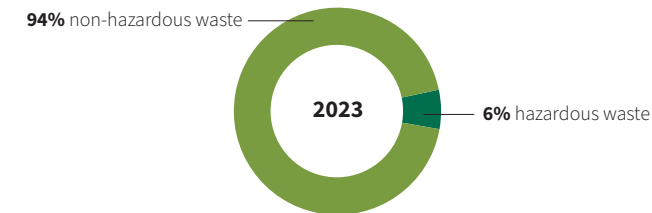
Reducing and effectively managing waste from our operations promotes efficient resource use, helps minimize our environmental impact, and reduces regulatory and reputational risks.

Targets

- **On track** – Retail will continue to broaden and implement our Global Waste Minimization Standard, with a focus on improving our data management system and analytics with an aim to set a target by 2025.

Non-mining waste disposed by type

(Percent)



Our waste volumes can vary from year to year due to production levels and projects such as construction, demolitions, turnarounds and clean-ups.

Key links:



Global alignment and standards

ISO 24161



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[SH&E Policy](#)

[SH&E Management System](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)

Our approach

Nutrien aims to reduce its waste and responsibly manage its non-mining waste.

For **non-hazardous** waste, Nutrien's Global Waste Minimization Standard outlines waste management requirements for all operating segments and locations.

Requirements include a biennial waste review completed by each site to prioritize site-specific waste minimization strategies to reduce, reuse and recycle materials. In 2023 we began to build a global data management tool to collect, monitor and report waste management across our operations.

For **hazardous** waste, Nutrien works with third-party waste management suppliers to verify these materials are transported, treated, and recycled or disposed according to applicable regulatory requirements. Where feasible, spent catalysts are sent to recycling where the metals can be recovered for reuse.



Spotlight

Reducing plastic waste across our global locations

Nutrien is progressing our global waste management strategy for plastic containers, our retail operating segment’s largest category of non-hazardous waste. While plastic is an ideal packaging material for our crop protection and seed products – it does not react with our products and is lightweight and cost-effective – we strive to use this resource as efficiently as possible and to reuse or recycle it. Here are some ways we worked to reduce plastic waste in 2023 at our locations around the world.



Participating in Cleanfarms

More than 85 percent of our Retail selling locations participated in Cleanfarms, the Canadian program to collect used agricultural packaging for recycling and bags, and returned nearly 305,000 kilograms of this material.

Nearly 600,000 pesticide and fertilizer jugs, totaling approximately 213,000 kilograms of plastic, were recycled from Retail locations across Canada.



Canada



US



Trinidad and Tobago



South America



Australia



Using a closed chain of custody system

Two of our Nutrien Solutions facilities produce custom-blended herbicide products in returnable and refillable containers using a closed chain of custody system, with containers tracked using bar-codes and a digital app. The container disposal reductions equate to about 25,000 15-gallon drums per year that are refilled repeatedly for customers across the US.

As a member of the Ag Containers Recycling Council (“ACRC”) Nutrien has recycled almost 955,000 kilograms of plastic containers since 2020.



Partnering with a local NGO

We partnered with a local NGO to convert 1,300 kilograms of plastic waste from our facility into benches for an outdoor seating area.



Participating in Sistema Campo Limpo

Nutrien’s Brazilian retail operations participate in the National Institute for Processing Empty Packages Sistema Campo Limpo (Clean Field System). We promote responsible reuse or disposal of used crop protection containers and provide our customers with information on certified locations near their farms where they can recycle their used containers. We also strengthened relationships with similar organizations and promoted projects in Argentina, Uruguay and Chile.



Participating in plastic recycling programs

One hundred percent of our Retail selling locations have a plastic recycling program in place.

Almost 85 percent of the 110 liter drums used for crop protection and plant nutrition production distribution were returned for reuse, an increase from about 75 percent in 2022 and 2021.

We also participate in drumMUSTER , an ag industry program, to collect small pack drums (under 20 liters) for recycling.

Mining Tailings and Byproducts

We responsibly manage mining tailings and byproducts in compliance with applicable laws, regulations and environmental standards.

How is this topic relevant to our business?

Potash tailings and phosphogypsum make up the vast majority of Nutrien's waste profile. Each year we produce approximately 28 million tonnes of mining waste or byproducts.

Our **potash** mining and milling activities produce potash tailings consisting of salt, brine (salt water) and clay. Although salt, clay and brine are non-hazardous, spilled brine could reduce soil productivity or impact the salinity levels of fresh surface or groundwater. Nutrien has six active Potash mines with tailings management areas ("TMAs") in Saskatchewan, and one inactive facility undergoing decommissioning in New Brunswick, Canada.

Our **phosphate** mining and processing activities produce phosphogypsum, a silt-like byproduct of phosphate fertilizer manufacturing primarily composed of hydrated calcium sulfate, and small amounts of trace metals and naturally occurring radioactive materials that were originally in the phosphate rock. Nutrien's phosphogypsum is primarily stored in engineered stacks referred to as phosphogypsum stacks or gypstacks. We manage gypstacks at six facilities. Nutrien's active gypstacks are located in Aurora, NC and White Springs, FL. Inactive gypstacks are located in White Spring, FL, Conda, ID, Geismar, LA, Redwater, AB, and Fort Saskatchewan, AB and have been closed or are undergoing closure.

Transparent, safe and responsible management of mining byproducts is essential for protecting the environment and maintaining trust with our employees, communities and other stakeholders.

Key links:



Global alignment and standards

Nutrien's Tailings Management Standard incorporates elements and principles from the following:

[Global Industry Standard on Tailings Management](#)

[Mining Association of Canada](#)

[Canadian Dam Association](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[SH&E Policy](#)

[SH&E Management System](#)

[Nutrien's Tailings Safety Disclosure](#)

[Tailings Management Standard \(Potash\)](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)



Our approach

We strive to responsibly manage mining tailings and byproducts in compliance with applicable laws, regulations and environmental standards.

Potash tailings management

We sell small quantities of salt for winter road application, but the majority of potash tailings are stored in TMAs. TMAs are engineered containment facilities to store solid tailings and brine. Containment typically consists of engineered dykes, engineered slurry-walls or compacted earth trench barriers.

Nutrien's internal Tailings Management Standard defines Nutrien's minimum requirements for tailings and brine management within TMAs in the Potash operating segment. Our standard incorporates relevant best practices from the Mining Association of Canada and Global Industry Standard on Tailings Management, and includes requirements for: governance roles and responsibilities, planning, design and testing; facility operations, management and training; and performance evaluation, auditing and continual improvement. As described in our Saskatchewan Potash facility environmental operating permits, all external potash tailings dykes in Saskatchewan are defined as "High Classification" based on Canadian Dam Safety Guidelines. Learn more in [Nutrien's Tailings Safety Disclosure](#).

At each active mine site, there are environmental staff who manage the day-to-day compliance and surveillance needs of the TMAs. At the corporate level, Nutrien has dedicated engineering groups, an ERM group and a centralized SH&E group that support risk assessment and auditing of these facilities. We also hire third parties with expertise in engineering, construction and decommissioning activities to support us as we develop, implement and maintain our tailings management systems safely. All six Saskatchewan Potash sites have a decommissioning and reclamation plan that requires renewal and regulatory approval every five years.



 Above: Nutrien's Aurora, NC Phosphate facility.

TMAs includes safe storage in

- **Tailings and brine 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 tracking of surrounding environmental conditions.
- **Tailings piles:** We separate the liquid from the solids through gravity drainage. Tailings are stored in piles that are closely monitored through routine inspections, investigations and examinations of surrounding environmental conditions. The salt in the piles dissolves over time through natural rainfall events. Excess liquid, or saturated brine, that is not reused in the production process 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 approval.

Phosphogypsum management

To maintain the **stability of gypstacks**, they are constructed, operated and closed in accordance with applicable engineering best practices and regulatory requirements. Typically, a third-party engineer develops designs for gypstack construction and closure, prepares operating plans, and performs annual inspections. As part of the requirements to operate gypstack systems, we conduct routine groundwater monitoring and inspections, and maintain and comply with applicable environmental permits such as air, solid waste and water discharge. At our phosphoric acid manufacturing operations, wastewater from the gypstacks is decanted and reused in the production process. At closure, long-term management plans for gypstacks are implemented per regulatory requirements, including completion of groundwater monitoring and reporting.

Manitoba, Canada

Reclaiming a legacy site

As part of a 1996 business acquisition, Nutrien assumed ownership of the Fox Mine TMA. The Fox Mine was an underground copper and zinc mine in northern Manitoba that operated from 1969 to 1985. During mine operations, tailings from ore processing were discharged into the TMA, covering approximately 360 acres. While the TMA remained in compliance with current regulations, the exposed tailings were barren and generated acidic runoff, which required treatment to achieve water quality discharge license requirements.

In 2021, we began reclamation activities. Reclamation of the TMA involved three phases:

1. Relocation of approximately 1.8 million m³ of tailings, shrinking the tailings footprint from approximately 360 acres to approximately 190 acres. Tailings excavation was completed in April 2023.
2. Installation of approximately 800,000 m² of plastic liner above the consolidated tailings. Installation of the cover system began and was completed in 2023 and represented one of the largest liner projects in North America in 2023.
3. Neutralization of the downstream waterbodies, anticipated to be completed in 2024.

The consolidated and capped TMA was seeded in the fall of 2023 and we look forward to seeing the germination in the spring. Nutrien staff and contractors will continue ongoing water management, property maintenance and site restoration work until final disposition of the property is determined.

Phosphogypsum management (continued)

Typical gypstack closure involves covering the tops with an engineered cap (soil and/or high-density polyethylene liner), covering the side slopes with amended gypsum and/or soil, and vegetating and seeding them with a grass mixture. Long-term care includes groundwater monitoring and reporting.

Reclamation and remediation

We aim to reduce our impacts on the environment during the full lifecycle of our mines and facilities. When preparing our mining sites for closure, we include decommissioning of facilities and land reclamation. Nutrien has a legal obligation to reclaim land used for operations and return it to a beneficial use. We work with environmental authorities to verify that land is properly restored post-mining, using local and native plant varieties to support biodiversity.

Each year, we estimate the cost and timing of future environmental obligations, including gypstack closure and land reclamation expenditures. As of December 31, 2023, our discounted asset retirement obligations (“AROs”) were approximately \$1.3 billion. For Phosphate sites, the majority of these costs are expected to be paid over the next 16 years, while costs for our Potash sites are expected to be paid after that time. We have spent \$175 million towards our AROs over the last two years.

In 2023, we had a variety of active reclamation projects underway. At our Phosphate operations at White Springs, FL and Aurora, NC, we planted over 500,000 trees and continued our land reclamation efforts. In collaboration with Project Forest at our Fort Saskatchewan, AB facility, we planted approximately 26,000 hybrid poplars on two legacy gypstacks and one former phosphate cooling pond that were reclaimed in 2022.

Remediation refers to the removal, treatment and/or containment of impacts to soil or groundwater. Remediation can occur during operations or at the time of closure. Sometimes in acquiring new sites or lands, we also acquire the environmental liabilities associated with those sites, even if Nutrien did not operate them. As of December 31, 2023, we had accrued environmental costs of approximately \$395 million for costs associated with site assessment and remediation related to the clean-up of impacted sites currently or formerly associated with Nutrien or our predecessors’ businesses. At that time, the current portion of these costs totaled \$30 million.

Gypstack closure: Closure of gypstacks generally includes construction (including stack contour and sloping), capping, and adding a vegetative cover; treating wastewater and managing storm water; and long-term care and groundwater monitoring. We continue to close gypstack systems at our Phosphate operations in Geismar, LA, Redwater, AB, Fort Saskatchewan, AB, Conda, ID, and White Springs, FL.

Phosphate mine reclamation: As part of current reclamation practices, the material that is removed from the upper layers of the mine (overburden) is backfilled. If the naturally occurring metals in the overburden materials come into contact with water from precipitation (as was allowed in legacy practices), the metals can begin to leach, negatively impacting nearby surface water and groundwater. We seek to preserve surface water quality through proper phosphate mine reclamation, including installation of low permeability cover systems as necessary on overburden materials.



Right: Nutrien’s Rocanville, SK Potash facility.



Air emissions

Our operations generate emissions of carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO₂), particulates, volatile organic compounds (“VOCs”) and ammonia from process and combustion emission sources. Nutrien continues to look for opportunities to reduce emissions through continuous improvement in plant reliability and changes in operation or physical emission control upgrades during plant expansions and modifications. Data on our releases of air emissions are available on [page 92](#).

Social

Creating safe and inclusive workplaces and society



03

Topics in this section

- Safety, Health and Wellness ————— 45
- Equity, Diversity and Inclusion ————— 52
- Responsible Supply Chain ————— 59
- Human Capital ————— 62
- Community Relations and Investments ————— 65

São Paulo, Brazil

Brazil is one of the largest and fastest growing agriculture markets in the world. It is currently the largest soybean producer and the third largest producer of corn globally.

Safety, Health and Wellness

At Nutrien, our vision is “Everyone Home Safe, Every Day.”

How is this topic relevant to our business?

As one of Nutrien’s core values, Safety is at the heart of everything we do. Nothing is more important than the safety, health, and wellness of our employees, our contractors, and the communities we serve. Our safety programs are as varied as our operations, and span activities that cover all our operating segments and target specific mining, chemical and driving hazards. Leading safety standards and programs help us maintain our reputation as an industry leader and responsible employer while reducing our legal and financial exposure.

Targets

- **On track** – Achieve top-quartile safety performance across all operating segments by the end of 2025
- **Not achieved** – Zero Serious Injury and Fatality SIF incidents annually*
- **On track** – Reduce the three-year moving average LOC Index from 1.52 in 2022 to 1.25 by 2030**

* Target includes work-related fatality or life-altering injury/illness experienced by an employee or directly supervised contractor conducting work on behalf of Nutrien.

** An LOC is an unplanned release of material from its process that has the potential to impact human health and/or the environment. LOC Index normalized to production/sales data.

Key links:



Global alignment and standards

[The Ten Principles of the United Nations Global Compact](#)

Nutrien’s standards are informed by ISO: 45001, 14001, 9001, 22301, 27001 and ANSI Z10

[Environmental Protection Agency](#)

[Mine Safety and Health Administration](#)

[Occupational Safety and Health Administration](#)

[Responsible Care](#)

[ResponsibleAg in the US](#)

[Agsafe in Australia](#)



Nutrien’s contributions to the SDGs



[Learn more](#)



Nutrien’s policies, positions and disclosures

[SH&E Policy](#)

[Supplier Code of Conduct](#)

[SH&E Management System](#)

[The Nutrien Way](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)



Our performance

Tracking our performance, setting targets and benchmarking holds us accountable and drives improvement:

- **Retail** represents approximately 60 percent of Nutrien’s total workhours. We market crop inputs and provide agronomic application services for growers through more than 2,000 Retail selling locations with more than 30,000 vehicles and application equipment.
- **Potash** includes a six-mine network, each with surface processing operations. These operations represent approximately 10 percent of Nutrien’s total workhours.
- **Nitrogen** represents approximately 15 percent of Nutrien’s total workhours. We produce nitrogen at nine strategically located facilities.
- **Phosphate** represents approximately 10 percent of Nutrien’s total workhours. We operate two integrated phosphate mines and mineral processing facilities plus four product upgrade facilities.
- **Corporate** represents approximately five percent of Nutrien’s total workhours.

Peer comparisons is one way to demonstrate commitment, transparency, and continuous improvement. Since Nutrien is the only publicly traded company with operations across the agriculture value chain, comparing our company-wide safety data with single-industry chemical peers or benchmarks can be misleading. As a result, Nutrien’s four distinct operating segments are compared to organizations closely matching their operation, culture, size, market, and geography. In 2023:

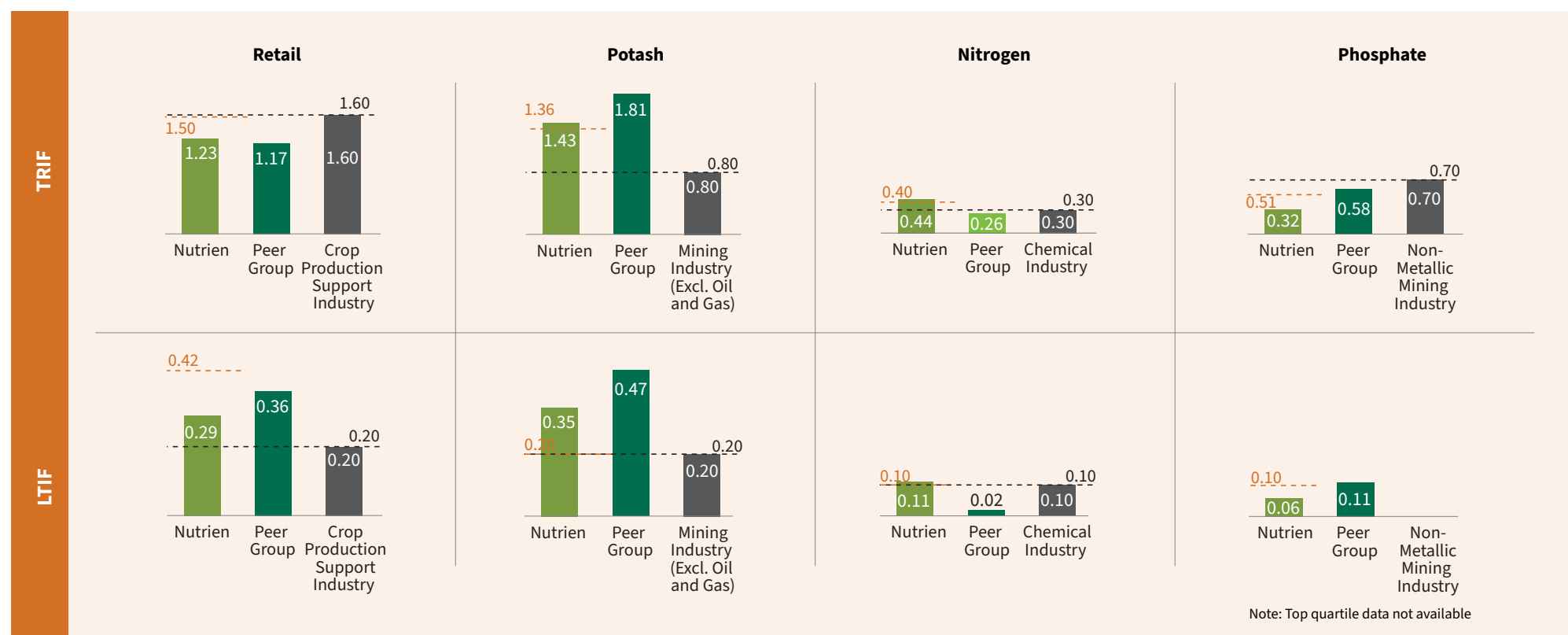
- Retail exceeded their peers in LTIF performance
- Retail and Phosphate TRIF performance exceeded the Bureau of Labor Statistics top-quartile performance for their related industry
- Phosphate and Potash exceeded their peers’ average performance in both TRIF and LTIF
- Nitrogen made positive progress, nearly achieving TRIF and LTIF performance targets

Nutrien’s safety performance in 2023 varied. Despite achieving our best record for TRIF and maintaining our best record for LTIF since Nutrien formed in 2018, unfortunately we experienced five SIF incidents. Nutrien is determined to learn from these incidents and to take steps to prevent similar incidents happening again.

Tragically, one of those incidents resulted in a fatality. We were deeply saddened at the loss of a US Retail employee while making repairs on fertilizer mixing equipment. Nutrien responded immediately to this incident with support for the employee’s family and employees on-site.

In certain instances, Nutrien may utilize a mandatory safety stand-down to discuss relevant system failures, and reinforce the critical importance of personal safety and actions everyone must take to keep themselves and others safe. We can never stop focusing on safety. We can always be better and perform work more safely as we evolve trust, accountability and responsibility for ourselves and others.

Nutrien 2023 Health and Safety Performance Compared to Peers and Industry



Peers: Based on results from ADM (2022), Bunge (2023) and Deere & Co. (2022)
Industry data: US Dpt. of Labor Statistics (Support Activities for Crop Production – 2022)

Peers: Based on 2023 average performance of Saskatchewan Mining Association companies
Industry data: US Dpt. of Labor Statistics (Mining excl. Oil and Gas – 2022)

Peers: Based on 2022 results for CF, Nova Chemicals and Yara
Industry data: US Dpt. of Labor Statistics (Chemical Manufacturing – 2022)

Peers: Based on results from BHP (2023), Mosaic (2022) and OCP (2022)
Industry data: US Dpt. of Labor Statistics (Non-metallic Mineral Mining – 2022)

Note: Top quartile data not available

Our approach

At Nutrien, our vision is for everyone to go home safe, every day. To achieve this vision, we focus on enhancing and integrating a Culture of Care and having a clear plan of action, The Nutrien Way.



Elements of The Nutrien Way

Leadership	Accountability	Engagement	Programs
<ul style="list-style-type: none"> • Leader visibility • Safety leadership coaching • Psychological safety and mental well-being • Community outreach 	<ul style="list-style-type: none"> • SH&E Management System • Data, analytics and targets • Incident investigation • Internal audits • Site assessments 	<ul style="list-style-type: none"> • Employee engagement • Stop work authority • Frequent pauses and hazard identification • Peer-to-peer observations • Team engagement • Safety meetings and moments • Daily Nutrien Safety Connect • SH&E Summits and other events • Continuous improvement teams 	<ul style="list-style-type: none"> • SIF prevention • Emergency preparedness and response • Contractor safety • Process safety management • Mining safety • Driving safety • Transportation safety

The Nutrien Way

Our Culture of Care demonstrates care for ourselves and each other through deliberate, principled behaviors and actions. These include leading in a way that reflects Nutrien’s values, collaborating to amplify our impact, challenging the status quo, and building and maintaining trust. Our Culture of Care is embedded throughout Nutrien, from our Board of Directors to our individual sites, and extends to our communities, growers, contractors, industry members and other partners.

The Nutrien Way comprises formal programs and informal practices we use daily to keep our people, facilities and communities safe and bring our Culture of Care to life. Nutrien’s Safety, Health and Environment (“SH&E”) Management System is embedded throughout The Nutrien Way. [Learn more.](#)

Leadership

At Nutrien, being a leader means leading by example, continually improving our skills, creating a safe working environment and finding ways to promote safety in our communities.

Leader visibility

Across all levels of Nutrien, leaders are empowered and expected to set the tone for safety and health. We expect leaders to be available, visible and engaged, showing that safety is a core value. Leader visibility, measured as number of senior leadership site visits, is one of the many ways Nutrien measures engagement. In 2023, Nutrien leaders conducted more than 1,900 senior leadership site visits to our Corporate, Retail and NPK operations.

Safety Leadership Coaching

The Nutrien Safety Leadership Coaching teams have been integrated across our operations for 10 years. Nutrien has eight coaches among our NPK operations that travel to sites working directly with front-line personnel to reinforce values, vision, culture and action. They also facilitate workshops and one-on-one in-person coaching sessions with employees in the field, at their respective sites and work locations. Coaches build relationships and trust as they support our field employees to enhance safety habits. [Learn more.](#)

In 2023, Safety Leadership Coaches held 150 workshops and more than 900 in person, field-level coaching sessions.

Psychological safety and mental well-being

In Nutrien’s Culture of Care, employee safety, health and mental well-being are paramount. Leaders and employees are responsible for creating a psychologically safe work environment where diversity and inclusion are valued, mental health is supported, and everyone feels safe to speak up with questions or concerns. Results from our 2023 Culture of Care and Engagement employee survey saw almost 85 percent of our employees respond

Focusing on mental health

The goal of Nutrien’s Mental Health Strategy is to promote mental health and psychological safety, driving positive cultural change and supporting our vision to make sure we all go home safe, every day. Our three-year multi-phase strategy focuses on

Prevention: In 2023, we developed and delivered introductory mental health training to individuals across our North American operations. Mental health training is available to all Nutrien employees.

Resourcing and sustainability: In 2023, we focused on advancing employee knowledge and incorporating practical tools to sustain mental wellness. We distributed quarterly 15-minute videos to be used in safety meetings or toolbox talks. Video topics included self-care, resilience, stress management and employee assistance program support for mental health.

Crisis support: In the future we plan to offer Mental Health First Aid (“MHFA”) training to employees throughout the organization, on a voluntary basis, with the goal of certifying a percentage of employees in MHFA.



Our North American operations celebrated Wellness Week in May with a focus on the many dimensions of wellness and mental health, Nutrien’s wellness resources, and our efforts in equity, diversity and inclusion (“EDI”), Integrity, Leadership and Development, SH&E, Community Investment, and Benefits and Retirement. Recordings of all presentations were made available to employees.

Leadership (continued)

favorably to statements about Nutrien’s safety leadership, and over 90 percent responded that they feel safe in their workplace. We continued the roll-out of our multi-phase Mental Health Strategy to build a comprehensive approach to mental health at Nutrien. See [sidebar](#) on previous page.

Community outreach: As a leader in the agriculture industry, we have an opportunity to share our safety training and programs with communities, emergency responders and growers to promote safety across our industry. [Learn more.](#)

Accountability

At Nutrien, we are all accountable and have a part to play in keeping each other safe.

SH&E Management System: The SH&E Management System is our framework for the consistent protection of employees, contractors, the environment and our assets. It outlines Nutrien’s expectations for our operating segments, accounting for their unique risks and controls related to workforce, operations and geography. Our standards and safety procedures support the proactive company-wide execution of our safety strategy. Safety and wellness are further integrated into our operations through our SH&E Policy, Code of Conduct, Supplier Code of Conduct and The Nutrien Way. Learn more about our [Code of Conduct](#) and [Supplier Code of Conduct](#).

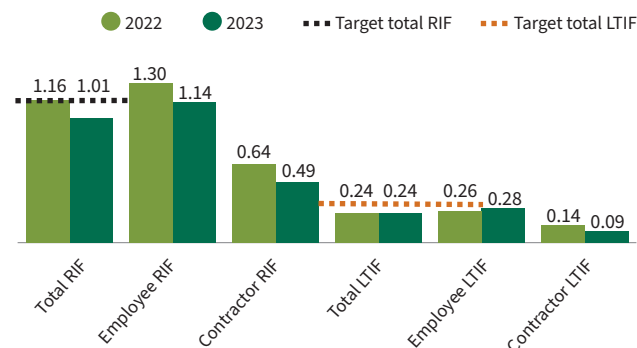
Data, analytics and targets: Making performance visible is essential for learning and improvement. Nutrien’s real-time safety performance can be viewed company-wide on our internal online safety dashboard, populated by our centralized data management system, and managed by our dedicated SH&E data analytics team. Leaders and employees can view key leading (proactive) and lagging (reactive) performance indicators (for example, Leader

Visibility, TRIF) by operating segment and country. Nutrien’s Executive Leadership Team (“ELT”) receives safety performance reports on a monthly basis, and the Board receives quarterly reports. We set annual safety targets at the corporate and operating segment levels using leading and lagging safety indicators. [Read more.](#) A component of our executive short-term compensation is tied to our safety targets. Learn more in the [2023 Management Proxy Circular](#).

Incident investigation: Investigating incidents is one tool that Nutrien may utilize in its efforts to continuously improve its safety performance, sharing lessons learned, demonstrating commitment and sustaining our operations. Investigations are one way that Nutrien demonstrates responsibility, accountability, vulnerability and commitment to correct immediate issues, to prevent future incidents.

Safety rates

(incidents* 200,000 hours/total actual hours)



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

In 2023, we achieved our best record for TRIF and maintained our best record for LTIF since Nutrien formed in 2018.

Audits: Our internal SH&E audit team works to regularly audit Nutrien’s operational safety, process safety management (“PSM”), and ResponsibleAg procedures. The audit team’s work is guided by our ongoing AI-enabled risk assessment (see sidebar).

Site assessments: Nutrien regularly conducts assessments of incident prevention, leadership and employee engagement at our sites. These assessments are opportunities to identify best practices to share across the Company and continually improve the effectiveness of our site-based safety programs.

Engagement

Standards and procedures alone are not enough to keep our people, assets, communities and the environment safe. Employee and contractor engagement is essential to making sure everyone goes home safe, every day. Nutrien empowers our employees and contractors to make safe choices for themselves and others.

Employee engagement

Stop work authority: Nutrien expects employees and contractors to exercise their obligation to stop work when they are unsure, when work or conditions are unsafe, or to ask for clarification. Stop work authority extends to travel to and from the worksite. [Learn more](#) about how we work to keep contractors safe.

Frequent and structured pauses: 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.

Hazard identification: Employees and contractors are expected to complete pre-job hazard assessments (“PJHAs”) before a life critical task – that is, any work-related activity involving a hazard that may cause a major injury or death. In 2023, we launched our “HomeSafe” SH&E collaboration platform, providing safety and

Using AI to predict and prevent safety incidents

In 2023, Nutrien began using an AI system to identify risks and guide our risk-based audits.

Nutrien’s data scientists and engineers began developing the system in 2022. Using advanced machine learning and AI, it analyzes text from hazard identifications, near misses, incident reports and investigations, and other safety reports, quickly validating what we believe to be the top hazards, and predicting future risks at a regional, activity and process level, all in a verifiable manner.

Our early use of the system has already enabled

- identification of leading indicators and human factors to focus on for training and coaching
- increased internal reporting capabilities for inspection management
- enhanced analysis of corrective action management
- development of improved tracking tools to control workflow more effectively and reduce repeat incidents



Engagement (continued)

other information for our Retail operations across North America. HomeSafe provides a consistent link to central SH&E information, Retail operating standards and key metrics, programs, policies and procedures.

Peer-to-peer observations: Peer-to-peer observations involve engaging, collaborating and building trust when work is in progress. These observations lead to reflection and discussion on a task that generate avenues for continuous improvement and safe actions. Our employees conducted over 50,000 observations in 2023.

Team engagement

Safety touchpoints: Sharing stories and lessons learned helps to reinforce collaboration and trust throughout the Company. We do this through safety meetings (typically in a field setting), safety moments (at the beginning of meetings), and Nutrien Safety Connect, a daily email to all Nutrien employees sharing inspiring stories and safety lessons learned from employees across the Company.

SH&E Summit and other events: Nutrien's quarterly SH&E Summit webcasts bring all our employees and contractors together to showcase SH&E initiatives and successes across the organization, and inspire attendees to uphold Nutrien's Culture of Care.

Safety Committees: We have safety committees at every production site. These teams are empowered to identify and support implementation of improvement related to safety, health, environment, process safety management, plant reliability, technology, turnaround and conduct of operations.

Programs

Serious injury and SIF prevention

Nutrien's life critical standards outline the steps to be followed to help prevent SIFs in the most hazardous working conditions. Aligned to current industry risks for potential SIF, the standards include confined spaces, engulfment prevention, mobile equipment proximity, ground control (specific to potash mining), energy isolation, hoisting and rigging, hot work (includes welding, cutting, grinding, and other operations that have the potential to cause fire, explosion, injury or other damage when using heat or generating sparks), and line break and fall protection.

In recognition of the dangers of routine work and losing focus, Nutrien employees and contractors are expected to regularly assess routine daily tasks for risk of procedural drift or complacency. We modify our processes to prevent SIF risks as they are identified. In 2023 SIF prevention projects included the installation of an unloading platform at our White Springs Phosphate operations, which eliminated the need for drivers to climb on top of their vehicles to start unloading, and height protection upgrades like stair replacements and handrail additions, among other improvements, to our facilities in South America.

What we do for safety each day:

1. Take the time to work safely
2. Identify hazards and stop work if necessary
3. Pause frequently and focus
4. Use the right tools and PPE for the job
5. Care and look out for each other



Our South American Retail operations celebrated Health Month in October, with a focus on well-being and quality of life.

2023 Culture of Care and Engagement survey

At Nutrien, our employees' voices matter and are vital to our continued improvement. Our 2023 Culture of Care and Engagement survey asked employees about their perceptions of our Culture of Care, core values and purpose, and their experiences as a Nutrien employee. More than half of our employees completed the survey, with almost 15,000 responses. Nutrien received a score of almost 85 percent on the Culture of Care index, comprising items related to safety, leadership, speaking up, stop work authority, collaboration and caring for each other.

Nutrien received a score of almost

85%

for our Culture of Care

Programs (continued)

Emergency preparedness and response

Emergency preparedness plans are in place and regularly tested at every Nutrien mine, and fertilizer production and storage facility. We have emergency response teams at all production facilities who are regularly trained, as well as on-call response coordinators on staff. Manufacturing sites have response vehicles, trailers, decontamination equipment, and equipment to perform both defensive and offensive mitigation tactics, and capture hazardous materials. We conduct regular inspections of our emergency equipment including personal protective equipment, safety showers, fire extinguishers, ladders, forklifts and more.

We provide the public with a 24-hour toll-free staffed phone number to report any concerns. All our manufacturing sites are involved in their local emergency planning committees made up of fire departments, emergency management groups, emergency medical services and law enforcement agencies (both local and federal). Nutrien is also a member of [Transportation Community Awareness Emergency Response](#) (“TRANSCAER”), a North American program that assists communities and trains emergency responders to prepare for and respond to hazardous material transportation incidents.

In 2023, we conducted more than 300 emergency drills at our facilities, and almost 80 of them were joint-response drills with local EMS, first responders and community members. We also reviewed our training resources and equipment to help ensure we are prepared in case of a serious event.

Nutrien also works to prepare our employees and facilities for severe weather events. In the US, our Retail business has established a Severe Weather Response Team with the aim of providing additional context to the National Weather Service warning information, such as expected local timing and impacts. The Severe Weather Response Team educates Retail branch employees on emergency preparedness and response and is developing an employee alert system. [Learn more.](#)

Contractor safety

Contractors were responsible for approximately 65 percent of our Nitrogen operating segment’s workhours in 2023, followed by approximately 40 percent in Phosphate, and approximately 30 percent in Potash. Contractors play a significant role across our business, making their selection and engagement in our Culture of Care essential to achieving our goal of everyone home safe, everyday. [Read](#) about how we screen and select contractors in the Responsible Supply Chain section. We engage contractors in all regular Nutrien safety processes (for example, safety meetings, PJHA). In October of 2023, our Nitrogen and Phosphate operating segments held a Contractor Safety Forum with several contractor groups, and Nutrien employees and senior leaders. At this virtual forum, contractors shared best practices with worker competency, training and mentorship programs, and we discussed clear expectations, communication, overcoming language barriers, worker engagement, hazard assessments and more.

Process safety management (“PSM”)

PSM is relevant to our Nitrogen production facilities and Phosphate processing facilities, which are considered chemical facilities. In chemical process facilities, or other facilities dealing with hazardous materials, process safety focuses on reducing hazards that have the potential to affect people or assets, including fires, explosions and accidental releases. To help ensure we operate safely and reliably, we have established processes for maintaining mechanical integrity (including asset and facility care and planned inspections), understanding process hazards, managing change, ensuring tasks are completed and reviewing equipment safety prior to start-up. [Learn more.](#) Our dedicated team of PSM professionals adhere to internal standards that surpass minimum legal requirements. Access to real-time dashboards for equipment inspection by type and due date and for tracking corrective actions are available as required.

When working with hazardous substances, reducing loss of containment (“LOC”) incidents - an unplanned or uncontrolled release of material from its vessel above certain thresholds - improves the safety of site personnel and the public, minimizes the impact on the surrounding environment and reduces regulatory and reputational risk. Our LOC reduction strategy, launched in 2022, has helped reduce the overall number of LOC incidents in our operations by almost half in 2023, compared to 2022. Of the 34 actions identified to reduce LOCs as part of the strategy, 19 have been implemented in 2023. In one example, we use operator training simulators in all our ammonia plants to allow employees in training to make process adjustments and see the impact on the process in a simulated environment, without affecting the actual process.

Performance	2023	2022	2021
Percentage of Nutrien Ag Solutions facilities enrolled in ResponsibleAg ¹ (US)	89	90	91
Percentage of Nutrien Ag Solutions agricultural chemical centers accredited by Agsafe (Australia)	100	100	100

¹ Due to the three-year cycle of certification and re-certification, a facility may be enrolled in ResponsibleAg and be certified, audited and awaiting certification, or awaiting audit. Due to COVID-19 travel restrictions, many sites were unable to complete the ResponsibleAg certification process in 2020 as planned. We changed this metric in 2021 and restated data for 2020 and 2019 to better reflect our participation in the program.



Programs (continued)

Mining safety

Potash is produced from underground mines, which present specific risks including ground fall, fires and water inflow that require mitigation. [Learn about](#) how we work to mitigate these risks. In addition, Nutrien's Potash operating segment is harnessing innovative technology to make our assets safer and more efficient. These technologies include

- autonomous and [remote mining](#) to remove employees from the active mining face
- proprietary [ground penetrating radar](#) to identify potentially hazardous spots in the mine ceiling

Phosphate is mined in open pit operations. We use large haul trucks, bulldozers and other large mobile equipment in our Phosphate operations. In 2023, we continued to use remote-control earth moving equipment to reduce worker proximity to hazards and enhanced proximity detection with warning lights to improve hazard awareness of nearby equipment.

Driving safety

With Nutrien's large fleet of commercial trucks, forklifts, tractors, and fertilizer and seed applicators, driving safety remains a top priority, especially in our Retail segment, where most drivers are based. Measures in place to support safe driving practices include telematic systems to track vehicle driving data and identify risks, such as speeding or hard acceleration. We also continue to implement inward- and outward-facing camera technology in our North American commercial fleet that promote real-time driver safety and efficiency by prompting in-cab alerts to correct driving behaviors. In 2023, we saw a 40 percent reduction in unsafe driving practices, such as speeding, harsh braking and distracted driving, across participating vehicles when compared to 2022. In 2023, telematics and/or camera technology was installed on more than 11,000 vehicles in our Retail commercial fleet, with plans to continue installation on our remaining fleet.

Transportation safety

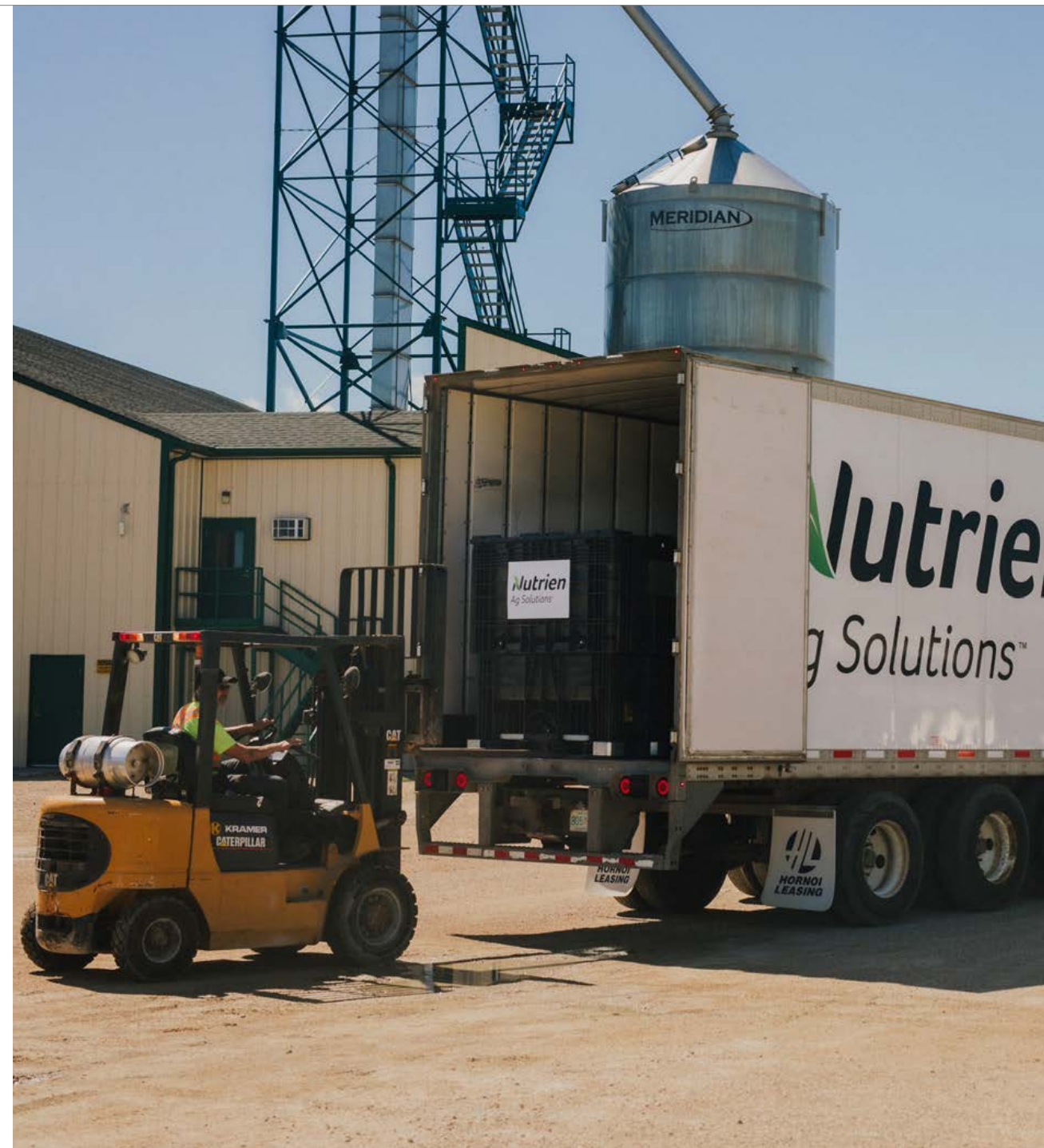
Trucking: Third-party trucking companies transport product from our production facilities to our wholesale customers.

Rail: We use third-party rail carriers to ship raw materials and finished goods in railcars that are either owned or leased by us from third parties (approximately 17,000) or supplied by the railroads. Nutrien promotes safe rail transport by using safe railcars, and we are developing technology to robotically open and close railcar lids, with the goal of improving loading and unloading efficiency and reducing worker exposure to potential hazards.

Ammonia safety

Ammonia is a hazardous material that we produce and distribute. To promote safe handling of ammonia, we provide training to our loading personnel. We have two full-time ammonia specialists who provide internal training and support for ammonia rail and truck transport. Nutrien has an Ammonia Safety and Emergency Response Railcar for training purposes that is moved among our manufacturing locations. We have an agreement with major rail lines to move the training railcar at no cost anywhere in North America, for use in training internal or external emergency responders on how to safely work around ammonia and mitigate releases. In 2023, we

- rolled out training for our updated standard operating procedures for ammonia storage and handling, consisting of nine modules. Approximately 2,300 employees across Canada and the US completed the training.
- held two Ammonia Safety Days in the US for employees and local stakeholders.
- completed five advanced ammonia training classes in Canada for more than 90 employees.



Equity, Diversity and Inclusion

We are committed to a Nutrien where we all belong and, together, we all grow.

How is this topic relevant to our business?

Equity refers to improving policies, systems and processes to create fair opportunities for all by engaging people or groups in ways that address potential barriers they may face. Equity is not only about policy and process; it is a mindset that, when developed and embedded within the organizational culture, allows us to identify fair outcome opportunities, realizing tangible business value for all stakeholders. **Diversity** refers to people with a variety of unique backgrounds, experiences, qualities and skillsets and may include factors related to age, gender, gender expression, geographic origin, ethnicity, culture, religion, disability and sexual orientation. **Inclusion** is defined as bringing people together to understand, involve, respect and embrace the differences that make each of us unique.

Our more than 25,900 employees live and work across many countries, cultures and languages and bring with them their different experiences and valuable perspectives. We believe that fostering an equitable, diverse and inclusive workplace enhances Nutrien’s organizational strength, and contributes to more successful outcomes throughout our workforce.

Targets

- **Withdrawn** – Create new grower financial solutions to strengthen social, economic and environmental outcomes in agriculture, by 2030
- **In progress** – Leverage our farm-focused technology partnerships and investments to drive positive impact in industry and grower innovation and inclusion, by 2030
- **Achieved** – Annually, women comprise no fewer than 30 percent of the Board of Directors
- **Under review** – Thirty percent women in leadership (director and above) by 2025
- **Achieved** – Annually, 100 percent of potash suppliers contracted under a Master Supply Agreement (“MSA”) have local Indigenous inclusion commitments
- **Achieved** – By 2025, 25 percent of local spend in our Potash business has direct Indigenous economic impact



Key links:



Global alignment and standards

[The Ten Principles of the United Nations Global Compact](#)



Nutrien’s contributions to the SDGs



[Learn more](#)



Nutrien’s policies, positions and disclosures

[Code of Conduct](#)
 Respect in the Workplace Policy
 Diversity Policy (Brazil)
[Equal Employment and Affirmative Action Policy](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)
[Executive responsibilities for sustainability](#)
[Management responsibilities for sustainability](#)
[Inclusion Council](#)

Our approach

We seek to make Nutrien a place where we all belong and, together, we all grow. We aim to provide all employees with a respectful and inclusive workplace. Our Global Strategic Inclusion Plan guides Nutrien's efforts to increase diversity and inclusion. It also guides our related work with suppliers, peers and industry partners.

We monitor our inclusion maturity through ongoing benchmarking of our internal culture via the Culture of Care and Engagement Survey and feedback from our employee resource groups ("ERGs"), as well as employment trends such as new hires, promotions and turnovers for employee groups, and we also compare our practices to benchmarks for continuous improvement.

EDI in our workforce

We promote EDI in our workforce by continually identifying and removing potential barriers to participation.

Women in leadership

We have made considerable progress to advance women in leadership across the Company (23 percent of women in leadership positions in 2023, with marked improvement from 21 percent in 2022 and 13 percent in 2018). Our level of women in leadership roughly matches the level of women overall across Nutrien. Among our Corporate employees, we have achieved 40 percent women in senior leadership roles in 2023. Among our Nitrogen business senior leaders, we have achieved 21 percent. We have taken several meaningful actions regarding our recruiting efforts, workforce planning tracking and training associated with rolling out our core value of Inclusion.

Our goal of 30 percent women in leadership positions by 2025 will not be achieved within the original time frame and is currently under review. While we have seen a significant increase since 2018, we believe a single

numerical measure of this nature may not drive the most effective progress against the fundamental purpose for diversity at our Company. Our core value of Inclusion reflects our commitment to create and sustain a sense of belonging, and respect, and leverage the best in each other. Diversity of thought and perspectives through contributions from a varied group of people, enabled by an inclusive environment, is the objective and remains a priority. This leads to innovation and stronger performance.

We continue to evaluate our EDI strategy, initiatives and measures to develop programs focused on women and activities that enable our employees and partners to use our collective resources more efficiently and effectively. By focusing not only on diversity numbers but also on equity and inclusion programming, we are setting the Company up for lasting change for a sustainable business.

1 | Recruiting with a focus on diversity and inclusion

Nutrien's recruitment processes are designed to attract and promote a diverse selection of candidates. We do this in many ways, including the use of diverse images in recruitment campaigns and inclusive wording in our job postings. We also manage our recruitment efforts in the following ways:

- Nutrien's inclusivity-trained recruiters participate in and host diversity-related career events to promote Nutrien job opportunities to women and other underrepresented groups. For example, in Saskatchewan we support the Mining Introduction Pre-Employment Program at the Saskatchewan Indian Institute of Technologies.
- Nutrien supports scholarships and internships associated with diverse groups including women, Indigenous Peoples, and people of different races across our North American and South American regions. In Australia, we launched a new "Harvesting the Future" scholarship program supporting students from historically underrepresented groups and low socioeconomic backgrounds. Read more about Indigenous recruitment and supply chain participation on [page 57](#).



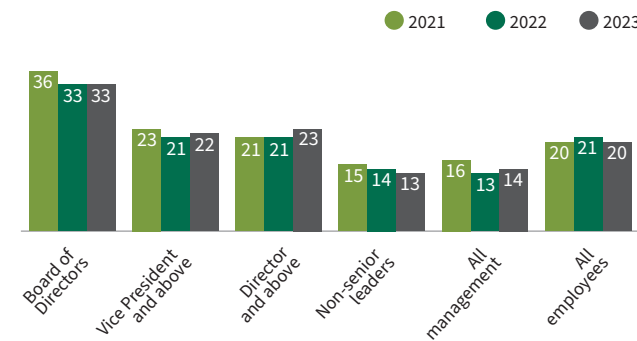
Conectadas pelo Agro attendees in Silvania, Brazil. The event provides an opportunity for women in the agriculture sector to learn, network and share their knowledge with other women leaders.

- Our Alberta Nitrogen facilities have partnered with trades school across the province to create a pilot program called [Women in Trades](#). The program was created to build a diverse and effective talent pool of women for trades and technical positions, specifically process operators within the Nitrogen sites in Alberta.
- Our business in Brazil has partnered with Ser Especial (Be Special), an NGO that provides training and capacity building for people with disabilities in order to create work opportunities.

We aim to provide all employees with a **respectful** and **inclusive** workplace

Women at various levels

(percent) across all operating segments



In 2023, we maintained gender diversity across all management and increased gender diversity at senior levels.

EDI in our workforce (continued)

2 | Removing potential barriers to full participation

Each of our operating segments has developed an action plan to remove potential barriers and deliver on opportunities that align with Nutrien's Global Strategic Inclusion Plan. These plans reflect the EDI maturity of each operating segment, incorporate best practices in EDI and support progress towards their internal EDI goals.

Within our operating segments, executives, managers and supervisors are responsible for ensuring inclusion, increasing diversity, incorporating equity measures, and providing a work environment free from discrimination, bullying, workplace violence, and harassment, including sexual harassment. Management follows an open-door policy to encourage employees to discuss any workplace issues.

Our compensation philosophy is to pay competitively, fairly and equitably. Nutrien continuously assesses pay equity in the organization by considering both internal and external equity when we set employee compensation, such as for hiring and promoting. Nutrien complies with all applicable laws, rules and regulations.

EDI training and resources

Across all regions, Nutrien provides EDI training for all employees, and targeted development programs and support for underrepresented groups. Facilitator-led EDI education sessions on EDI Fundamentals, Unconscious Bias and Allyship/Active Bystander are available in person or through webcast sessions.

Nutrien's Learning Management System ("LMS") also includes foundational and skill-building self-serve EDI content. In 2023, over 4,800 inclusion lessons were completed, nearly 17,000 articles read and almost 44,000 learning exercises completed via our inclusion platform that provides micro-learning through lessons, articles and short videos. In 2023, our South American region formalized its Diversity Policy and launched an EDI awareness training program for operational and field employees, with more than 900 employees in Supply Chain and Sales taking part. We continue to incorporate EDI competency elements in Nutrien's leadership education programs, including inclusive interview training kits for leaders.

Talent development and support

Nutrien's talent development programs support the recruitment, retention, development and career progression of our workforce. See [pages 63-64](#) for details on our training programs. See [page 55](#) for initiatives to promote gender diversity in the agriculture and mining sectors.

Nutrien also proudly supports a variety of ERGs, which are voluntary, employee-led efforts designed to support underrepresented employee populations and help sustain an inclusive workplace. We currently support ERGs in a variety of areas such as gender, Black employees, members of the LGBTQ+ community, Asian employees, early-stage employees, military members and veteran employees.

~44K

EDI learning exercises completed by employees in 2023



Right: A Nutrien employee at our Rocanville, SK Potash facility



Spotlight

Promoting gender diversity in the agriculture and mining sectors

We continue to expand leadership programs associated with women, look to remove any systemic barriers, develop additional means to attract, develop and retain women, and drive cultural change that fosters an increasingly inclusive workplace where all employees, including women, can thrive. Nutrien supports internal programs and partners with others regarding women at all stages of their careers. Here are highlights from 2023.

11

program members enrolled in Women in Trades

Supporting Women in Trades

Nutrien supports Women in Trades, an apprenticeship program similar to our Operator-in-Training program. This program is focused on building a diverse talent pool of women, specifically process operators, within Nutrien's Nitrogen sites in Alberta. We partner with three local trade schools. Since it was piloted in 2021, 11 women have participated in the program.

Building business competency

Nutrien Academy is a year-long internal program designed to help women expand their ag-related business, strategic and financial acumen and enhance leadership skills.

60%

of women progressed their careers after participating in Nutrien Academy

10

networking events sponsored

Networking for women in the ag and mining sectors

We sponsor conferences and events in Canada, the US and Brazil that provide opportunities for women in the agriculture and mining sectors to learn, network and share their knowledge with other women. Some of the events we have sponsored in North America include the annual Women in Non-Traditional Environments and Roles Potash ("WiNTER K") conference, Women in Agribusiness events, the [Advancing Women in Agriculture Conference](#), and more.

In Brazil, we hosted our first Conectadas pelo Agro (Connected by Ag) session, which brought together almost 1,400 of our female growers and employees to discuss topics of interest and network.

Identifying emerging talent

Our Emerging Talent Program is an internal two-year rotational program to accelerate the development and promotion of post-secondary graduates to leadership and manager roles in our Retail operating segment. Consideration is given to age, ethnicity and gender diversity when selecting applicants.

11

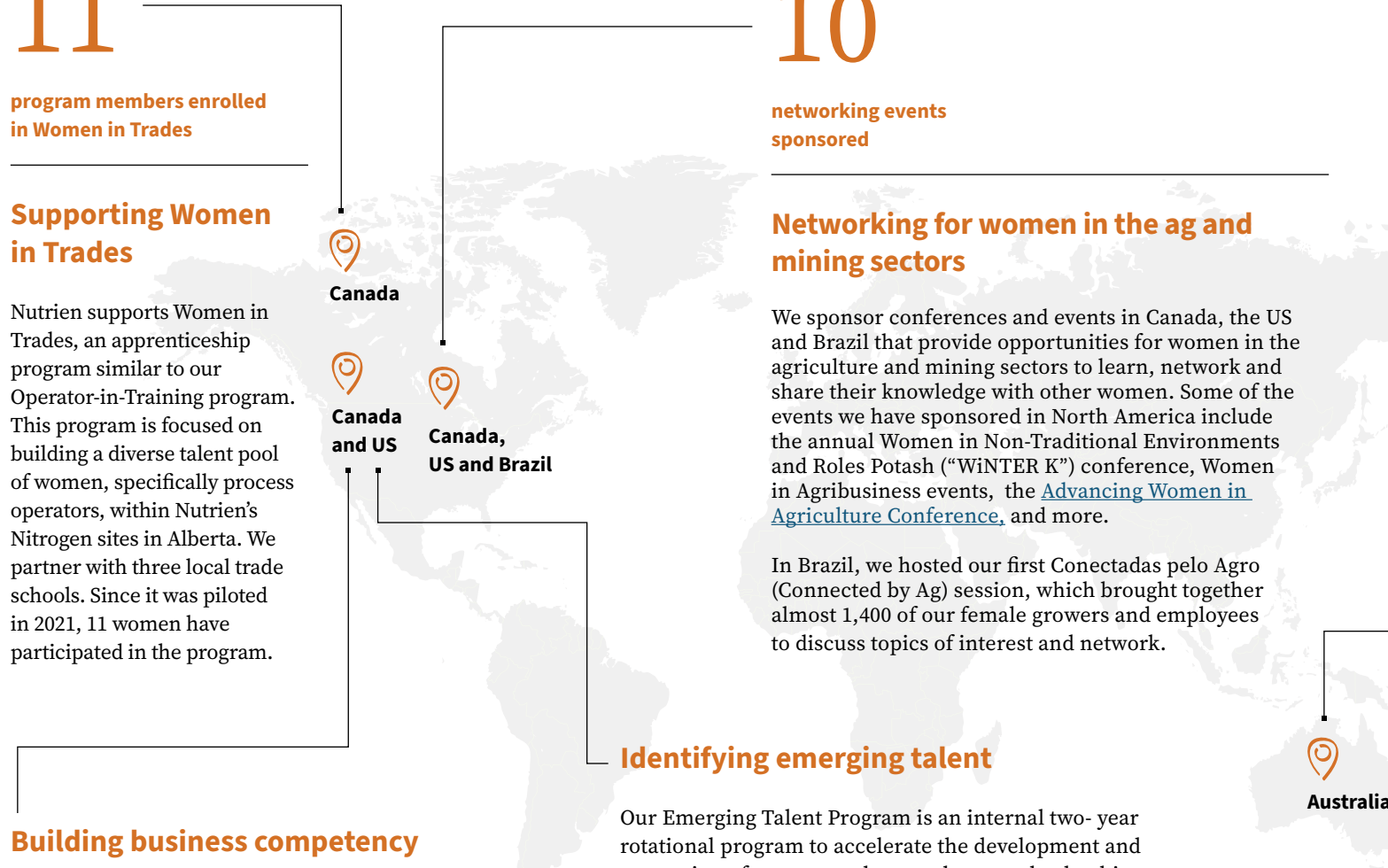
participants completed the Emerging Talent Program

Transitioning women into management

Our two mentoring [programs](#) in Australia, She Leads in Ag and Women's Leadership Mentoring, develop key capabilities and confidence and provide a support network to accelerate women's leadership. The Women's Leadership Mentoring program is currently expanding to North America.

38

participants in leadership mentoring programs



EDI in our supply chain and industry

Nutrien believes our supply chain should also reflect our commitment to EDI and our core value of Inclusion. Our goal is to support suppliers appropriately in this regard as key contributors to Nutrien's success.

We work to minimize and eliminate potential barriers and biases to supplier engagement and leverage supplier diversity and supply chain accountability. To amplify our impact, we engage and support our suppliers in their own inclusion efforts. We have an Indigenous Content Playbook that is an evolving resource to provide guidance on how Nutrien incorporates Indigenous participation and content into our business practices and supply chain. [Read more](#) about how Nutrien works to increase Indigenous participation in our supply chain.

EDI in our community and society

Nutrien supports economic and social equity of underrepresented groups through strategic partnerships, financial support and our Nutrien Financial offerings.

Strategic partnerships: We partner with diversity-supportive organizations and educational institutions to offer scholarships to underrepresented groups and we support initiatives that promote social and economic equity. In 2023, we participated in the Radicle Growth Inclusion Challenge, which strives to accelerate inclusive investments in agriculture. The challenge was a pitch competition from ag-tech entrepreneurs around the globe who identified as female and/or BIPOC (Black, Indigenous, People of Color), from historically underrepresented groups in agriculture, or were committed to diversity and inclusion while advancing a sustainable food value chain. In 2023, we continued to support Minorities in Agriculture, Natural Resources and Related Science, the National Black

MBA Association, and the National Black Growers Council to promote academic and professional advancement and facilitate information sharing for minorities in agriculture and related fields.

Financial support: "Inclusive Industry" is one of Nutrien's community relations and investment focus areas, and it helps guide our community giving. [Learn more.](#)

Nutrien Financial: We offer growers financing options for purchases such as seed, fertilizer and crop protection. [Nutrien Financial](#) is committed to promoting financial inclusion and we aim to ensure that individuals and businesses can attain insightful financial information that encourages sound economic actions. Our existing credit program operates in accordance with the US Equal Credit Opportunity Act ("ECOA"), a federal law enforcing equal opportunity to obtain credit, and is inclusive for all applicants.

As we strive to create new grower financial solutions, our Nutrien Financial goal to evaluate how we can support growers through a lens of sustainability and inclusion has been re-focused to explore how financing can be a key enabler to the broad adoption of sustainable agricultural practices. While many growers are adopting sustainable agricultural systems and practices, there is an opportunity for us to help support even more growers to increase soil carbon sequestration, productivity, profitability and resiliency through financing.



Below: An STCI employee, who is a member of Yellow Quill First Nation, working on a steel fabrication project for Nutrien.



Below: STCI employees, who are members of One Arrow First Nation and Peter Ballantyne Cree Nation, fabricating a custom power skid for Nutrien.



Saskatchewan, Canada

Partnering to promote economic reconciliation

Nutrien and the STC Industrial Group ("STCI") have been collaborating for many years on numerous projects at many of Nutrien's Potash and Retail selling locations. STCI is a 100 percent Indigenous organization with ownership held by the seven member Nations of the Saskatoon Tribal Council. The Saskatoon Tribal Council Nations represent over 12,000 members directly and serve Saskatoon's Indigenous population of over 20,000. Based in Saskatoon, STCI specializes in providing industrial construction, maintenance, fabrication and manufacturing services for the mining and utility industries.

STCI has placed a strong emphasis on acquiring and retaining Indigenous talent, actively working to enhance the skills of their Indigenous workforce, and eliminating barriers to employment. STCI provides customized support to foster career development and confidence, including

- direct engagement with Indigenous post-secondary institutions, First Nations career centers and community job boards to ensure potential employees are aware of career opportunities

- information sessions within Indigenous communities to share employment opportunities
- assistance in purchasing work clothing and tools
- paid tuition for apprenticeship training
- wage top-up programs for First Nations employees attending trade school
- engagement of an Indigenous knowledge keeper to provide cultural learnings and individual counseling
- employee mentorship program, including trade school study groups led by team journeypersons
- beginning in 2022, a "Ride to Work" program to provide reliable transportation for employees to and from work every day

We take pride in our partnership with STCI, appreciating their alignment with our Culture of Care and commitment to inclusion. By engaging as partners rather than maintaining a traditional buyer-supplier relationship, we have actively supported STCI in providing stable year-round careers for Indigenous employees while contributing to the success of our Potash operations and supplier network.

Spotlight

Taking steps towards reconciliation with Indigenous People in Canada

With a large operating base in Canada, we understand and act on our responsibility to Indigenous reconciliation. We strive to engage early, often and authentically with Indigenous individuals and communities, aiming for a positive impact on our own workforce, industry, communities and society. [Learn more.](#)



Left: Chris Reynolds, Nutrien Executive Vice President and President, Potash, welcomes members of the Indigenous Internship Program to a networking event.

Middle: Nutrien employees participate in Rock Your Roots event in Saskatoon, Saskatchewan.

Top right: A Nutrien employee leads a tour for students in the Indigenous Internship Program.

Bottom right: Nutrien employees and former Indigenous Internship Program participants attend an event honoring National Indigenous Peoples Day in Canada.



In our workforce

Nutrien is committed to inclusion across all job categories and supporting access for Indigenous Peoples to meaningful potential career opportunities in our operations. Nutrien initiatives include

- ➔ **Indigenous awareness training** – for Nutrien employees, this provides an overview of the shared history of Canada. It provides information about the Indigenous Peoples of Canada, introduces the concept of cultural awareness and outlines Nutrien’s approach to Indigenous relations. Since its launch in 2018, more than 2,300 employees have completed the training.
- ➔ **Indigenous internship program** – enables Indigenous Peoples to gain experience in roles ranging from geology and process engineering to accounting and procurement.
- ➔ **Scholarships and apprenticeships** – for Indigenous students. [Learn more.](#)

19

Indigenous interns in 2023



In our supply chain

Nutrien has unique opportunities to promote equitable outcomes across our operations and value chain. We support various industry partners in their inclusion and reconciliation efforts through

- ➔ **Indigenous awareness training** – for suppliers in partnership with the Saskatchewan Industrial and Mining Suppliers Association.
- ➔ **Indigenous Content Playbook** – offers guidance for suppliers to develop an Indigenous Content Plan and strengthen their relationship with the Indigenous community. [Learn more.](#)
- ➔ **Potash Indigenous Supply Chain Strategy** – launched in 2023 and is intended to continue building capacity internally and externally and ultimately enhance Indigenous inclusion throughout our supply chain.

100%

of Potash-contracted suppliers have local Indigenous inclusion commitments



Spotlight (continued)

Taking steps towards reconciliation with Indigenous People in Canada



In our communities and society

Nutrien aims to build relationships and invest in Indigenous communities in ways that advance mutual understanding and promote cultural awareness and economic reconciliation.

Advancing understanding of Indigenous culture

Nutrien annually recognizes Canada's National Day for Truth and Reconciliation. Public commemoration of the history and ongoing impacts of residential schools is a vital component of the reconciliation process. Activities to listen, learn and act towards reconciliation included

- ➔ **Rock Your Roots** – Employees participated in this community walk in Saskatoon as a symbol of reconciliation and building bridges between cultures.
- ➔ **Elders Story Project** – Nutrien supported the Elders Knowledge Circle and employees attended Elders Story Project events in Calgary, Alberta, where Elders shared personal stories about their residential school experiences and healing journeys.
- ➔ **Every Child Matters – In Honour of Reconciliation Pow Wow** – Hosted by the Saskatoon Tribal Council, employees participated in this Pow Wow to honor survivors and celebrate Indigenous culture.



Promoting social and environmental causes

- ➔ **Nutrien MakerLodge** – Pawâcîkêwikamik – a Cree word meaning “a lodge supporting those who dream”, is intended to stand as a vibrant hub with the mission to empower Indigenous learners, nurture creativity and strengthen community connections, while preserving culture and language. Nutrien partnered with Saskatchewan Indian Institute of Technologies to fund the creation of this lodge. Since 2021, the MakerLodge has already facilitated over 950 training hours, benefiting almost 60 First Nations communities across Saskatchewan, and making significant strides in fostering Indigenous inclusion and leadership in the tech economy.
- ➔ **Project Forest** – Nutrien pledged CAD\$100,000 to support the Project Forest Siksika Nation Community Shelterbelt Rewilding in 2023. [Read more.](#)
- ➔ **Back-to-School Backpack Giveaway Event** – Our annual White Buffalo Youth Lodge Back-to-School Backpack Giveaway Event brings Nutrien, community partners and community members together to prepare for the upcoming school year in Saskatoon. [Learn more.](#)



Left: Chris Reynolds, Nutrien Executive Vice President and President, Potash, participates in the ribbon cutting ceremony for the pawâcîkêwikamik: Nutrien MakerLodge at SIIT.

Middle: Ken Seitz, Nutrien President and CEO, shares greetings on behalf of Nutrien with Tribal Chief Mark Arcand at the Saskatoon Tribal Council Every Child Matters Pow Wow.

Right: Students receive backpacks and schools supplies at the annual backpack giveaway event.

CAD \$900K

donated to Indigenous communities and organizations within our operating territory

Responsible Supply Chain

Nutrien aims for responsible sourcing, including upholding human rights and supporting diversity and inclusion in our supply chain.

How is this topic relevant to our business?

A responsible supply chain is one that works to ensure products and services are procured economically in an ethical, safe and environmentally responsible way. Nutrien works with thousands of suppliers who provide materials, products or services across our operations. Promoting a responsible supply chain helps us uphold our values and promote social and environmental responsibility in the regions and communities where we operate. Working with business partners who share our commitment to doing business with integrity is essential to maintaining our reputation and mitigating operational risks.



[Learn more: Nutrien's 2023 Modern Slavery Report](#)

Key links:



Global alignment and standards

[The Ten Principles of the United Nations Global Compact](#)



Nutrien's contributions to the SDGs



[Learn more](#)



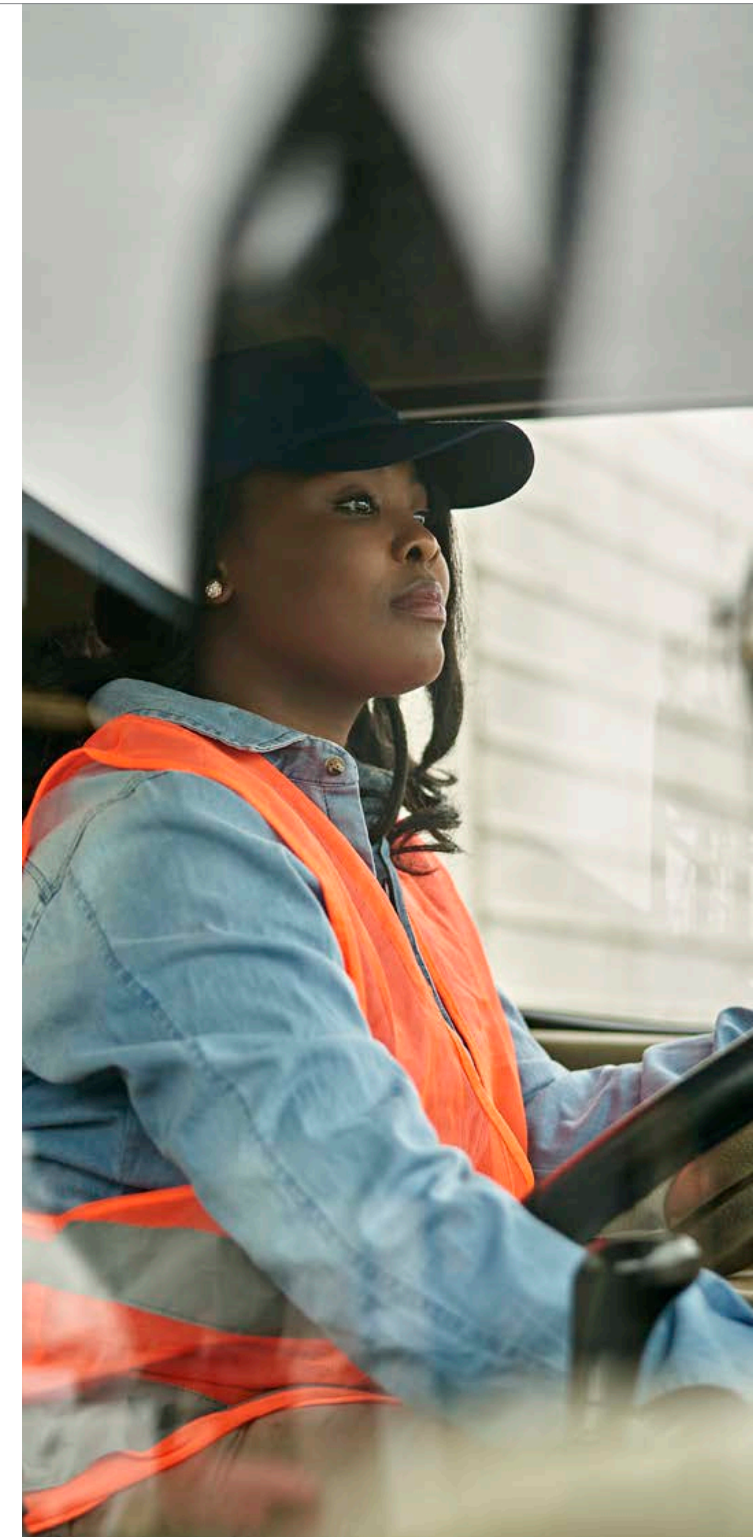
Nutrien's policies, positions and disclosures

[Supplier Code of Conduct](#)
[Procurement Policy](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)
[Executive responsibilities for sustainability](#)
[Management responsibilities for sustainability](#)



Our approach

Nutrien aims for responsible sourcing, including upholding human rights and supporting diversity and inclusion in our supply chain. We strive to build a responsible supply chain by having policies to guide responsible sourcing decisions, and are developing procedures to pre-screen potential suppliers and contractors to ensure they align with Nutrien's values.

Policies

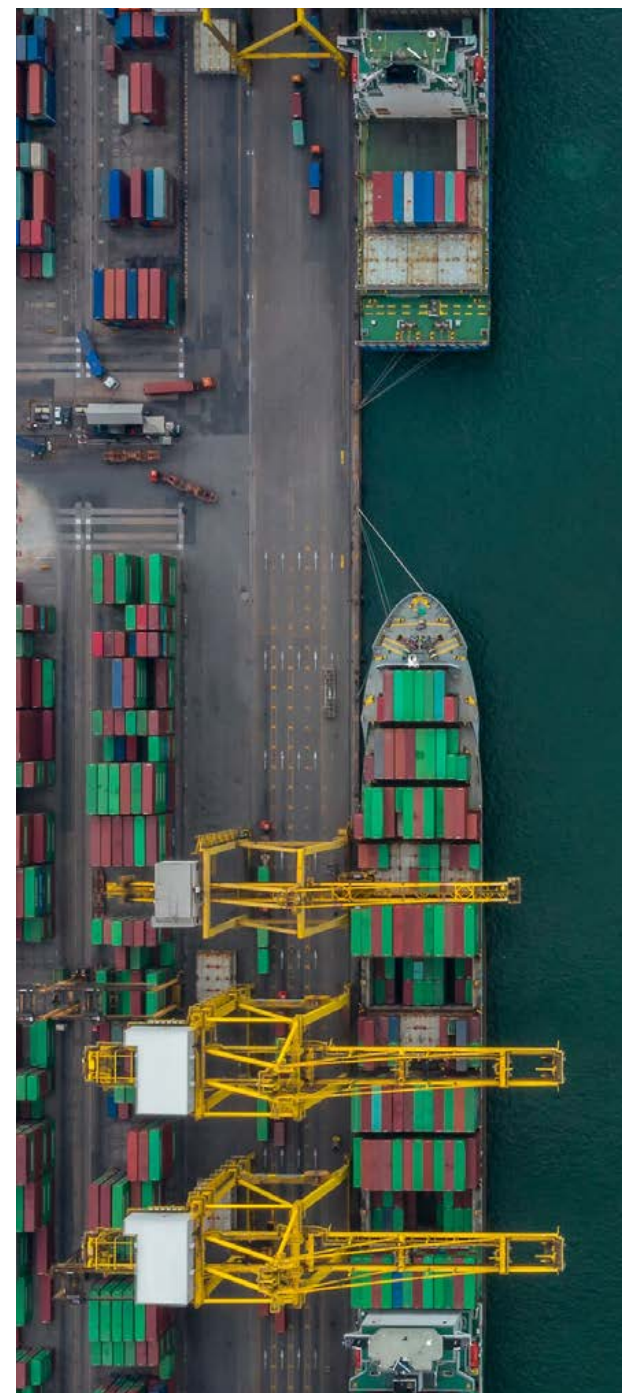
In 2023, Nutrien introduced an updated Procurement Policy, which establishes procurement rules of conduct for the Company, including providing clear expectations of how we conduct procurement practices within Nutrien, as well as guidance related to supplier qualifications and risk management. The Procurement Policy requires Nutrien personnel responsible for procuring goods and/or services, in collaboration with internal stakeholders, to evaluate the level of risk suppliers may create for Nutrien and act as appropriate. This includes, but is not limited to, conducting appropriate due diligence before committing to procure goods and/or services. Supplier risks included in the Procurement Policy include modern slavery risks, performance quality risk, financial viability, litigation risk, regulatory compliance risk, supply disruption risk, intellectual property risk, insurance risk and cybersecurity risk. Also in 2023, we updated our Supplier Code of Conduct (the "Supplier Code") (as a replacement for our Supplier Code of Ethics, which was implemented in 2019). Our Supplier Code was established to communicate Nutrien's requirements for suppliers of goods and contractors performing services for, or on behalf of, Nutrien. The Supplier Code is intended to apply to all suppliers that provide goods and services to Nutrien, whether directly or indirectly. It includes requirements related to human rights, equity, diversity and inclusion, labor, safety and health, the environment, and others. Our report outlining the steps we have taken to identify and address the risk of modern slavery pursuant to *Canada's Fighting Against Forced Labour and Child Labour in Supply Chains Act* is available [online](#).

Contractor and supplier evaluation

We aim to procure products and services from responsible suppliers. Activities include:

Contractor screening: Our operating segments have varying on-site contractor needs. For instance, Retail has few contractors on site while, at our Nitrogen, Potash and Phosphate sites, contractors represent between 30 and 65 percent of the hours worked. We screen contractors twice, once prior to hire, and again before starting work. During the initial procurement process, Nutrien screens contractors for safety and environmental performance, integrity, and financial and cybersecurity risks. For example, 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 SH&E performance and, increasingly, sustainability metrics such as diversity. We have rolled out a digital program at select Nitrogen and Phosphate sites to view individual contractor qualifications and certifications when they arrive on site. We anticipate expanding this program to other Nitrogen and Phosphate sites and our Potash business unit.

Feedstock evaluations: We recently incorporated a stewardship assessment for suppliers of product feedstock into the supplier screening process, and we completed risk profiles for all feedstocks for our North America and Europe Wholesale manufactured Nitrogen, Phosphate and Potash products. This information will be used to make more informed feedstock procurement choices pertaining to the safety and sustainability of our products. Read more in the [Product Stewardship section](#).



Brazil

Responsible value-chain activities

In 2023, we continued to evolve our processes to further promote responsible procurement and sales. Activities included:

Responsible Purchasing Project was implemented to mitigate sustainability related risks and improve the governance of our supply chain. It consisted of mapping categories of purchases made, which resulted in a risk matrix that is an integral part of the purchasing process. During this exercise, no suppliers and operations were identified that did not support workers' freedom of association and collective bargaining, or that presented a risk of child labor or forced or compulsory labor.

Screening for compliance: We implemented an online assessment tool for customers, whether they require credit or not, that screens applicants for slave and illegal deforestation activities. This automation not only expedites the approval process for lower risk customers, but also mitigates our risk of doing business with customers who are not in compliance by conducting the proper checks. Read more in Biodiversity.

Employee training: Through our internally created School of Sustainability, we are able to provide training to all of our team members on the field on sustainability topics such as socio-environmental compliance and climate change to support their work with our customers.

Customer support: We launched our Awareness on Socio-environmental Compliance and Issues Program. This included a Rural Producer Guide to answer producers' questions about standards, legislation and issues related to social and environmental compliance, as well certifications and rural credit within agribusiness. We also held customer workshops at our Experience Centers on topics such market trends and client and capital provider requirements for socio-environmental compliance.

Contractual obligations

Through the contracting process, we aim to require our suppliers to comply with our Supplier Code, which includes expectations for non-discrimination, a commitment to compliance with human rights laws, and the avoidance of forced labor, child labor and human trafficking. We do not knowingly procure materials from conflict zones, which is prohibited by our Supplier Code. 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 applicable laws permit, this review may include termination of our relationship with the non-compliant supplier.

Diversity in our supply chain

We aim to build authentic relationships with qualified contractors and suppliers and engage in meaningful dialogue about building and supporting a business environment that appropriately reflects the diversity of the communities in which we operate. As a global company with significant operations in Western Canada, we have a responsibility to grow opportunities for Indigenous communities, individuals and businesses throughout our supply chain. We believe that their meaningful economic participation creates benefits for society and building relationships with Indigenous communities and Peoples provides sustainability and stability in the local economy. Nutrien has made considerable progress towards greater inclusion of Indigenous suppliers through our Potash operating segment (see sidebar for details). We are proud of our journey and look forward to continuing to build on our foundation of Indigenous inclusion through procurement.

Saskatchewan, Canada

Key milestones promoting Indigenous participation in our Potash supply chain

2018 Indigenous Content Playbook –

Provides suppliers with guidance for developing an Indigenous Content Plan and strengthening their relationship with the Indigenous community [Learn more](#)

2021 Set two new targets

25% of local spend in our Potash business has direct Indigenous economic impact by 2025

Annually, 100% of Potash suppliers contracted under an MSA have local Indigenous inclusion commitments

2023 Internal launch of Potash Indigenous Supply Chain Strategy

The Strategy is intended to continue building capacity internally and externally and ultimately enhance sustainable Indigenous inclusion throughout our supply chain.

Spent CAD \$324M in contracts with Indigenous-owned suppliers and suppliers who commit to 15 percent or more full-time Indigenous employment

100% of contracted Potash suppliers have local Indigenous inclusion commitments (direct employment, subcontract commitments, education and training, or community investment)

Below and right: KPCL workforces providing construction services at Nutrien potash mines in Saskatchewan.



Saskatchewan, Canada

Supporting Nutrien suppliers in their inclusion journey

Nutrien and Kelly Panteluk Construction Ltd. (“KPCL”), a Saskatchewan-based construction company, have had a relationship since 2006, when they started working on the tailings expansion project at Rocanville. Since then, KPCL has continued to advance its Indigenous employment efforts while providing Nutrien with construction services at many of our Saskatchewan Potash mines.

KPCL has employed Indigenous individuals since the early 1990s, and developed and formalized its Indigenous Engagement Strategy (“Engagement Strategy”) after Nutrien’s Indigenous Content Playbook: A How-To Guide (the “Playbook”) was released. The Playbook provided realistic targets and guidance for Indigenous content, such as workforce and supplier diversity, community investment, and cultural awareness. KPCL set its own goals and key performance indicators to track and measure progress against the Playbook’s expectations, which they have exceeded.

KPCL’s Engagement Strategy has enhanced the awareness, retention and advancement of its Indigenous workforce, as well as its own suppliers. The Engagement Strategy has also fostered a culture of engagement and appreciation among all KPCL employees, regardless of their background. KPCL has witnessed many positive personal growth stories of its workers, some of whom have been promoted from laborers to leadership roles, and some of whom have moved on to start their own businesses.

Nutrien commends KPCL’s Indigenous engagement initiatives and acknowledges that different strategies may suit different service providers. We have provided KPCL with direction and encouragement, as well as opportunities to showcase its achievements and best practices.

Human Capital

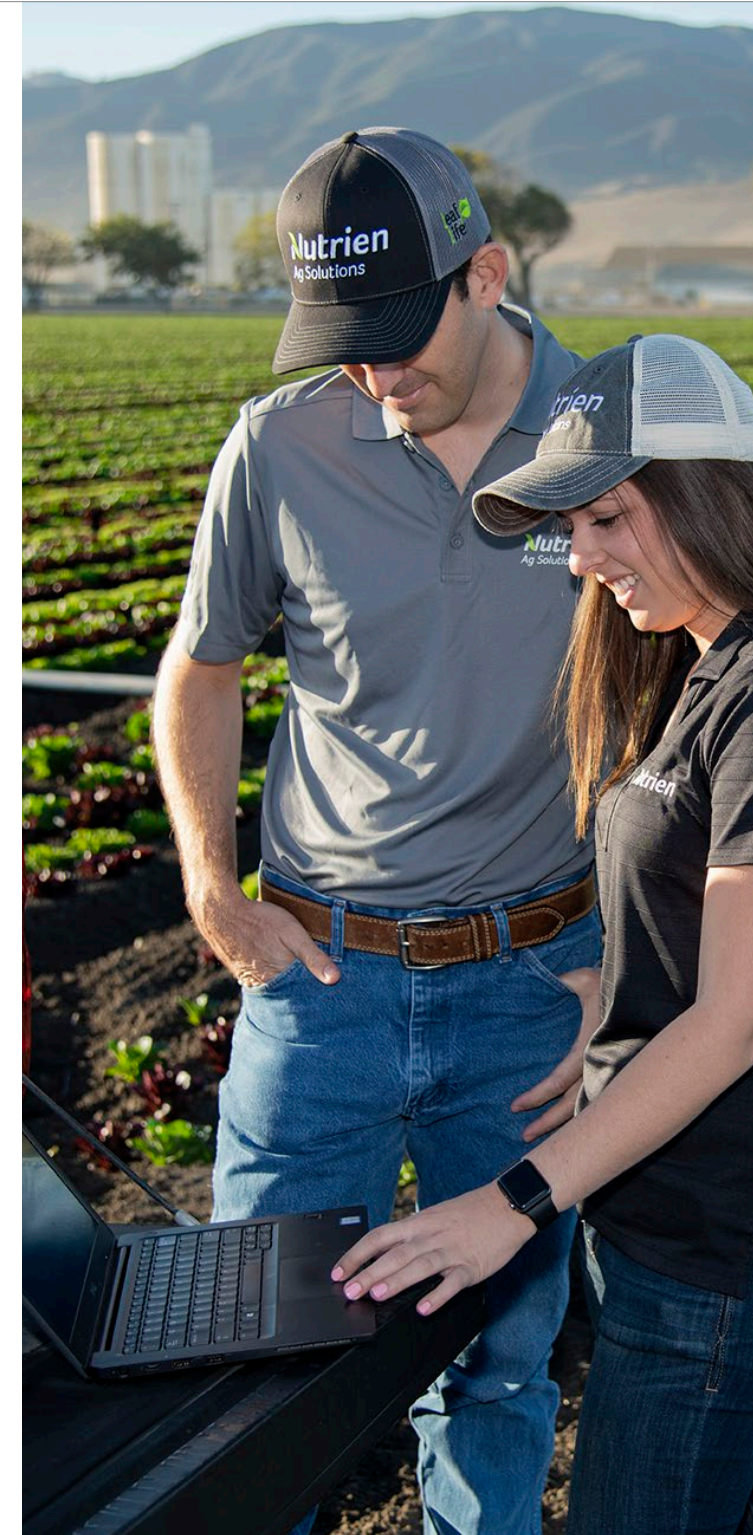
We are committed to listening to our employees and creating an environment where they feel valued, respected and engaged in their own success.

How is this topic relevant to our business?

The knowledge and skills of our valued employees represent our greatest assets. To maintain that valuable human capital means we focus on attracting, retaining and engaging everyone who works at Nutrien. With over 25,900 dedicated employees, Nutrien offers a wide range of roles, from underground potash mining to designing digital platforms that provide products and services for growers. Ensuring that Nutrien employees feel valued, respected and engaged in their own success is essential in attracting and retaining the talented people who will help us achieve our purpose of *Feeding the Future*.



[Read more](#)



Key links:



Global alignment and standards

- [The Ten Principles of the United Nations Global Compact](#)
- [International Labour Organization](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

- [Code of Conduct](#)
- [Inclusive workplace commitment](#)
- [Equal Employment and Affirmative Action Policy](#)



Governance for this topic

- [Board Committee responsibilities for sustainability](#)
- [Executive responsibilities for sustainability](#)
- [Management responsibilities for sustainability](#)

Our approach

At Nutrien, we are making a difference. As the world's largest crop inputs and services company, we aim to transform agriculture by innovating how food is grown, supporting our communities and breaking down barriers. To achieve this industry transformation, we are investing in attracting talent, providing an engaging and supportive employee experience, offering opportunities to learn and grow, and employing effective succession management processes.

Attracting talent

To help us attract the right people for the right roles, we regularly request feedback from applicants and new hires on what they look for in a role, and continually survey social media channels to gauge sentiment towards Nutrien. We also conduct exit interviews, “stay” interviews (informal conversations meant to identify the factors that drive retention and engagement), and request feedback from employees with service milestones to further inform our programs. We developed our Employee Value Proposition in 2023 through extensive engagement and with input from employees at all levels of the organization, which will inform our recruitment and retention strategies going forward.

Nutrien continues to be an employer of choice, with an over 90 percent acceptance rate on all employment offers in 2023. We were also Great Place to Work Certified in Canada, the US, and Australia and were named one of Canada's Top 100 Employers and one of Saskatchewan's Top Employers in 2023.

Engaging and retaining employees

Employees who have positive experiences at work are more likely to be engaged in working safely and

collaboratively towards our shared company goals. We promote employee engagement and retention by focusing on the overall employee experience: providing the right rewards, gathering feedback by listening, offering learning and development opportunities for all, and supporting mental and physical well-being. [Read more.](#)

Total rewards

Nutrien provides a competitive, equitable and inclusive total rewards program guided by our core values to attract, retain and engage diverse talent. We provide attractive and market-based compensation packages as well as localized benefit and retirement programs that demonstrate our care for the health and well-being of our employees and their eligible family members. We also offer resources that support physical, emotional and financial well-being, including comprehensive benefits and valuable savings plans and retirement programs. Our paid time-away-from-work policies include vacation time, sick time, personal days and parental leave.

Additional resources may include Employee Assistance Programs, education and tuition reimbursement for eligible employees, fitness classes, discount programs, scholarships and more. Eligible employees can also contribute to their community with our matching gift program and paid volunteer days. While we aim to provide one suite of programs to our employees, in some circumstances plans vary by operating segment and/or geography to remain competitive in local markets.

Active listening

Listening to our employees helps us identify ways we can improve the employee experience and retain our talented people. Techniques for listening include global “town halls” throughout the year, regular engagement and Culture of Care surveys, pulse surveys to gauge employee sentiment on time-sensitive matters, and ad hoc focus groups. Almost 15,000 employees responded to our enterprise-wide Culture of Care and Engagement Survey in 2023, a response rate over 56 percent. The results confirmed that we are effective in living our values

of Safety (over 90 percent), Integrity (almost 90 percent), Inclusion (over 80 percent), and Results (85 percent). We scored 75 percent on the Engagement and Employee Experience Index, comprised of questions related to overall experience, communication, work-life balance, and other elements of employee engagement. Areas of strength included employee understanding of Nutrien's goals/objectives and how their work contributes to them, and leader support for conducting work with integrity, even when difficult. Key areas for improvement were coaching and career development, pay, and mental health.

Learning and leadership development

We aim to empower everyone with the meaningful opportunities and individual development support needed to set and reach career goals. This includes in person and virtual learning and development offerings, targeted leadership programs at all levels, regular performance management, and support for career planning.

Virtual learning

Nutrien's LMS is an online platform that provides online courses and additional resources for employees to learn more about owning their career. Nutrien's LMS is available for our North American, Trinidad and Tobago, and Australian employees. This centralized location for learning and development creates an improved educational experience and has greatly expanded the learning opportunities and development paths available to employees. The LMS houses an array of learning content, including soft skills training such as influencing and communication skills. Benefits of the LMS include the ability to self-assign courses, leader insights into training needs, and personal dashboards for employees and leaders to help track and report on training. A suite of professional development courses and content are available through virtual eLearnings through LMS, as well as in person training.

Collective bargaining, unions and labor relations

Nutrien supports freedom of association and values, effective communication, collaboration with unions, and dispute resolution procedures for grievance processes. Maintaining positive relations with unions is important to our business. Our employees can join an employee association or labor union, consistent with national or regional laws and practices. We strive for productive relationships with the unions representing our employees. Nutrien has entered into 13 collective bargaining agreements with labor unions representing approximately 12 percent of our total employees. Of those, three are currently under renegotiation. In some of our jurisdictions, employees are self-represented through other forms of collective bargaining such as enterprise award agreements or work councils. Of our non-North American employees, 49 percent are covered by these types of arrangements.

>90%

of employees believe that Nutrien is effective in living our value of Safety

Learning and leadership development (continued)

Leader development

Our leaders play a critical role in helping us achieve our purpose. Nutrien provides all employees with opportunities to tap into their leadership potential. Employees can participate in Nutrien's Leadership Development Program, a four-workshop series designed for new leaders, those who aspire to be leaders and existing leaders looking to sharpen their skills. This program covers topics ranging from establishing trust and emotional intelligence to performance management. In addition, our Authentic Leadership Program is available to all employees and is based on the belief that everyone has the capability for leadership. Nutrien Academy is a year-long program that empowers women to increase their leadership potential by expanding their business acumen and developing leadership capabilities. It builds the talent pipeline for diverse representation at senior levels of the organization.

In 2023, Nutrien launched the High Performance Institute (the "Institute"), offering unique programs and services aimed at developing individual and organizational performance. With a focus on senior leaders, the Institute builds detailed individual profiles and enables data-based decisions using behavioral science and psychological assessments to understand candidate growth potential and development needs. It currently supports performance development for 50 senior and executive leaders and will progressively expand in the coming years. Throughout 2023, more than 1,600 employees participated in at least one leadership development program.

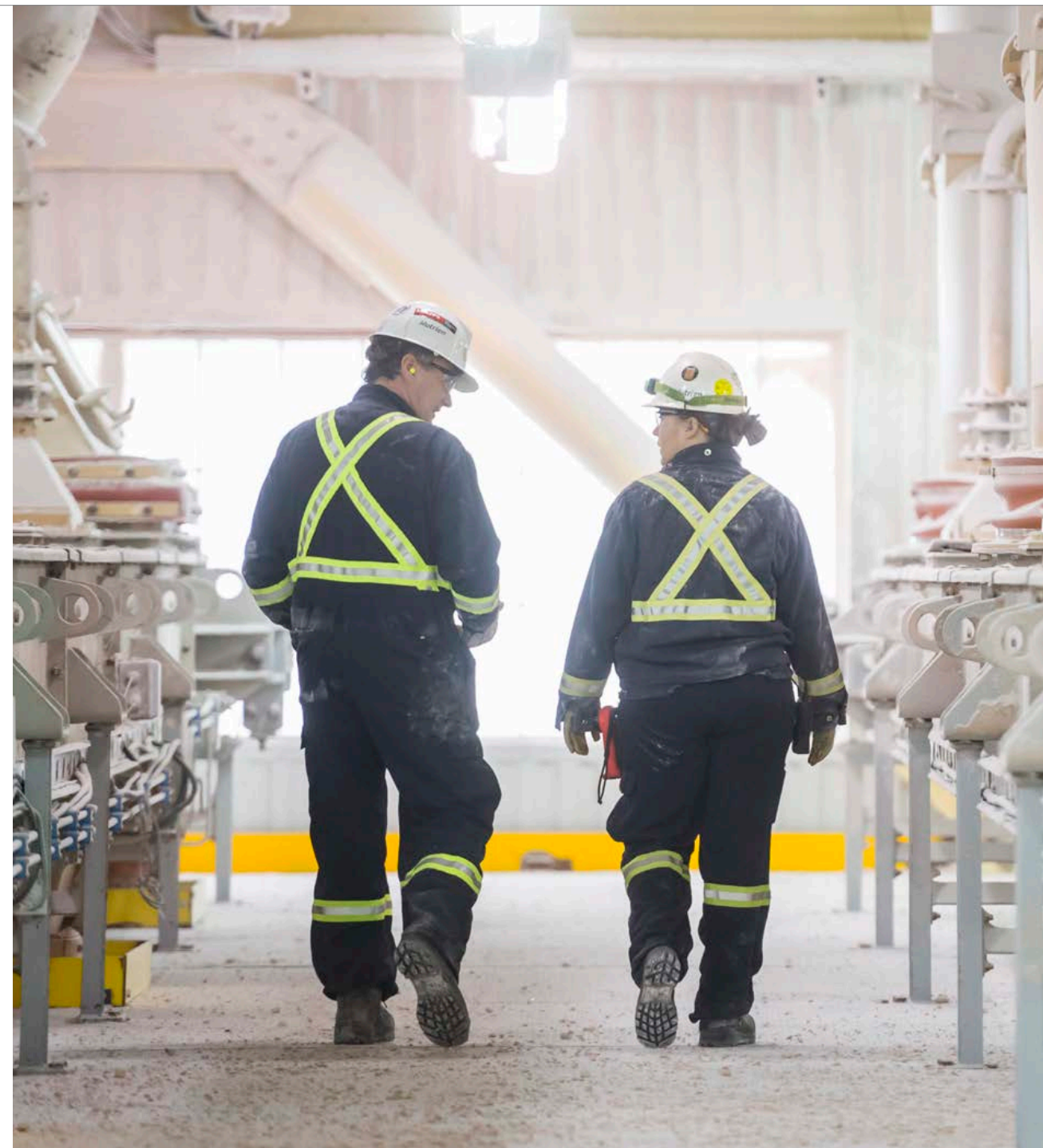
Performance management

At Nutrien, performance management is a continuous process of coaching and communication between team leaders and team members, focusing on individual objectives and behaviors that support the strategic objectives of the Company. In 2023, Nutrien increased the availability of our online performance management process to almost 20,000 employees, with the remaining employees using a paper-based process to complete their performance reviews. We plan to continue expanding online access. We also made 360-degree review process materials available for employees who wish to take advantage of this tool.

Career development and succession management

We continue to use real-time dashboards to provide executives and HR access to important metrics such as employee turnover and workforce demographics. Currently, we have career development plans in place for approximately 10 percent of our North American, Trinidad and Tobago, and Australian employees. In 2023, almost 20 percent of the roles posted within Nutrien's applicant tracking system were filled by internal candidates.

Our succession management program enables the retention of talent, identification of talent gaps and creation of succession plans, aligning organizational needs with employee knowledge and career aspirations. Succession planning also supports continuity within our operations when changes occur. At senior leadership levels, we manage internal talent pools of high-potential individuals rather than 1:1 replacement planning. Within our operating segments, we conduct succession planning for the roles that are most critical to the achievement of our business strategy as well as highly specialized roles and difficult-to-fill positions. Almost 2,000 unique positions, or approximately 10 percent of our roles, within our North American and Trinidad and Tobago operations, have an identified successor.



Community Relations and Investment

Nutrien is committed to being a catalyst for societal growth and development, ensuring our people, communities and businesses can continue to thrive.

How is this topic relevant to our business?

Our approach to community relations includes the many ways we engage and support local communities and global organizations. With operations around the world, Nutrien can make a positive impact and help advance sustainability priorities in the communities where we do business.

Positive and transparent community relationships are essential to the successful operation of our business,

especially in smaller communities where we have a more prominent operational footprint. Strong connections in our communities provide opportunities for employee attraction, engagement and retention. Community stakeholder relationships contribute to business risk mitigation and reputation management through increased communication and collaboration.

Targets

- **Achieved** – Employees volunteer at least 25,000 hours by 2025¹
- **Achieved** – Develop and implement a targeted approach to measure the impact of our sustainability and community investments by 2023

¹ Volunteering during work and outside of work are counted towards this target.

Key links:



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[Community Relations Position](#)

[South America Social Investment Policy](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)





[Management responsibilities for sustainability](#)



Our approach

Nutrien is committed to being a catalyst for societal growth and development, ensuring our people, communities and businesses can continue to thrive. As Nutrien focuses on sustainable agriculture, environmental stewardship and EDI in our business, we support the same priorities in our communities. This approach allows us to advance Nutrien's sustainability and strategic inclusion priorities in both our business and our communities. Concentrated and strategic support also allows us to make a more impactful contribution to progress in these critical areas. Our program includes strategic partnerships and investment, employee engagement through donation matching and volunteering, emergency relief, and agriculture and environmental education programs.

Community investment focus areas

 <h3>Sustainable agriculture</h3> <p>Increase availability of nutritious food through innovation, education and advancement of sustainable agriculture</p>	 <h3>Inclusive industry</h3> <p>Seed and support a diverse and inclusive industry</p>
 <h3>Environmental stewardship</h3> <p>Protect and promote ecosystem health</p>	 <h3>Resilient communities</h3> <p>Diverse communities where residents are nourished and supported</p>

Community engagement

Engagement is the foundational principle of Nutrien's relationships with communities. We engage regularly with the communities in which we operate, providing opportunities for dialogue, information sharing, and the development and maintenance of mutual understanding. Nutrien representatives participate in community-based meetings or events with Community Advisory Panels, industry associations and Chambers of Commerce, and volunteer with charitable and non-profit organizations and Local Emergency Planning Committees where they operate. Our participation with these groups varies by location.

Community investment impact framework

Our new internal Investing for Impact framework is complete and currently being implemented. We

developed a training program for community partners and Nutrien's community investment representatives. We aim to test, evaluate and refine the framework and impact measurement data in the coming years. Our framework supports four focus areas: sustainable agriculture, inclusive industry, environmental stewardship and resilient communities (see below).

Community relations and investment

Many of our community relations and investment activities support one or more focus areas. Examples from 2023 include:

1 | Strategic partnerships and investment

In 2023, Nutrien invested \$23 million in communities around the world. We focus on initiatives that address existing needs in local communities and create positive impact in the areas of food security and sustainable agriculture, the environment, inclusive industry, and resilient communities. See [page 67](#) for examples. Partner organizations are vetted and must be a registered charity or non-profit to be eligible for funding. Basic impact monitoring is also in place to facilitate consistency and integrity in our community outreach.

2 | Employee engagement

Eligible employees can support their communities and the causes important to them through matching gifts,

paid volunteering and workplace United Way campaigns. In 2023, Nutrien contributed more than \$1.8 million through these programs and volunteers from across our business dedicated 26,700 hours contributing to community organizations. In 2023, we saw the first year of South America's formal volunteer program, although Nutrien employees in this region have been volunteering for several years. Community engagement in South America is supported by the local Social Investment Policy, with a focus on education, sustainable agriculture and development of communities. Many of our offices and facilities in North America participate in annual United Way campaigns where employee donations are matched by Nutrien.

3 | Emergency relief

We provide support for Nutrien communities affected by disasters. In 2023, Nutrien provided nearly \$200,000 to disaster relief organizations in Alabama, California, Florida, Mississippi, Texas and Alberta to support those impacted by tornadoes, flooding, wildfires and hurricanes. Learn more [here](#) and [here](#).

4 | Education programs

Today's youth are tomorrow's decision makers and employees, and they play a crucial role in our industry's future and the future of our planet. Nutrien's education programs are available or implemented in communities where we operate and raise awareness about sustainable agriculture, safety in agriculture and environmental stewardship. [Learn more.](#)

Performance	2023	2022	2021
Community investment ¹	\$23M	\$33M	\$19M
Community partnership (count)	2,800	3,000	>2,700
Employee volunteering (hours)	26,700	17,580	11,460

1 In 2022, Nutrien allocated additional funds on a one-time basis to advance our strategic priorities.

Spotlight

Community investments around the world

Nutrien invests for impact across our regions. Here are a few examples of how we supported community initiatives and educational programs that promote resilient communities, biodiversity and environmental stewardship in 2023.



Planting shelterbelts with the Siksika Nation

In 2023, Nutrien pledged CAD\$100,000 to support the [Project Forest Siksika Nation Community Shelterbelt Rewilding](#). Project Forest and the Siksika Nation are planting shelterbelts on Siksika Nation, the second largest Indigenous reserve in Canada. Shelterbelts, up to five rows wide with food-bearing and medicinal plants interspersed, will benefit the members of Siksika Nation by creating privacy from the road, mitigating extreme weather and offering spaces for traditional land use activities like berry-picking.



Helping growers and their families in times of need

Nutrien has committed \$1 million over three years to [Farm Rescue](#) to help US growers continue viable operations when disaster or illness prevent them from working. Farm Rescue assists farm and ranch families with planting, haying, hay or commodity hauling, harvest, or livestock feeding when a major injury, illness or natural disaster strikes. Farm Rescue has assisted more than 1,000 families since its beginning in 2005.



Alberta, Canada



Geismar, US



Learning about food production and security

In 2023, Nutrien sponsored and helped facilitate the “I-EAT” food security and agriculture education initiative with the Trinidad and Tobago Ministry of Education. The project’s goal is to help primary students better understand food production and food security through hands-on experience in school gardens. This encouraged innovation, entrepreneurship and skill development in agriculture with over 1,500 primary school students from 55 schools participating. [Learn more.](#)



Trinidad



Brazil and Argentina



Unwavering community support

We continue to champion local and diverse hiring and work-readiness programs, provide scholarships, and work to ensure that the community benefits from the opportunities created by Nutrien’s operations. Our 2023 highlights include our \$600,000 donation over two years to Greater Baton Rouge Food Bank, and a \$150,000 donation to [Junior Achievement of Greater Baton Rouge](#) to increase financial literacy and leadership skills for local students. [Learn more.](#)



Supporting rural schools

Nutrien has supported the Escola Transforma (School Transforms) project, founded by Instituto Cuidare, since 2021. This project collaborates with rural public schools to improve their infrastructure and provide professional development opportunities for educators. The goal of this project is to reduce poverty and address social inequalities through the power of education. Since the project began, over 700 Nutrien volunteers have provided more than 3,000 hours of volunteering and supported the construction of playgrounds, vegetable gardens, reading rooms and more, impacting more than 20,000 students.

Governance

Creating strong corporate governance systems and acting with integrity

04

Topics in this section

Corporate Governance	69
Governance of Sustainability	71
Integrity	74
Cybersecurity and Data Privacy	77
Additional Governance Topics	79
Nutrien Climate-related Disclosure	80

California, US

The US is the world's second largest producer of lettuce. Nutrien's network of ~1,200 selling locations in the US serves growers needs including specialty crops like lettuce and other fruit and vegetables.

Corporate Governance

We are committed to creating a culture of integrity throughout the organization by engraining good corporate governance systems and principles in our business operations and culture.

How is this topic relevant to our business?

Nutrien's governance systems include policies and processes that define the roles and responsibilities of the Board and the Executive Leadership Team ("ELT"). Robust governance helps us preserve and create value through effective risk management and the focused pursuit of Nutrien's strategic objectives, aligned with our Purpose.

Key links:



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[Corporate Governance Framework](#)

[Corporate Disclosure Policy](#)

[Proxy Circular](#)

[Board Diversity Policy](#)

Board of Directors



Russell Girling
Chair



Ken Seitz
President and Chief Executive Officer



Christopher Burley
Director



Maura Clark
Director



Michael Hennigan
Director



Miranda Hubbs
Director



Raj Kushwaha
Director



Alice Laberge
Director



Consuelo Madere
Director



Keith Martell
Director



Aaron Regent
Director



Nelson Luiz Costa Silva
Director

Executive Leadership Team



Ken Seitz
President and Chief Executive Officer



Noralee Bradley
Executive Vice President, External Affairs and Chief Sustainability and Legal Officer



Pedro Farah
Executive Vice President and Chief Financial Officer



Andrew Kelemen
Executive Vice President, Corporate Development and Chief Strategy Officer



Chris Reynolds
Executive Vice President and President, Potash



Jeff Tarsi
Executive Vice President and President, Global Retail



Mark Thompson
Executive Vice President, Chief Commercial Officer



Trevor Williams
Executive Vice President and President, Nitrogen and Phosphate

Our approach

We embed strong corporate governance systems and principles in our business to place the interests of our shareholders and stakeholders at the center of every decision we make. Nutrien's governance structure and committed leadership support the development of a cohesive sustainability strategy and the integration of sustainability practices across our Company, including actions supporting Nutrien's *Feeding the Future* Plan.

Board diversity

Having Board directors 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 members represent no less than 30% of the Board's composition. Nutrien is also a member of the 30% Club Canada, 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 the Canada Business Corporations Act, including women, Indigenous Peoples, persons with disabilities and members of visible minorities, and confirms our commitment to diversity in recruitment practices.

Nutrien's 2023 proxy circular disclosed that, of our directors, four self-identify as women (33 percent of the total number of directors), one self-identifies as an Indigenous person (8 percent of the total number of directors) and one self-identifies as a member of a visible minority (8 percent of the total number of directors). None of our directors self-identify as a person with a disability.

Board renewal and skills

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. Nutrien therefore does not limit the term that a director can serve on the Board and may request a director extend their term of service beyond the general retirement age of 72.

The Board regularly reviews the Board skills matrix for skills and experience. As of the time of our last assessment (March 20, 2023) with our 2023 management proxy circular, we disclosed that 58 percent of our Board members had sustainability related skills or experience. For more information, see [Nutrien's 2023 Proxy Circular](#).

Executive compensation

Nutrien's compensation framework is based on a pay-for-performance philosophy, with the majority of compensation being at-risk for the CEO and other named executive officers ("NEOs"). We include an advisory "say on pay" vote at our annual shareholders' meeting. In 2023, 88 percent of CEO compensation was at-risk, and 77 percent of other NEOs' compensation was at-risk. A component of executive short-term compensation is tied to demonstrated sustainability performance in key initiatives including safety, inclusion, cybersecurity, and GHG emission reduction projects, and progress across our sustainability commitments. We continue to evaluate and refine the most effective way to incorporate metrics that support a sustainable business within both our short-term and long-term incentive programs.

Board and governance information ¹	2023
Total number of directors	12
Number of independent directors	10 ²
Separate Chair and CEO	Yes
Independent Chair (required)	Yes
Annual Board evaluation process	Yes
Board renewal and diversity	2023
Annual election of directors	Yes
Average age of directors	61
Retirement age	72
Average director tenure	3-5 yrs
Women Board members	33%
Board Diversity Policy	Yes
Shareholder rights	2023
Proxy access	Yes
Say on pay advisory vote	Yes
Votes in favor of compensation approach at the 2023 AGM	95.21%

- Information presented as of the time of our last assessment (March 20, 2023) and as disclosed in our 2023 Management Proxy Circular, except where indicated.
- Effective January 1, 2023, due to a technical deeming rule, Mr. Martell was rendered non-independent under applicable Canadian securities laws for the purposes of serving on the Company's Audit Committee. For more information, see Nutrien's [2023 Proxy Circular](#).



Governance of Sustainability

We embed strong corporate governance systems and principles in our business to place the interests of our shareholders and stakeholders at the center of every decision we make.

How is this topic relevant to our business?

Nutrien's governance for sustainability systems includes policies and processes that define the roles and responsibilities of the Board and the ELT when it comes specifically to managing sustainability related risks and opportunities. Sustainability topics include climate, biodiversity, ecosystems and ecosystem services, human capital, and human rights. These topics have been embedded throughout this report.

Nutrien's governance structure and processes help us identify and manage sustainability related risks and opportunities, related regulations, and societal expectations, incorporating them into our strategic and business planning activities. This enhances our resilience, helping us capitalize on opportunities for growth, mitigate potential risk and effectively deliver on our strategy. Sound management of sustainability, underpinned by our balanced and disciplined approach to capital allocation, aims to ensure we have the financial, human and natural resources for the creation and preservation of Nutrien's long-term value.

Key links:



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[Board of Directors Charter](#)
[Safety & Sustainability Committee Charter](#)



Our approach

Nutrien is governed by our Board and Board committees who, in whole or at the Committee level, oversee management in ensuring our businesses' principal risks and opportunities are being appropriately identified and addressed. This includes sustainability and climate-related risks. Responsibility and accountability for managing risk are embedded in all levels of our organization, and we integrate risk management into key decision-making process strategies. Our sustainability function is part of the external affairs and legal functions and is closely connected with the operating segments and other corporate functions.

Nutrien's Sustainability and ESG Governance Framework (including climate)



¹ Includes representation from relevant corporate functions and operating segments.

Board oversight

Nutrien's objectives, goals, associated risks and related strategies are subject to appropriate Board oversight and approval. The Board takes reasonable steps to ensure that management identifies and understands Nutrien's principal risks, implements appropriate measures to manage these risks, and achieves a proper balance between risk and returns. Finally, the Board oversees safety, health, environment and security activities and the integrity of related policies.

Board Committee responsibilities for sustainability

Safety and Sustainability Committee ("S&S Committee"): The S&S Committee has responsibility for the oversight of the Company's activities as they relate to ensuring that appropriate policies, systems and personnel are in place to support safe and sustainable operations and the long-term viability of the Company, including its consideration of stakeholders relevant to the creation and preservation of long-term value. This oversight includes the ongoing monitoring and development of the Company's sustainability strategy and incorporates safety, environmental stewardship, health, climate change related risks and opportunities, cybersecurity and data privacy. The S&S Committee directly reports to and advises the board on these matters. While a component of sustainability, we have retained a specific reference to safety in the name of the S&S Committee and have also retained a significant focus on safety in the S&S Committee workplan given its importance as a Nutrien core value.

Executive responsibilities for sustainability

Executive Leadership Team ("ELT"): Ensures Nutrien's material sustainability risks, including climate-related risks, are being appropriately identified, assessed, managed and addressed, and for performance related to sustainability strategy, commitments and targets. In particular, the Executive Vice President, External Affairs and Chief Sustainability & Legal Officer provides executive-level oversight, strategic vision and leadership for sustainability related matters, including developing and monitoring Nutrien's *Feeding the Future* objectives and providing direction to the Executive Sustainability Committee.

Executive Sustainability Committee: Oversees sustainability materiality assessment issues and oversight of risk mitigation for sustainability matters, and develops external disclosures and communications related to material sustainability matters.

Management responsibilities for sustainability

To develop plans to manage specific sustainability risks and opportunities, we coordinate among the following cross-functional groups, employee-level councils and committees, and our corporate risk function.

Sustainability Working Group: Coordinates and aligns functional strategy and disclosure on climate and sustainability issues.

Corporate SH&E Committee: Establishes priorities and strategically aligns with the SH&E Management System to shape the overall SH&E strategy for the Company and our various operating segments. Areas of focus include the SH&E strategy and performance, with the goal of protecting our employees, environment, communities and customers, as well as overseeing the Product Stewardship and Security functions.

Inclusion Council: Accelerates EDI throughout the organization by guiding, benchmarking best practices and driving accountability for EDI-related strategies, policies and initiatives. The Council is chaired by Nutrien's President & CEO, with membership including executive level representation from each business unit and corporate function.

Enterprise Risk Management team: Establishes frameworks and facilitates processes to identify and assess risk (including sustainability and climate-related risks) across the organization.

Strategic Issue Teams

Strategic Issue Teams (“SITs”) provide the foundation of Nutrien’s sustainability governance. SITs are cross-functional platforms that provide guidance on strategic issue alignment for Nutrien. Our Sustainability and ESG Governance Framework supports the collective goal for Nutrien to conduct business with integrity in all aspects of our operations. SITs report to the Sustainability Working Group.

Climate Scope 1 and 2 Strategic Issue Team: Provides oversight on strategic activities to achieve our goal of at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018.

Climate Scope 3 Strategic Issue Team: Provides oversight on strategic activities to manage risk and inform decisions related to Scope 3. The SIT is focused on understanding global expectations around Scope 3 emission and inventory management and reporting.

Product Stewardship Strategic Issue Team: Provides oversight to the current sustainability target and is working to identify additional requirements to achieve goals related to Product Stewardship for Nutrien.

Soil Health Strategic Issue Team: Identifies relevant and impactful soil-health-related science focused on sustainable agriculture and provides strategic recommendations to address related risks and opportunities.

Water Strategic Issue Team: Provides oversight to the current sustainability target and is working to identify additional actions required to achieve goals related to water management and stewardship across our operations.



Biodiversity Strategic Issue Team: Provides strategic recommendations related to biodiversity risks and opportunities across our value chain and recommends actions to promote sustainable agricultural production.

Aligning with global standards

Nutrien’s Environmental Global Standards include

- Environmental Leadership
- Environmental Sustainability, ESG, Footprint and Data Management
- Environmental Risk Management
- Environmental Operations Management
- Environmental Global Waste Minimization
- Environmental Agency Inspections, Investigations and Enforcements
- Environmental Regulatory Change Management and Compliance Calendar
- Environmental Training, Awareness and Competence
- Environmental Incident Management, Reporting and Investigation
- Environmental Audit and Compliance Assurance

Nutrien’s Environmental Global Standards set out minimum expectations for managing our environmental risks. They are informed by external environmental management best practices including ISO 14001 and 9001, as well as [IFA](#), [Responsible Care](#) and [ResponsibleAg](#).

Integrity

Nutrien conducts business around the world, and we are committed to doing so the right way which, among other practices that demonstrate integrity, includes respecting and observing all human rights laws, following principles of fair competition, and doing business with honesty and transparency.

How is this topic relevant to our business?

Integrity is one of our core values at Nutrien. As a large, global company operating in many countries, it is our responsibility to provide the systems and tools for our employees to act with integrity. Our reputation as a company that does business with honesty and respect for others is essential to building and maintaining trusting relationships with stakeholders, as well as reducing our legal, reputational and financial risks.

Targets

- **Achieved** – All employees, directors and officers complete mandatory Code of Conduct training annually

Key links:



Global alignment and standards

[Voluntary Principles on Security and Human Rights](#)

[Universal Declaration of Human Rights](#)

[Declaration on the Rights of Indigenous Peoples](#)

[Guiding Principles on Business and Human Rights](#)

[The Ten Principles of the United Nations Global Compact](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[Code of Conduct](#), supported by these and other policies:

Competition Law Policy

Anti-Corruption Policy

Gift and Entertainment Policy

Conflicts of Interest Policy

Respect in the Workplace Policy

[Supplier Code of Conduct](#)

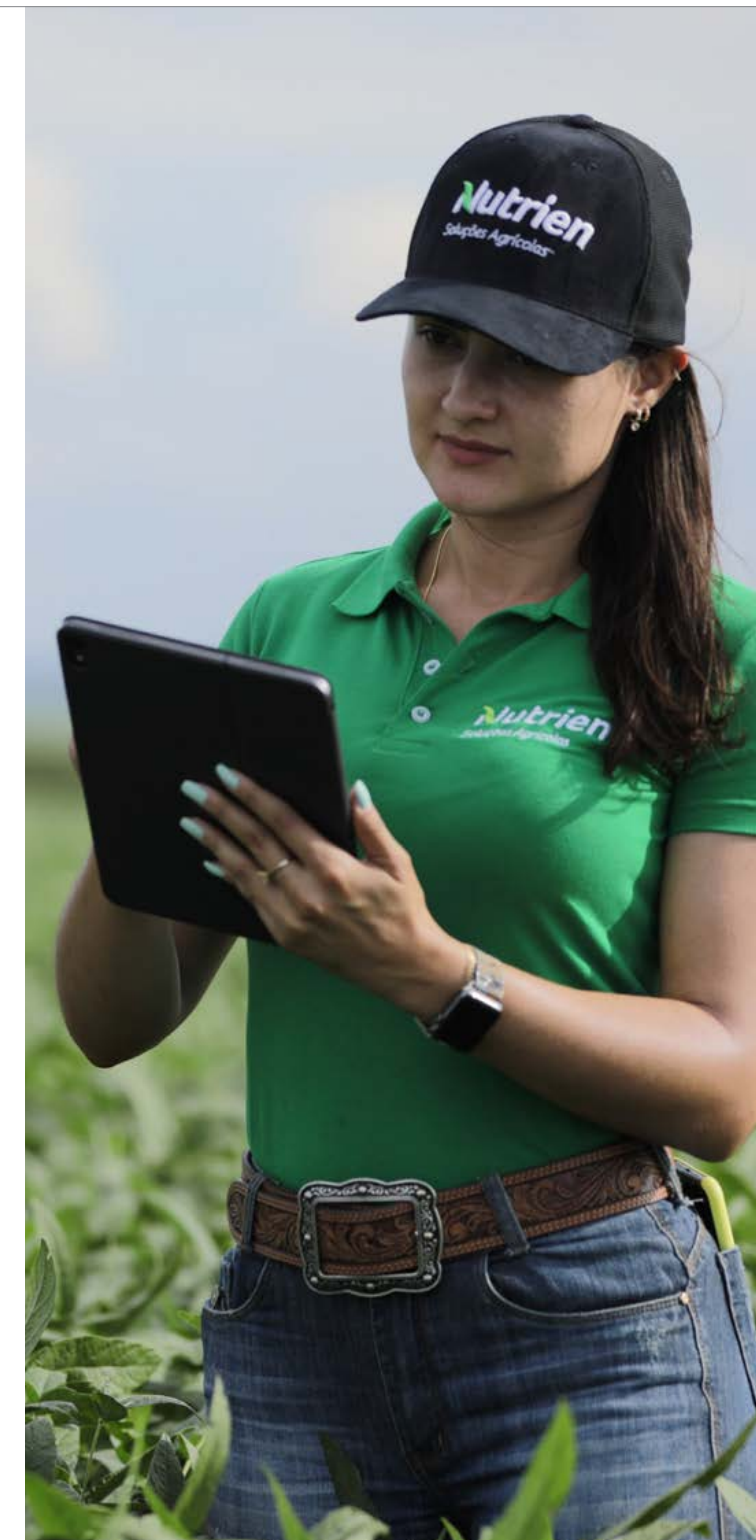


Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)



Our approach

Some of the key aspects of integrity that we focus on include respect for human rights, avoiding anti-competitive behavior, and preventing bribery and corruption.

Policies

Some of the policies that guide our integrity work are

- We are committed to respecting and observing all **human rights**, in accordance with applicable law and the principles set forth in applicable international standards listed on the [previous page](#).
- Our **Competition Law Policy** outlines Nutrien's strict expectations of all employees, officers and directors, as well as third parties such as distributors, agents, resellers and contractors. Anti-competitive behaviors with competitors or customers and other third parties (for example, governments) are prohibited, including but not limited to, price fixing, agreements to limit production, exchanging competitive information and predatory pricing.
- Our **Anti-Corruption Policy** sets forth the acceptable behaviors for interacting with government officials and commercial partners. We have zero tolerance for bribery, whether our own employees are involved or third parties who are acting on our behalf. Supporting policies are listed on the [previous page](#).

Integrity Program

Nutrien's Integrity Program provides the knowledge and tools for all employees to achieve business results the right way – with integrity. This program consists of four pillars: risk intelligence, learning, speaking up and investigations. Policies, information and resources on each of these pillars are available to all employees through multiple formats and channels in all of Nutrien's working languages. We continually review and, where necessary,

update our policies to provide clarity and guidance around our expectations for doing business with integrity. See the [previous page](#) for links to key integrity policies.

1 | Risk intelligence

Nutrien's risk intelligence activities include assessment and mitigation tools for human rights, compliance, integrity and legal factors that are available to employees on a risk basis considering their specific role and, sometimes, location. These tools include trade sanctions due diligence, customer and supplier reputation due diligence, and our ERM program.

Human rights and anti-corruption: Nutrien identifies and assesses human rights-related risks annually as part of our global ERM process and through our sustainability material topic analysis. Note that Nutrien has no operations in countries with high levels of corruption risk as determined by Transparency International's Corruption Perception Index (that is, the countries that are part of the 20 lowest rankings).

Mergers and acquisitions: We integrate compliance and integrity assessments and training into our due diligence and integration process for new acquisitions to verify that our growing Company continues to build and maintain a culture of integrity in line with our core values. These activities also serve to mitigate legal and financial risks as the business grows, such as those related to bribery and corruption, as well as environmental and social sustainability issues. Compliance and integrity integration activities are risk-based and range from deployment of Nutrien policies, to alignment of key processes with Nutrien's programs and provision of training.

Third-party due diligence: We integrate legal and compliance risk assessment into supplier screening and monitoring processes. For example, in 2023 our Integrity Group continued working closely with Nutrien's operating segments to provide guidance on evolving trade sanctions. Our procurement team has taken significant steps through processes related to our Supplier Code of Conduct to further embed the importance of supplier risk management across the organization.

Integrity culture questionnaire: Since 2021, we have been conducting monthly surveys of a representative sample of employees across Nutrien about our integrity culture, including psychological safety. The anonymous responses enable us to understand what we are doing well and where we have room to improve by region, operating segment and corporate function.

2 | Learning

Training and communications: All employees, directors and officers must complete mandatory Code of Conduct training annually. The 2023 training included Nutrien's purpose and values; fostering a "speaking up" culture; cybersecurity and use of AI tools and services in the workplace; data privacy; respect in the workplace (including anti-harassment, anti-discrimination and inclusion); safety; conflicts of interest; protecting company assets; accurate records and information; fair competition; preventing corruption and bribery; gifts and entertainment; and sustainability. In addition, leaders completed an additional section on leading with integrity, which included content on psychological safety and promoting a speaking up culture, receiving and escalating concerns, and their elevated responsibility to demonstrate Nutrien's values. We update and rotate topics from year to year as part of our risk-based training strategy.

Our training program also includes refresher training on a periodic basis. This is to address the ever-changing legal and compliance landscape by providing our employees with the necessary tools to recognize and respond to any potential risks. Some of these risk areas include anti-corruption and fair competition. In 2023, we set a goal to train employees who work in potentially higher-risk roles on these two important topics. About 1,700 employees received online training, and about 500 employees received tailored live training, on anti-corruption. On the topic of fair competition, over 2,300 employees received online training, and about 500 employees received live training.



Integrity Program (continued)

Emails providing information and resources on anti-corruption were sent to those traveling to high-risk countries (according to Transparency International’s Corruption Perception Index), and refresher training was completed prior to their travels if they had not already done so in the last year.

Integrity Moments: Integrity Moments involve sharing stories that show integrity in action (personal or otherwise) at the start of meetings. Integrity Moments help to foster and normalize discussions about our core value of integrity in our everyday work. We continue to encourage employees to share an Integrity Moment at the beginning of meetings.

3 | Speaking up

One of the most important ways to do business with integrity is to speak up, ask questions and report concerns about situations that may violate the Code, an associated policy or the law. There are several options for speaking up (for example, in person, email, instant messaging, direct phone calls), but Nutrien also provides an externally administered Integrity Helpline for employees and anyone outside Nutrien to ask questions and report integrity concerns. Service is available in seven languages and can be accessed by calling a localized phone number or using an online form. Reports can also be made anonymously. Nutrien has zero tolerance for any retaliation against someone who raises a concern or otherwise participates in the investigation process in good faith.

Speaking up is promoted throughout the year with various communications on Nutrien’s intranet, in townhall sessions, through memos, during integrity and safety shares, and via training. Recent initiatives by our Integrity, Human Resources and SH&E functions are aimed at increasing employee understanding of the types of concerns to report, when to speak up and how, and the process and confidentiality they can expect when concerns are raised. Leaders are also expected to adhere to and promote our “open door” policy. This means that

they are available to anyone with integrity concerns or questions, and they encourage an environment where our employees feel comfortable speaking up.

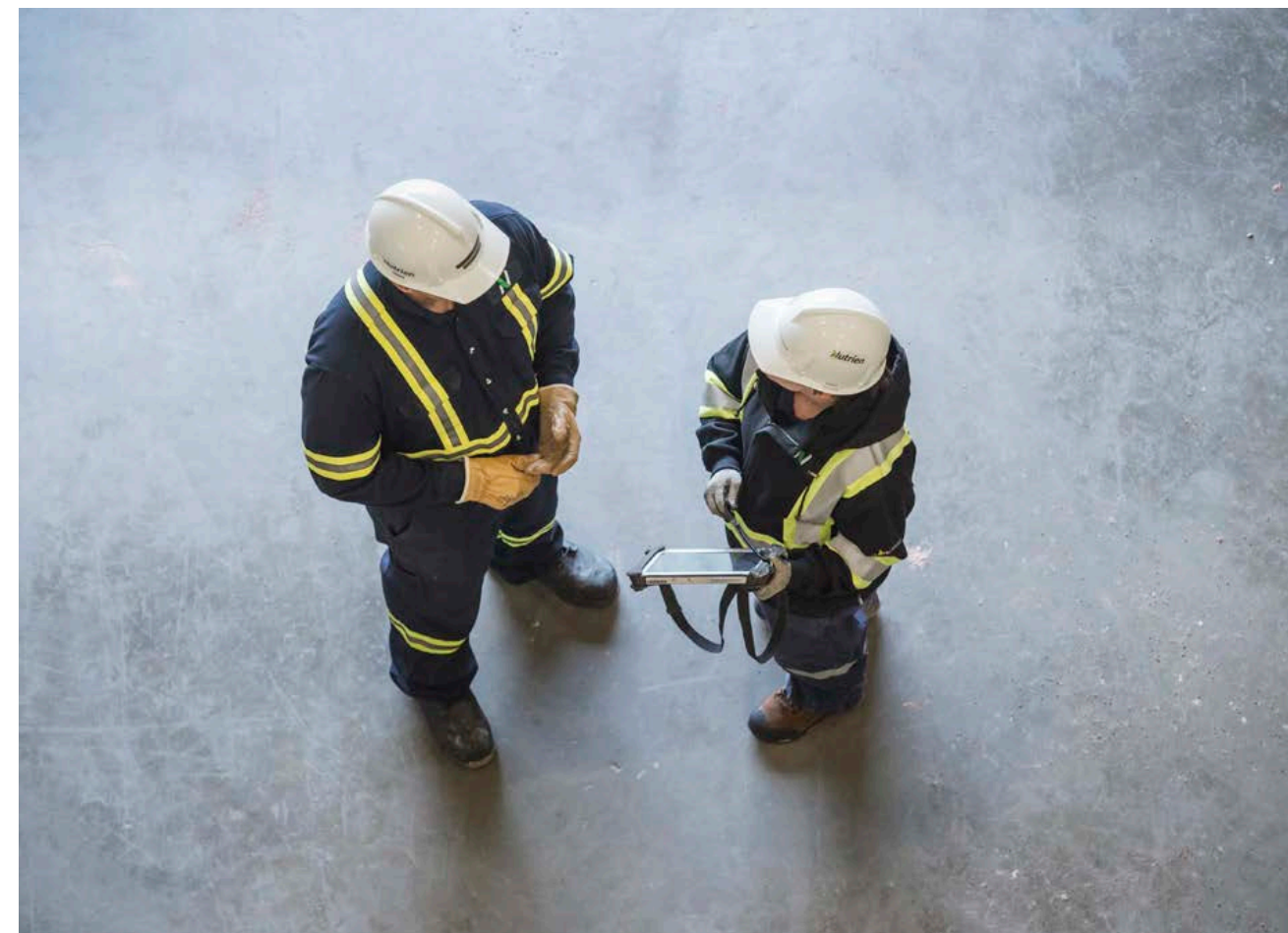
Nutrien tracks the number and types of concerns raised, the rate of concerns per 100 employees (or “compliance reporting rate”, a common benchmark used to assess the health of organizational speaking up culture), the percent of concerns raised anonymously, and the level of substantiation, which is the percent of those concerns that were found to be breaches of the Code, or an associated policy, following an investigation. We continue to review these and other factors, to assess how well our Integrity Program is identifying, assessing, and addressing issues and risks related to doing business with integrity.

Nutrien’s compliance reporting rate has increased by over 40 percent compared to 2022 (using the reporting rate per 100 employees). This is a positive trend as it demonstrates the strength of our speaking up culture and the level of trust employees have in the investigation process. Employees show their commitment to integrity by reporting behavior that does not meet the expectations we have for each other set forth in the Code, or its associated policies. Employee concerns related to workplace respect were most common once again in 2023. Learn more on [page 98](#).

4 | Investigations

We strive to maintain a speaking up culture where all concerns related to the Code (as well as an associated policy) will be investigated under the oversight of the Integrity Group. All questions and concerns are taken seriously and handled promptly, confidentially and professionally, in accordance with our compliance investigation principles.

All necessary and appropriate actions are taken based on the investigation findings. On a quarterly and annual basis, we provide reports on investigation statistics and other data to the operating segment leadership teams, the Executive Leadership Team and the Audit Committee of the Board of Directors. These reports are the basis for regular discussions regarding any trends and insights that lead to process or other improvements to our Integrity Program.



Key integrity metrics	2023	2022	2021
Employees who have completed Code of Conduct training	All	All	All
Employees who have received live anti-corruption training	470	320	200
Employees who have received live fair competition training	500	390	305
Total Compliance Reporting rate (reports per 100 employees)	1.11	0.77	0.74

Cybersecurity and Data Privacy

We are committed to staying ahead of evolving threats and establishing a culture of privacy and data protection within Nutrien.

How is this topic relevant to our business?

Our cybersecurity and data privacy efforts are geared towards the protection of company assets and personal information. Increasing digitization and advances in 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. We also handle sensitive data, including information about our employees, customers and partners, which must be protected to maintain their trust and comply with privacy laws. Our commitment to safeguarding customers' and partners' data is important to Nutrien.

Targets

- **Achieved** – Host quarterly education and training on cybersecurity for our community partners and stakeholders

Key links:



Global alignment and standards

[NIST Cybersecurity Framework](#)



Nutrien's contributions to the SDGs



[Learn more](#)



Nutrien's policies, positions and disclosures

[Code of Conduct](#)

[Cybersecurity Policy](#)

[Privacy & Cookies Statement](#)

[Employee Privacy &](#)

[Cookies Statement](#)



Governance for this topic

[Board Committee responsibilities for sustainability](#)

[Executive responsibilities for sustainability](#)

[Management responsibilities for sustainability](#)

Cybersecurity and data privacy are managed in accordance with Nutrien's ERM system.



Our approach

We are committed to staying ahead of evolving threats and establishing a culture of privacy and data protection within Nutrien. The protection of Company assets and personal data is a constantly moving target. We are continually adapting and increasing our protections to respond to the rapid evolution of the cybersecurity landscape.

Cybersecurity

Our continued focus on and investment in our cybersecurity program has increased our overall system control maturity and decreased cyber risk in critical areas. We focus on the following fundamentals: protecting our systems, assets, data and identities, and making modifications as the cyberthreat landscape changes. Specific activities to maintain and enhance cybersecurity include

Robust systems: Our cybersecurity system and processes are based on recognized best practices including the National Institute of Standards and Technology (“NIST”) Cybersecurity Framework, a voluntary framework created by industry and the US government to promote the protection of our infrastructure from cybersecurity risks. The system is assessed annually by a third party.

Cyber risk identification and preparedness: We continue to enhance our risk assessment framework and work with our operations and employees to identify risks by conducting cybersecurity reviews of new initiatives and cyber process hazard assessments for Nutrien’s mining and fertilizer manufacturing sites. We integrate cybersecurity into the major project development process by requiring Threat Risk Assessments be completed as early as possible and conducting “cyber-health checks” at later stages in the process.

Cyber response exercises: In addition to responding to cybersecurity events, our Cybersecurity team actively prepares other Nutrien teams to respond to such events using an established framework. In 2023, we conducted three tabletop exercises with key business leaders and technical teams to simulate real events, test our readiness and enhance their preparedness. We also conduct threat modeling to simulate potential threats and inform changes that are expected to make business processes more resilient to cyberattacks.

Training: Our training on managing digital risks includes a cybersecurity module in our mandatory annual Code of Conduct training, regular phishing campaigns of our staff, and focused training for groups with higher-risk business processes. Our Cybersecurity team hosts multiple education sessions during our annual Cybersecurity Awareness Month to provide information and resources for Nutrien staff, to protect our assets and data while at work or home.

Linking Nutrien’s Performance Incentive Plan (“NPI”) to cybersecurity performance: To track our performance, we developed an internal cyber score for employees and contractors based on their interactions with phishing tests, along with training completion and awareness session attendance. Our cyber score is monitored company-wide and at team and individual levels. Our Cybersecurity team drives engagement on this topic and enables improvement with global webcasts, training, data, leader tracking of team performance and follow up. To emphasize the importance of cybersecurity, the Company-wide cyber score metric is included in the NPI, which is a component of compensation for eligible employees.

Reducing risk from third parties: Nutrien recognizes the emerging cybersecurity risks that third parties can pose, including acquisitions, mergers and our supply chain partners. We have a team dedicated to ensuring our third-party review processes are robust.

Partnering with communities and stakeholders:

Keeping our identities, data and families safe online is important to Nutrien. We extend our awareness programs of cybersecurity fundamentals to our key customers, suppliers and community stakeholders through training sessions to decrease our shared cyber risk and increase our collective knowledge. In 2023, we met our target to host quarterly cybersecurity education and training for our community partners and stakeholders with five sessions completed. For the first time, these sessions included Australian and South American external stakeholders. Live subtitles provided translation for our Spanish and Portuguese audiences.

Data privacy

Establishing a culture of privacy and data protection within Nutrien means fostering an understanding of the importance of privacy as a fundamental right among our employees and stakeholders. We achieve this by maintaining a dedicated Privacy team responsible for overseeing our privacy and data protection policies, managing compliance, and staying informed of trends and developments in data privacy laws. We take appropriate technical, contractual, administrative and physical steps to protect against the unauthorized access to and disclosure of personal information of employees, customers and other third parties that we possess.

Information Security Risk Oversight	2023
S&S Committee independence (responsible for information security)	100%
Number of times senior leadership briefed the Board S&S Committee on information security matters	4
Number of directors with innovation/technology and security (including cybersecurity oversight) skills	4
Information Security Risk Management	2023
Approach for identifying and mitigating information security risks disclosed	Yes
Information security breach in the last three years	No material breaches
External evaluation against top information security standards	Yes (NIST framework)
Information security training and compliance program implemented	Yes
Time since the most recent information security breach	No material breaches

Key cybersecurity metrics	2023	2022	2021
Participants in online cybersecurity refresher (as part of Code of Conduct)	27,630	25,740	22,850
Tabletop exercises to practice responding to cybersecurity events	3	3	3
Participants in focused cybersecurity training for higher-risk business areas	26,810	26,400	8,310
Participants in online data privacy refresher (as part of Code of Conduct)	27,630	25,740	22,850

Data privacy (continued)

Data privacy awareness: To promote awareness of data privacy, we integrated an online data privacy refresher into the annual Code of Conduct training for all employees, directors and officers. Our global Privacy & Cookies Statement describes the personal information that Nutrien collects from or about individuals, how we use it, and to whom we disclose that information. In addition to periodic communications from Nutrien's Privacy team, employees now have access to a dedicated privacy intranet site for current resources, upcoming training videos and support guides.

Global Privacy Program: In 2023, we began a multi-year data protection program to further develop our culture of privacy and data protection. Key elements include developing policies and procedures to manage accountability for all Company data processing activities, ensuring customers and employees have control of their data, and embedding privacy considerations into all future business initiatives. In late 2023, privacy training was provided for our Australian employees as well as human resources, information technology and SH&E employees in North America. In 2024, training will be extended to the remaining North American employees and those in Trinidad and Tobago. This training covered recognizing personally identifiable information, understanding privacy principles and individual privacy rights, data sharing between groups, and how to report a data breach. Additionally, we refined our privacy impact assessment process, adopting a risk-based approach to streamline reviews and ensure that privacy is inherently woven into projects involving the processing of personal information from the outset, adhering to the principle of "privacy by design".

Additional Governance Topics

Tax policy

At Nutrien, we invest in our business and the communities in which we operate to create sustainable value for all of our stakeholders. We believe that tax regimes should be stable, efficient and competitive to attract and promote this investment and value creation. Nutrien's operating segments pay a significant amount of tax across multiple jurisdictions, including income taxes, potash production taxes, royalties, property taxes and indirect taxes. [Nutrien's Tax Policy](#) is available on our website.

Political advocacy

Whether at local, regional or national levels, Nutrien participates in policy and political discussions that impact employees, stakeholders, shareholders and the communities where we operate. Nutrien advocates for free and fair competition in marketplaces, for safety, and for sustainable solutions to global challenges.

Our senior leaders and designated employees engage government officials to understand and share observations about policies that may impact our employees, our customers and our communities, and to seek policy certainty where such policies have the potential to impact our investment decisions and business operations. Specifically in the US, Nutrien has established the Nutrien Ag Solutions Employee Citizenship Fund Political Action Committee ("Nutrien Citizenship Fund PAC") to build relationships with lawmakers who share our Company's policy objectives. The Nutrien Citizenship Fund PAC is a "political action committee" as defined by the US Federal Election Commission ("US FEC"), and is a voluntary, non-partisan, non-profit, unincorporated entity. The Nutrien Citizenship Fund PAC is regulated by the US FEC and adheres to all reporting and compliance requirements.

Nutrien is [committed](#) to participating ethically, openly and responsibly in democratic public policy development and decision-making processes. We publicly disclose all donations or benefits to political parties or candidates according to the regulations of the jurisdictions where we operate. See Nutrien's political donations reported by year on [page 100](#). Nutrien Citizenship Fund PAC donations are also available by year at the [US FEC website](#).



Country	Earnings (loss) before income taxes			Income tax expense (recovery)			Cash taxes paid (recovered)		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Canada	1,427	5,707	1,884	476	1,539	513	1,260	1,005	(8)
United States	976	3,447	1,319	196	785	287	260	569	262
Trinidad	(75)	487	256	(32)	181	90	66	147	73
Australia	161	263	204	42	77	60	112	88	51
Other	(537)	343	505	(11)	(23)	40	66	74	57
Total	1,952	10,246	4,168	670	2,559	989	1,764	1,882	435

Nutrien Climate-related Disclosures

Understanding climate-related risks and opportunities

Our approach

Nutrien's climate-related disclosures are intended to inform our stakeholders about our material climate-related risks and opportunities. The assessments we conduct to support these disclosures are intended to effectively evaluate climate-related risk, assist in strategic planning and support informed capital allocation decisions in the transition to a low-carbon economy. Our current climate disclosures are informed by the voluntary TCFD framework, whose monitoring responsibilities have now been transferred to the IFRS Foundation.

Governance

For information on Nutrien's governance for climate-related risks and opportunities please see the [Governance of Sustainability](#).

Risk identification and assessment

Risk management is a fundamental part of Nutrien's activities and decision-making processes and is integrated into the structure, operations and processes of the organization.

Roles and responsibilities

At least annually, we identify and assess climate-related risks using our global risk management framework, which requires the identification, assessment and monitoring

of risks to be embedded in business activities across the organization. These risks are then reviewed by our ELT for completeness. Our Executive Sustainability Committee, Sustainability Working Group, and ERM teams are involved in the escalation of climate-related risks and opportunities to our ELT and the Board.

Risk identification

Our identification and assessment of climate-related risks is an integrated process that includes critical input from our enterprise risk assessment process, subject matter specialists and dedicated working groups, who bring in critical perspectives and information on stakeholder expectations and external context related to climate matters. For completeness, we also cross-reference our identified risks with industry-specific guidance in the relevant SASB Standards. We consider potential transition and physical risks and impacts associated with climate change across a wide spectrum of environmental, meteorological, human health, societal and financial domains.

Risk assessment

We characterize a significant risk as a risk, or combination of risks, that could threaten the achievement of our business model, future performance, or ability to deliver on our strategy. Risks are assessed using our common enterprise risk methodology based on their likelihood of impacting our business and the potential severity of impact. Our assessment criteria are embedded in our global risk management framework allowing comparability to other non-climate-related risks.

Criteria include financial, reputational and SH&E impacts:

- For financial impacts, adjusted net earnings (loss) before finance costs, income taxes, and depreciation and amortization ("Adjusted EBITDA") is used as a key quantifiable indicator. Financial impact may be assessed at the corporate level and/or at the individual operating segment level, depending on the nature of the climate-related risk.
- Reputation impacts are based on a number of factors with key drivers being stakeholder or media attention/concern, legal concerns, effect on corporate value, and potential credit rating impacts.
- SH&E impacts are based on the potential for safety or health impacts to our employees or communities and/or potential impacts to the environment.

As climate change can pose unique and longer-term risks to our business, we also assess physical and transitional climate-related risks by building climate models and using scenarios to understand potential financial impacts, provide better insight on risk time horizons, and identify possible pathways from the outcomes. We create specialized working groups and leverage knowledge from internal specialists to provide input and review when assessing climate-related risks and developing scenarios. Additionally, when assessing physical climate risks, we look at the exposure and vulnerability from weather variability and climate factors and assess how future climate change could impact our sites.

An overall risk assessment is determined for each risk in accordance with our ERM framework, prioritized using a risk matrix and managed by the organization accordingly.



Scenarios

We continue to evaluate, refine and consider various climate scenarios to help identify risks and opportunities and assess the resiliency of our business model. These scenarios are hypothetical and are not intended to be used as forecasts or predictions.

	Transition scenarios	Physical scenarios
Scenario models	International Energy Agency (“IEA”) Scenarios: <ul style="list-style-type: none"> Announced Pledges Scenario (“APS”) Sustainable Development Scenario (“SDS”) Net Zero Emissions (“NZE”) by 2050 	The Intergovernmental Panel on Climate Change (“IPCC”) Sixth Assessment Report (AR6): <ul style="list-style-type: none"> SSP 1-2.6 SSP 5-8.5 SSP 2-4.5 A combination of IPCC AR6 scenarios may be best suited for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty
Time horizons	Impact models cover the time horizon over the next 30 years to 2050	Scenario models are focused primarily between the 2030 and the 2050 time horizons as these relate to key milestones for global emissions reductions
Potential key inputs	<ul style="list-style-type: none"> Key internal inputs include production estimates, emissions factors and discount rates External inputs include carbon prices and CO₂ emissions assumptions based on the IEA’s World Energy Outlook for the relevant period 	<ul style="list-style-type: none"> Key internal inputs include our global operational footprint, grower regional locations, historical sales, acreage and yield data External inputs include historical and projected acres data, inflation rates and the latest IPCC climate datasets covering flood depth, extreme wind, extreme rainfall, wildfire, drought, hail and thunderstorm, heat and cold hazards
Key areas of our organization to be considered	<ul style="list-style-type: none"> Nitrogen, Potash and Phosphate operating segments, which account for most of our Scope 1 and 2 GHG emissions profile Retail growers as nitrogen fertilizer application accounts for a significant portion of our Scope 3 GHG emissions 	<ul style="list-style-type: none"> Retail with its direct connection to grower customers Wholesale production operations and key transportation, storage and distribution sites
Potential climate-related risks and opportunities	<ul style="list-style-type: none"> Carbon pricing mechanisms Growers expected to reduce emissions New technologies or products risk New strategies and technologies to reduce GHG emissions New markets for ammonia Helping growers reduce emissions from agriculture Reputational risks associated with climate change including our stakeholder’s perception of our role in the transition to a lower-carbon economy 	<ul style="list-style-type: none"> Physical risk to growers Physical risks to our supply chain and our transportation, distribution and logistics networks Helping growers deal with chronic impacts of climate change

Risks and opportunities

The list below captures our top climate-related risks and opportunities but is not exhaustive. For a listing of all our significant risk factors, including climate-related risks, refer to Nutrien’s [2023 Annual Information Form](#). These risks were identified over various time frames and will be monitored, evaluated and updated as necessary. For our time horizons, short-term timelines are up to three years, medium-term timelines are three to 10 years, and long-term timelines are 10 to 30 years. These time horizons are representative of timelines associated with our short-term climate-related targets, our mid-term 2030 commitments on emissions reductions and our ERM framework.

Transition-related risks

1 | Carbon pricing mechanisms

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Current: Short-term	Virtually Certain	Increased costs, capital	Low
Emerging: Medium-term	More likely than not	Expenditures or emissions limits	Medium to high

What is the risk?

Current: Our Canadian manufacturing facilities (located in Alberta and Saskatchewan) are subject to a variety of federal and provincial requirements to reduce Scope 1 and 2 GHG emissions ranging from carbon taxes to emissions intensity reduction requirements.

Emerging: Changes in regulations in the countries or jurisdictions where we operate, such as the implementation of new carbon taxes, increases in existing carbon pricing, or the establishment of absolute emissions limits, could negatively impact our business.

Current and emerging emissions regulations may impact our operations by

- requiring changes to our production processes;
- increasing raw material, energy, production or transportation costs;
- additional costs in the form of taxes, emission allowances or other carbon pricing mechanisms; or
- increased input costs and compliance-related costs for agricultural customers.

What are we doing about it?

- We look to minimize our Canadian compliance costs through implementing process improvements and using CCUS technology to reduce Scope 1 and 2 GHG emissions at our facilities, with a focus on our Nitrogen sites. Our Redwater, AB facility has been capturing and exporting CO₂ into the Alberta Carbon Trunk Line since late 2019. In 2023, we tied in our second Redwater, AB Ammonia Plant to the Alberta Carbon Trunk Line to allow additional CO₂ to be permanently sequestered and completed the vent sweep project at our Redwater, AB facility.
- We aim to improve our energy efficiency and at our Carseland, AB facility we have partnered with another Canadian energy company for the supply of steam and electricity generated by their Carseland Cogeneration Plant. Cogeneration is a more efficient way of generating useful energy as it simultaneously produces steam and electricity from one energy input (natural gas), which minimizes fuel consumption and reduces emissions. SaskPower’s Cory Cogeneration Station provides cogenerated steam to our Cory, SK potash mine, reducing the need for less efficient, on-site, gas-fired boilers. We are constructing a power generation facility at our Rocanville, SK Potash mine that is expected to meet the majority of that site’s power demand with lower-emission electricity than currently available from the grid. The Rocanville natural gas-based power generation facility is expected to be commissioned in 2024.

- In the US, we also aim to reduce GHG emissions, primarily through our suite of N₂O abatement projects. In 2023, we completed an N₂O abatement project at our Geismar, LA, location a facility that also captures and exports CO₂.
- In all our operations, we are working to reduce Scope 1 and 2 GHG emissions intensity and we have now completed our GHG Phase 1 abatement program. Key initiatives include improving energy efficiency, exploring renewable energy options at our Potash mines, expanding our use of CCUS infrastructure and evaluating our low-carbon ammonia production opportunities. For more information on our initiatives, read the [GHG Emissions & Climate Change section](#).

2 | Expectations to reduce emissions from fertilizer use

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium-term	More likely than not	Reduced demand for our current offerings	Medium

What is the risk?

The world is transitioning to lower-carbon options for consumer products, including food. Consumer and societal expectations are high for growers to drastically reduce emissions from agriculture. Meeting these expectations could increase costs for our growers and for our Company. Failure to meet these expectations can negatively impact the reputation of our Company and our customers. Government mechanisms intended to support decarbonization goals might put additional pressure on growers or our industry.

What are we doing about it?

- Nutrien develops EEFs and advanced nutrition products including our controlled-released ESN®, nitrogen inhibitors and stabilizers, our C² Technology and our naturally derived biocatalyst technologies. These products aim to provide environmental benefits including reduced nitrous oxide emissions from applied fertilizer, reduced leaching to ground and surface waters, reduced ammonia loss to air, and improved nitrogen-use efficiency.
- We continue to work to understand our Scope 3 GHG emissions and, once we refine our Scope 3 measurement estimates, we will be better positioned to evaluate reduction strategies in our value chain.
- We provide agronomic advice through our crop consultants, who promote best practices in fertilizer application such as 4R Nutrient Stewardship.

3 | New technologies or products that could displace current Nutrien products or services

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium-term	About as likely as not	Reduced demand for our current offerings	Medium

What is the risk?

The advancement and adoption of technology and digital innovations in agriculture and across the value chain have increased and are expected to further accelerate as grower demographics shift and pressures from consumer preferences, governments and climate change initiatives evolve.

The development of seed traits, biological products and/or advancements in precision agriculture that materially improve nutrient use efficiency have the potential to adversely affect the demand for fertilizer.

Risks and opportunities (continued)

What are we doing about it?

Retail is focused on providing the agronomic solutions to growers to enhance sustainable productivity and profitability and will adapt to the changing technological landscape. We also have a low-cost fertilizer production base with a diversified product portfolio including EEFs and non-agricultural products. Key initiatives include

- Nutrien’s **R&D programs** are designed to provide science-based solutions to the agronomic challenges that agriculture and growers face. Our R&D teams focus on innovative solutions for nutrient use efficiency, crop quality, sustainability and yield enhancement.
- Our **digital solutions** combine location, agronomic information, environmental data, weather forecasting and data science to make field-specific recommendations for growers. They also enhance data traceability and connectivity to leading agricultural, food and consumer products companies that want to measure the environmental impact of agriculture in their supply chains. Our digital tools are designed to maintain soil data related to carbon sequestration and to provide growers the required documentation for carbon credit markets.

Physical risks

1 | Physical risk to growers due to chronic changes in precipitation patterns and variability in weather patterns

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Long-term	Likely	Reduced demand or margins	Medium

What is the risk?

Our grower customers are impacted by changing regional weather factors, primarily increasing temperatures and volatile precipitation. Chronic changes in regional weather may affect the availability and suitability of arable land, crop quality and soil health. These chronic changes could also contribute to the loss of biodiversity and unpredictable shifts in the average growing season, types of crops produced and/or crop yields. Individually or together, these impacts could affect the long-term demand for our products and services.

What are we doing about it?

- **Weather analytics:** Through atmospheric science, we are able to provide new perspectives for growers and crop consultants throughout the agriculture cycle to help manage weather risk.
- **Products:** Nutrien is working to develop and offer innovative **biologically derived products** to meet growers’ challenges. For more information on our initiatives, read [page 19](#). We offer customers a broad portfolio of high-quality **seed options**. Seed hybrids and varieties combined with the latest trait technology are tested across geographies and environments to help our grower customers achieve increased yield and yield stability. Learn about Nutrien’s seed breeding programs and our innovative seed treatment technologies on [our website](#).

- **Irrigation management and water conservation practices:** We provide services and advice that promote water use efficiency and reduce nutrient loss to groundwater and surface water, such as the 4Rs. For information on some of our water-related activities, read [page 22](#).
- **Nutrien Financial services:** We offer flexible financing solutions to qualifying customers to help growers access Nutrien’s products and services when they need them. These services can help growers endure difficult periods and unanticipated climate-related events.

2 | Physical risks to supply chain and transportation, distribution and logistics network

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium-term to long-term	More likely than not	Inability to get inputs or deliver products in a timely fashion or cost effectively	Medium-low

What is the risk?

Extreme weather events can strain our upstream or downstream supply chains and disrupt our distribution and logistics network of railcars, marine vessels and trucks, and therefore our connection between our Potash, Nitrogen and Phosphate businesses with our customers and/or Retail network.

What are we doing about it?

We have contingencies in place to ensure we can continue production if our key suppliers experience disruptions due to extreme weather. We mitigate this risk by ensuring we have multiple suppliers in different locations for critical feedstocks and by using our diverse retail distribution network and expansive fertilizer terminal network to effectively manage product logistic challenges.

Transition-related opportunities

1 | Helping growers reduce emissions from agriculture

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium-term	Likely	Increased demand, new revenue sources; reduced Scope 3 emissions	Medium

What is the opportunity?

Reducing our growers’ carbon footprint from the agricultural products we manufacture and sell can help manage increasing environmental and societal pressures. We can offer growers products and services and promote sustainability programs that can facilitate the wider adoption of sustainable agronomic best practices and improve environmental outcomes, while supporting soil health and crop yields.

What are we doing about it?

- Our **Carbon Program** is designed to help growers generate high-quality carbon outcomes (GHG offsets or insets) that can be monetized in voluntary or compliance carbon markets. Growers use best practices to maintain or increase soil organic matter levels and/or optimize the application and efficiency of nitrogen fertilizer. Nutrien brings companies together from across the agricultural value chain to incentivize grower adoption of sustainable products and practices. [Read more](#) about our Carbon Program in action.
- Our **whole-acre solutions** include products that aim to improve productivity and environmental performance. [Read more](#).

Risks and opportunities (continued)

- Our **digital platforms, soil testing and other data technologies** measure the impacts of agricultural practices and inform customized recommendations for each grower. Our precision agriculture tools help improve yields and soil health and reduce nutrient loss to the environment. Our crop consultants promote best practices in nutrient application such as 4R Nutrient Stewardship (the Right Source of plant nutrients at the Right Rate, Right Time and Right Place) and Fertcare®.

2 | New strategies and technologies to reduce our Scope 1 and 2 GHG emissions

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium-term	Likely	Reduced emissions, carbon taxes and operating costs	Medium

What is the opportunity?

The energy transition is accelerating the development of technologies that can support our GHG emission reduction efforts. Market-driven advancements and government incentives are helping these technologies become more accessible and achieve faster commercialization. Nutrien continues to monitor programs and technology developments for potential fit in reducing our Scope 1 and 2 GHG emissions.

What are we doing about it?

- Carbon capture utilization and storage:** CCUS provides a significant opportunity for reducing GHG emissions from our manufacturing facilities. Our near-term focus is on using existing CCUS infrastructure to capture and export CO₂ and grow our low-carbon ammonia production. As of December 31, 2023, Nutrien has annual production capability for 1.2 million tonnes of low-carbon ammonia at our Geismar, LA, Redwater, AB and Joffre, AB nitrogen facilities. We are also investing in a study to understand the feasibility and viability of post-combustion flue gas CO₂ capture at our nitrogen facilities, through our study and assessment at our Redwater, AB facility.
- We are exploring options of **renewable energy** for our operations.
- For more information on our initiatives, read the [GHG Emissions and climate change section](#).

3 | Low-carbon and clean ammonia opportunities

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Long-term	More likely than not	Decreased costs, new markets	Medium-high

What is the opportunity?

The development and use of both low-carbon and clean ammonia have the potential to reduce the carbon intensity of our fertilizer production and provide other opportunities including ammonia for industrial use, clean fuel for marine shipping, displacing coal in power generation and ammonia as a hydrogen carrier.

What are we doing about it?

- We continue our partnership with the US DOE and other industry partners to develop a clean ammonia plant with technology developed from the REFUEL program.
- We are conducting a study to assess the technological feasibility, develop preliminary engineering, and create the overall business case for difficult-to-abate carbon emissions at the Redwater ammonia production facility.

Physical opportunities

1 | Helping growers deal with chronic impacts of climate change

Time horizon	Likelihood of impact	Primary impact	Magnitude of impact
Medium- to long-term	Very likely	Increased demand or margins for products and services	Medium

What is the opportunity?

As weather patterns change, the ideal window of time to seed a crop and apply fertilizer can become more variable, making the selection of seed or other crop inputs especially important. Chronic impacts from climate change may also affect the availability and suitability of arable land, including crop quality and soil health, shifts in the average growing season, and types of crops produced. Through specialized product development and our data-based service offerings, we can help growers use the right product at the right time and are positioned to adapt our offerings as growers adapt to the impacts of climate change.

What are we doing about it?

- In North America, we leverage our digital platforms, including Agrible®, to track and measure outcomes such as crop quality, soil health, emissions, water quality and biodiversity. Leveraging this data, we aim to independently verify sustainability outcomes, like GHG emission changes, through third-party verifiers such as SustainCERT and the Climate Action Reserve. In 2023, our Carbon Program achieved verified GHG offsets in the US from the 2021 crop season with credits being sold to Royal Bank of Canada. In addition, we achieved verified GHG insets in the US. In Canada we established a validated pathway and verified GHG outcomes being shared with Maple Leaf Foods. Our combined US and Canada GHG insets and offsets resulted in approximately 1,500 tonnes CO₂e of emissions reductions and removals from improved agricultural practices.
- Our digital solutions combine location, agronomic information (crop physiology, soil characteristics and pest or disease impact), environmental data (such as precipitation, temperature), GPS data, weather forecasting and data science to make field-specific recommendations for growers. Some of our key digital tools include Agrible®, NutriScript/Nutrien Recomenda and Echelon™.

Metrics and targets

We continue to enhance our understanding of climate-related risks and opportunities in the development of our sustainability targets. The table below summarizes our commitments and targets that measure our progress in reducing transition risks or physical risks as well as how we plan to advance the transition-related opportunities.

Emissions commitments and targets	Learn more
Achieve at least a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018, by 2030	Page 26
Reduce GHG emissions in nitrogen production by 1 million tonnes CO ₂ e by the end of 2023 ¹	Page 26
Deploy self-generated wind and/or solar energy at four Potash facilities by the end of 2025	Page 27
Commitments and targets associated with climate-related risks and opportunities	Learn more
Enable growers to adopt sustainable and productive agricultural products and practices on 75 million acres globally, by 2030	Page 16
Launch and scale a comprehensive Carbon Program, empowering growers and our industry to accelerate climate-smart agriculture and soil carbon sequestration, while rewarding growers for their efforts, by 2030	Page 24
Invest in new technologies and pursue the transition to low-carbon fertilizers, including low-carbon and clean ammonia, by 2030	Page 27

¹ On an intensity basis vs. 2018 baseline emissions intensity.

GHG emissions data

GHG emissions (millions of tonnes CO ₂ e)	2023	2022	2018 Baseline
Scope 1	9.54	10.27	11.19
Scope 2	2.63	2.49	3.05
Scope 1 and 2	12.17	12.76	14.24

Scope 1 and 2 GHG emissions

As part of our efforts to define accounting policies and standardize calculations for our GHG emissions, we formalized an accounting policy for changes in calculation methodologies, improvements/updates in data accuracy, and correction of errors. In 2023, we made the following updates:

- **Changes in calculation methodology:** we updated our calculations so that our Canadian and US Nitrogen facilities used the same regulatory framework for measuring GHG emissions.
- **Improvements in data accuracy:** we updated the global warming potential to the newest information available per the IPCC (AR6). We also made various other minor adjustments to data accuracy resulting from improvements in management’s understanding and data availability.

The above changes did not have a material impact on our Scope 1 and 2 baseline GHG emissions and as such we applied the changes prospectively and did not restate our baseline. For more information on Nutrien’s calculation methodology for reported Scope 1 and 2 GHG emissions, please see our [GHG Inventory Management Plan](#).

Scope 3 GHG emissions

We continue to advance our climate strategy. Greater reporting and transparency are required from participants across the agricultural supply chain, and by quantifying Nutrien’s Scope 3 GHG emissions, we are building a greater understanding of our broader climate change impacts. Improved understanding is expected to enable collaboration and effective decision making that drives beneficial change. We expect this work will build on our existing 2030 sustainability commitment initiatives to support our grower customers, develop further supply chain engagement on emissions reduction and drive potential future emissions reduction targets.

We are currently collecting and quantifying data using GHG Protocol aligned methodologies for our relevant Scope 3 categories. We intend to enhance the accuracy and precision of our Scope 3 measurement by refining data inputs and calculations, before reporting the emissions inventory. These improvements are essential to measuring and/or demonstrating reduction efforts in our value chain. Read more on [page 28](#).

Additional Content

05

Topics in this section

Interactions with Stakeholders in 2023	87
About This Report	89
Terms and Measures	89
ESG Ratings Profile	90
Performance Table	91
SASB Index	101
GRI Index	103
TCFD Index	105
VCMDA Disclosure	106
Forward-looking Statements	107

Texas, US

Last year, the US was the world's leading exporter of cotton, exporting 2.8 million tonnes. Under our Dyna-Gro brand, Nutrien sells proprietary cotton seed across North America. Our global proprietary seed revenue has grown by over 25 percent since 2021.

Interactions with Stakeholders in 2023

We regularly engage with stakeholders to better understand factors they believe are critical for Nutrien and the agriculture industry. Nutrien leaders attended over 10 major investor conferences and met with more than 600 investors and key stakeholders, which included speaking to our sustainability commitments and targets, climate-related opportunities, and action taken to date.

Stakeholder	Priorities and themes in 2023	How Nutrien responded
Communities	<ul style="list-style-type: none"> Increasing need to address food security Regions where Nutrien operates facing natural disasters Continued demand for free and high-quality online educational resources on sustainability, agriculture and the environment 	<ul style="list-style-type: none"> We focused on food security in our communities through financial support and volunteering at local food charities. We contributed to organizations in response to natural disasters such as tornadoes, hurricanes, flooding and wildfires. We also supported emergency response, safety and mental wellness for our growers. We provided ongoing delivery of free online educational resources as well as resuming delivery of in person agricultural and environmental educational programs.
Customers	<ul style="list-style-type: none"> Rising demand for sustainability-focused products and services Continued demand from industrial customers for organizational alignment on corporate sustainability strategies Demand starting to emerge for low-carbon ammonia and industrial products 	<ul style="list-style-type: none"> In 2023, we continued to facilitate sustainable agriculture products, practices and services. Continued dialogue with industrial accounts on how to best maximize current and future sustainability efforts between both parties. Worked with customers on market development of a low-carbon ammonia and low-carbon inputs for industrial products.
Employees	<ul style="list-style-type: none"> Nutrien's support of EDI internally and in our communities Nutrien conducted an enterprise-wide Culture of Care and Engagement survey continuing our mental health and wellness strategy 	<ul style="list-style-type: none"> We revitalized Nutrien's Inclusion Council, chaired by our President & CEO, with executive representation from each operating segment and corporate function. These leaders aim to align inclusion efforts to overall business objectives and ensure accountability across the organization. Key areas for improvement were identified, including coaching and career development, pay and mental health. Mental health and wellness are a critical focus at Nutrien that extends beyond our employees to contractors, family members, communities and other stakeholders. Our strategy includes education, resources, communications, Mental Health Champion networks and family programs.

Interactions with Stakeholders in 2023 (continued)

Stakeholder	Priorities and themes in 2023	How Nutrien responded
Shareholders	<ul style="list-style-type: none"> Nutrien's ability to reduce GHG emissions in our Nitrogen business and increase production of low-carbon ammonia Governance measures and accountability for leading sustainability progress Improvements to environmental impacts well beyond GHG emission reductions in our own operations Progress towards setting science-based targets related to near-term emissions reduction 	<ul style="list-style-type: none"> We completed our GHG Phase 1 abatement program in 2023, which included six N₂O abatement projects and increasing our CO₂ capture and export capability. Internally, we follow global sustainability guidelines for setting and managing targets and a component of our executive short-term compensation is tied to sustainability performance. Nutrien enabled growers to adopt sustainable and productive practices on 2 million sustainably engaged acres in 2023, which included an increase to approximately 900,000 acres under our Carbon Program. Nutrien continues to work with the WBCSD, fertilizer peers and the SBTi to produce an SDA for the fertilizer industry, which as of December 31, 2023 had not been published for public comment.
Society	<ul style="list-style-type: none"> Every two years Nutrien conducts an extensive stakeholder survey. This survey took place in 2021 and 2023. 	<ul style="list-style-type: none"> The external stakeholder survey contributed to our sustainability materiality assessment and provides insight into how a diverse set of stakeholders views Nutrien and relevant topics.
Suppliers	<ul style="list-style-type: none"> Need for establishment of long-term supplier relationships with Nutrien Need for enhanced visibility of our critical inbound materials 	<ul style="list-style-type: none"> We updated our Supplier Code of Conduct and introduced an updated Procurement Policy, which establishes procurement rules of conduct and applies across Nutrien. We continued to support our suppliers in building meaningful relationships with Indigenous partners through our Indigenous Content Playbook in our Potash operating segment. We maintained open channels of communication with our key suppliers and their key suppliers to ensure coordination during supply chain disruptions.
Government/regulators	<ul style="list-style-type: none"> Movement towards mandatory climate-related disclosures that provide consistent, comparable and decision-useful information to market participants 	<ul style="list-style-type: none"> Nutrien provided comments to the ISSB on their agenda consultation on future priorities. We continue to monitor the ISSB developments and jurisdictional adoption efforts, including developments with the Canadian Sustainability Standards Board, Canadian and US securities regulators' proposed mandatory climate-related disclosures, as well as other extraterritorial laws and regulations. We are preparing to comply with mandatory requirements if and when enacted.

About this report

This report is dated March 7, 2024, and focuses on Nutrien’s material sustainability topics, performance and key initiatives for 2023.

- Performance for the year ended December 31, 2023 is included, unless otherwise noted, for Nutrien Ltd., and our subsidiaries. Any exceptions are explicitly noted with the relevant data. When available, historical data is provided for comparison.
- Data included in our reporting relates to our operations where we have control, unless otherwise noted. Reports from previous years and supplementary sustainability information are available on our website.
- For any business asset we acquire, environmental, safety and community performance data are first provided for the year after acquisition to enable full integration of data systems.
- 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 noted, and product and environmental data are stated in metric units. Please refer to our [2023 Annual Report](#) for more details on our financial performance.
- References to Nutrien, our, we or the Company mean Nutrien Ltd., and its subsidiaries, unless the context indicates otherwise.
- Please see the cautionary statement on forward-looking information on [page 105](#).
- Materiality is used in a sustainability context for this report and refers to our sustainability priorities determined with input from our stakeholders and is different than how we address materiality for disclosure requirements under securities laws or accounting standards.
- Non-financial data subtotals may not add to total figures due to rounding.

Terms and measures

Scientific terms

KCl	potassium chloride
P₂O₅	diphosphorus pentoxide
CO₂	carbon dioxide
CO₂e	carbon dioxide equivalent
CH₄	methane
N₂O	nitrous oxide
CO	carbon monoxide
NOx	nitrogen oxides
SOx	sulfur oxides
PM₁₀	particulate matter that is 10 micrograms per cubic meter or less in diameter
VOCs	volatile organic compounds
NH₃	ammonia (anhydrous)
MAP	monoammonium phosphate
UAN	urea ammonium nitrate solution

Terms and product measures

tonne, mt	metric tonne
Mmt	million metric tonnes
gigajoule	one billion joules
terajoule	one trillion joules
petajoule	one quadrillion joules
CAD	Canadian dollar
AUD	Australian dollar
USD	United States dollar

Definitions

CCUS	Carbon capture, utilization and storage. Process by which CO ₂ produced from various industrial processes is captured and either utilized for further industrial processes or transported to a permanent storage location to prevent release into the atmosphere
Clean ammonia	ammonia made with direct GHG emissions reduced by at least 90% compared to a conventional process, produced from hydrogen obtained using the next generation of ammonia production technology such as auto-thermal reforming or water electrolysis with renewable power; this definition does not include end product use
Greenhouse gas (“GHG”)	gas that contributes to the greenhouse effect by absorbing infrared radiation
Low-carbon ammonia	ammonia made with direct GHG emissions typically reduced by approximately 60% but up to 80% compared to a conventional process, produced primarily utilizing carbon capture, utilization and storage (“CCUS”) or other low-emission production technologies; this definition does not include end product use
Scope 1	direct greenhouse gas emissions produced by Nutrien owned or controlled facilities
Scope 2	indirect greenhouse gas emissions resulting from the generation of purchased or acquired electricity, heating, cooling and steam consumed by Nutrien owned or controlled facilities
Scope 3	indirect greenhouse gas emissions not included in Scope 2 emissions occurring as a result of the activities of Nutrien, from sources not owned or controlled by Nutrien, including both upstream and downstream emissions
Sustainable agriculture	According to the United Nations Food and Agriculture Organization, sustainable agriculture means increasing farm productivity while protecting natural resources and enhancing grower resilience
Sustainable agriproduct program acres	Our Carbon Program is also referred to as a Sustainable Agriproducts Program. Sustainable agriproduct acres involve agronomic solutions leading to measurable outcomes such as carbon, soil or water, with the ability to validate and verify those outcomes.
Sustainably engaged acres	Acres participating in programs that track field-level data which can be analyzed for sustainability metrics and/or acres participating in sustainable agriproducts programs that incentivize growers to adopt additional sustainable practices and products resulting in quantifiable, incremental benefits that may be verified and used for reporting purposes

ESG Ratings Profile



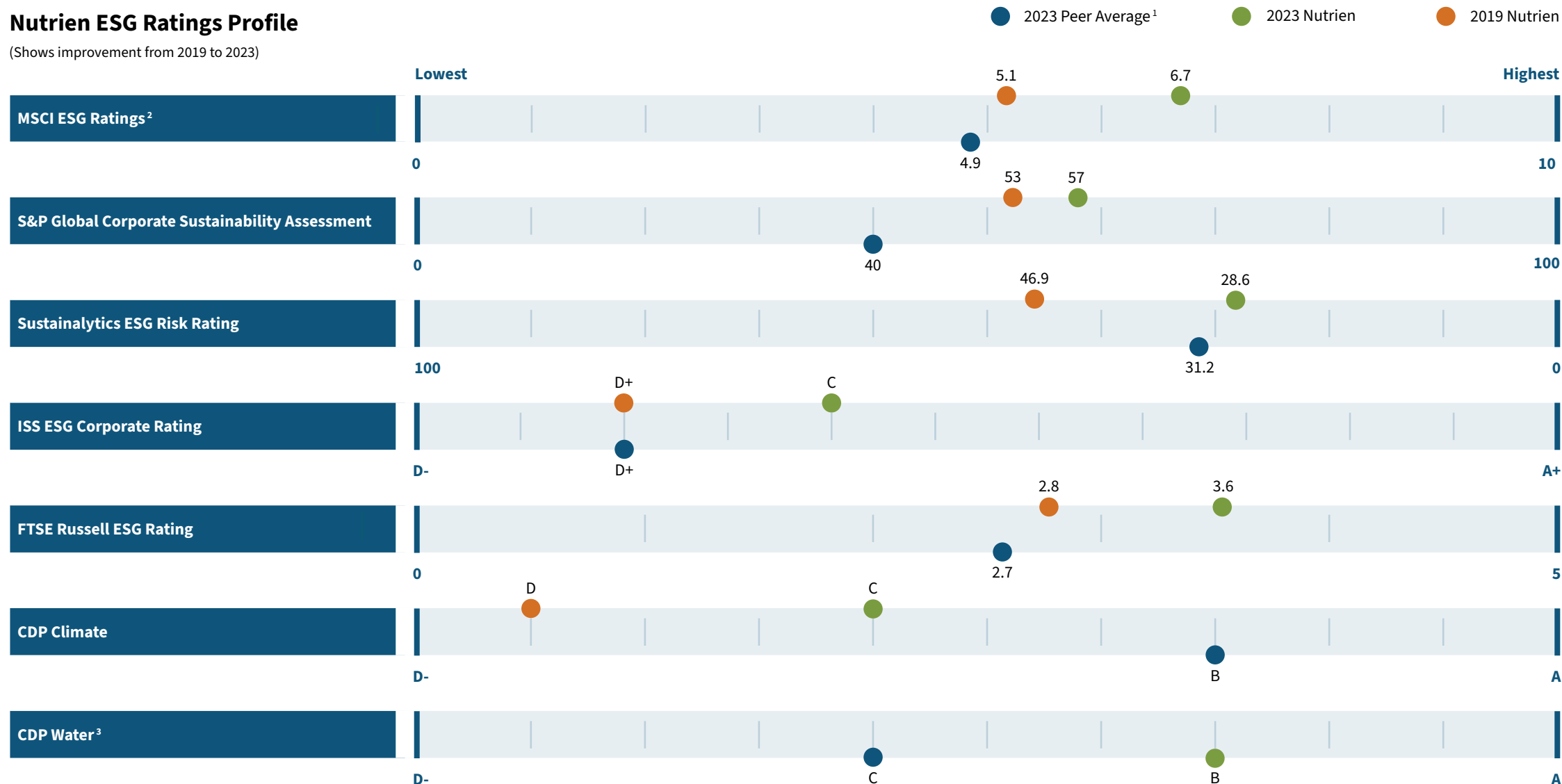
As of 2023, Nutrien Ltd. received an MSCI ESG Rating of AA²



Nutrien discloses both CDP Climate and Water annually

Nutrien ESG Ratings Profile

(Shows improvement from 2019 to 2023)



1 Peer groups: MSCI and FTSE = Specialty Chemicals; Sustainalytics, CDP, S&P and ISS = Chemicals.

2 The use by Nutrien Ltd. of any MSCI ESG Research LLC or its affiliates (“MSCI”) data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Nutrien Ltd. by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided ‘as-is’ and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

3 CDP Water not scored in 2019.

Note: These ratings reflect the extent our public ESG disclosure and rating agencies’ assessments of Nutrien’s processes and actions to manage risks and capture opportunities related to Nutrien’s key material sustainability issues. Where possible, we have addressed reporting gaps in this report.

Performance Table

Environmental	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.	
Emissions									
GHG – Total Scope 1 Direct	million tonnes CO ₂ e	9.54	10.27	11.05	10.43	10.40	Direct (Scope 1) emissions occur from sources such as combustion in owned or controlled facilities or fleet or emissions from chemical production. We apply the operational control approach to define our organizational boundary. Emissions are quantified following US EPA 40 CFR Part 98 Mandatory Greenhouse Gas Reporting methods, except for the Saskatchewan Potash facilities, which follow Environment and Climate Change Canada (“ECCC”) Greenhouse Gas Reporting Program (“GHGRP”) methods. 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 sold to a third party. Global Warming Potentials used are from the Intergovernmental Panel on Climate Change (“IPCC”) Sixth Assessment Report (“AR6”). Our inventory excludes nitrogen trifluoride (NF ₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF ₆) as they are either not emitted by or are immaterial to Nutrien’s operations. To understand Nutrien’s calculation methodology for reported Scope 1 and 2 GHG emissions, please see our GHG Inventory Management Plan . In 2022, reported emission intensities were recalculated to integrate previously segregated “Specialty” and “TD&L” facilities into the Retail, Nitrogen, Potash and Phosphate operating segments.	RT-CH-110a.1, EM-MM-110a.1	
GHG – Scope 1 Direct by type	million tonnes CO ₂	8.73	9.40	9.48	9.11	9.30			
	thousand tonnes CH ₄	1.30	5.78	4.93	2.67	4.94			
	thousand tonnes N ₂ O	2.81	2.44	4.85	4.20	3.30			
GHG Intensity – Scope 1 (company-wide)	tonnes CO ₂ e per tonne product (weighted average)	0.48	0.51	0.52	0.52	0.53			
Potash GHG Intensity – Scope 1	tonnes CO ₂ e per tonne KCl produced	0.04	0.04	0.04	0.04	0.04			
Nitrogen GHG Intensity – Scope 1	tonnes CO ₂ e per tonne NH ₃ produced	1.50	1.52	1.58	1.48	1.45			
Phosphate GHG Intensity – Scope 1	tonnes CO ₂ e per tonne P ₂ O ₅ produced	0.50	0.48	0.47	0.47	0.43			
Scope 1 emissions covered under emissions-limiting regulations	percent	28	28	26	27	27			RT-CH-110a.1
GHG – Scope 2 Energy Indirect	million tonnes CO ₂ e	2.63	2.49	2.70	2.74	2.85		Indirect (Scope 2) emissions relate to emissions from the generation of purchased electricity, heat or steam. We apply the operational control approach to define our organizational boundary. Scope 2 emissions reported are location-based emissions. Emission factors for imported electricity are region-specific as published in the most recent Canadian National Inventory Report (“NIR”), the US EPA Emissions & Generation Resource Integrated Database (“eGRID”), and other country or regional published grid averaged emission factors. Emission calculations include CO ₂ , CH ₄ and N ₂ O. Global Warming Potentials used are from the IPCC Sixth Assessment Report (“AR6”). To understand Nutrien’s calculation methodology for reported Scope 1 and 2 GHG emissions, please see our GHG Inventory Management Plan .	
GHG Intensity – Scope 2 (company-wide)	tonnes CO ₂ e per tonne product (weighted average)	0.13	0.12	0.13	0.14	0.15			
Potash GHG Intensity – Scope 2	tonnes CO ₂ e per tonne KCl produced	0.10	NPR	NPR	NPR	NPR			
Nitrogen GHG Intensity – Scope 2	tonnes CO ₂ e per tonne NH ₃ produced	0.19	NPR	NPR	NPR	NPR			
Phosphate GHG Intensity – Scope 2	tonnes CO ₂ e per tonne P ₂ O ₅ produced	0.19	NPR	NPR	NPR	NPR			
CO ₂ Captured and Sold	million tonnes CO ₂	1.0	1.1	1.1	1.0	1.2	At some Nitrogen facilities, a portion of the industrial process CO ₂ generated in ammonia manufacturing is captured and exported for commercial application (methanol production, industrial gas products or other). The CO ₂ captured and sold is net against Scope 1 process emissions.		

NPR not previously reported

Environmental (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Emissions (continued)								
Criteria Air Contaminants:								
							Includes CO, NOx, SO ₂ , particulates and VOCs as required by the Canadian National Pollutant Release Inventory.	
Carbon monoxide	thousand tonnes	5.9	7.9	8.3	6.6	8.6		EM-MM-120a.1
Oxides of nitrogen	thousand tonnes	6.8	7.4	7.8	7.4	7.7		RT-CH-120a.1, EM-MM-120a.1
Sulfur dioxide	thousand tonnes	3.2	3.4	3.8	3.6	3.4		RT-CH-120a.1, EM-MM-120a.1
Total particulate matter	thousand tonnes	7.0	7.3	7.4	7.7	7.0		EM-MM-120a.1
Volatile organic compounds	thousand tonnes	1.8	2.0	2.0	2.2	1.5		RT-CH-120a.1, EM-MM-120a.1
Other air emissions	thousand tonnes	9.4	9.1	9.7	10.1	10.2	Includes air emissions reported to the National Pollutant Release Inventory (“NPRI”) or Toxic Release Inventory (“TRI”), that are not considered Criteria Air Contaminants (“CACs”) or Hazardous Air Pollutants (“HAPs”) including ammonia, nitric acid and sulfuric acid. Emissions are determined for each emission source at each manufacturing facility using either source emission tests, published emission factors or engineering estimates.	
Hazardous Air Pollutants	thousand tonnes	1.1	1.5	1.6	1.5	1.6	Includes substances classified as EPA Hazardous Air Pollutants.	RT-CH-120a.1
Energy								
Total energy use	petajoules	260.8	273.3	281.1	279.2	283.9	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	petajoules	136.0	143.2	146.1	146.0	152.3		
Fossil fuels consumed	petajoules	102.8	110.1	114.3	110.7	111.5		
Electricity purchased	petajoules	16.5	16.3	16.7	16.8	16.2		
Imported steam	petajoules	4.2	3.6	4.0	4.1	4.0		
Self-generated	petajoules	1.3	1.3	1.3	1.3	1.3	Electricity generated from waste heat in manufacturing operations.	RT-CH-130a.1
Renewable energy	terajoules	2.5	7.3	19.0	0.0	0.0	Renewable energy consumption represents biomass combustion at our Brazil operations.	RT-CH-130a.1, EM-MM-130a.1
Energy intensity (company-wide)	gigajoules per tonne of product (weighted average)	13.2	13.6	13.2	13.9	14.3		

NPR not previously reported

Environmental (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Water								
Total water intake	million m ³	196	219	233	237	217		RT-CH-140a.1
Freshwater intake, by source:								EM-MM-140a.1
Groundwater	million m ³	42	46	55	55	48		
Mine dewatering/depressurization	million m ³	51	52	46	58	47		
Surface water	million m ³	61	64	67	69	59		
Industrial/municipal water	million m ³	14	16	15	15	16		
Non-freshwater intake, by source:								
Ocean water	million m ³	27	40	50	41	47		
Water intake in regions with high or extremely high baseline water stress	million m ³	4.3	3.1	4.0	4.0	3.4		RT-CH-140a.1, EM-MM-140a.1
Percentage water intake in regions with high or extremely high baseline water stress	percent	2.2	1.4	1.7	1.7	1.6		RT-CH-140a.1, EM-MM-140a.1
Total water consumed	million m ³	348	279	298	362	NPR	We define water consumed as water withdrawn from surface water, groundwater and/or third-party sources that is not discharged back into the environment or to a third party. For larger sites, includes an estimate of precipitation within the organizational boundary. The large surface area of our Phosphate mining operations as well as the relatively high precipitation that falls in these areas result in a high volume of water that requires on-site management. Our water consumption is all freshwater. Reported freshwater consumption intensities for previous years have been re-calculated to use production volumes for ammonia, potash and phosphate (as P ₂ O ₅) in the intensity calculation denominator. Reported freshwater consumption intensities have been re-calculated to integrate previously segregated "Specialty" and "TD&L" facilities into the Retail, Nitrogen, Potash and Phosphate operating segments.	RT-CH-140a.1, EM-MM-140a.1
Percentage water consumed in regions with high or extremely high baseline water stress	percent	1.2	1.1	1.4	1.1	NPR		
Freshwater consumption intensity – (company-wide)	m ³ per tonne product (weighted average)	17.6	13.9	13.9	18.0	NPR		
Potash freshwater consumption intensity	m ³ per tonne KCl produced	0.5	0.4	0.6	0.7	NPR		
Nitrogen freshwater consumption intensity	m ³ per tonne NH ₃ produced	6.1	5.5	5.5	5.9	NPR		
Phosphate freshwater consumption intensity	m ³ per tonne P ₂ O ₅ produced	220	180	168	219	NPR		
Total water discharge, by destination	million m ³	198	199	279	249	224		
Surface water	million m ³	197	198	278	248	223		
Municipal treatment	million m ³	1	1	1	1	1		

NPR not previously reported

Environmental (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Effluents and waste								
Discharges to on-site disposal wells	million m ³	17	22	15	18	15		
Total non-hazardous waste:								
Mining waste or byproducts disposed	million tonnes	28	27	29	27	26	Includes potash mining tailings and phosphogypsum.	EM-MM-150a.1, EM-MM-150a.2
Non-mining waste disposed	thousand tonnes	164	97	113	119	123	Excludes non-hazardous recycled materials and hazardous waste. Excludes South America Retail, Australia, and Europe.	
Hazardous Waste Disposed	thousand tonnes	10	3	7	4	7	Includes hazardous recycled materials and disposed hazardous waste. Excludes non-hazardous waste. Excludes South America Retail, Australia, and Europe.	RT-CH-150a.1
Recycled materials	thousand tonnes	41	35	38	28	35	Includes hazardous and non-hazardous materials. Excludes South America Retail, Australia and Europe.	
Environmental incidents								
Total Loss of Containment (“LOC”) incidents	count	23	44	31	36	29	Incidents that qualify as multiple criteria (for example, Reportable Quantity Releases and Process Safety Incidents) only qualify as one loss of containment incident. Incidents by type do not sum to the total due to multiple classifications.	
Reportable Quantity (“RQ”) releases	count	10	22	14	17	17	Includes non-permitted releases to the environment of a US EPA Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) hazardous substance (40 CFR 302.4) and/or Emergency Planning and Community Right-to-Know Act (“EPCRA”) Extremely Hazardous Substance (40 CFR §355.40) in a quantity that equals or exceeds the EPCRA/CERCLA reportable quantity in a 24-hour period at all non-Potash operations; or when a non-permitted release to the environment (on-site, off-site) occurs in a quantity that equals or exceeds the Saskatchewan Reportable Release Quantity in a 24-hour period at all Potash operations. Releases that exceed both CERCLA and EPCRA RQs are considered one RQ incident.	
Process Safety Management (“PSM”) events	count	10	10	9	20	12	Includes Tier 1 and 2 PSM incidents that exceed a threshold quantity for a chemical stewarding to the third edition of American Petroleum Institute Recommended Practice (“API”) 754 “Process Safety Performance Indicators for the Refining and Petrochemical Industries”. PSM is not applicable to the Potash operating segment.	RT-CH-540a.1
Level 2 Environmental Incidents	count	2	2	2	2	8	Includes any environmental release that is reported as Level 2 (Significant Event) through the “Nutrien Global Standard: Incident Notification” due to its environmental consequences.	

Environmental (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Environmental incidents (continued)								
Environmental incident frequency	LOC incidents * 1,000,000/ production	1.25	1.66	1.16	1.60	0.96	We changed the calculation methodology in 2023 and restated prior years to better reflect Nutrien's environmental performance across our operating segments. This metric is now calculated as Loss of Containment incidents (Reportable Quantity Releases, Process Safety Management Tier 1 and 2 incidents, and Level 2 Environmental Incidents) multiplied by 1,000,000 and divided by production.	
Tier 1 process safety total incident rate	incidents * 200,000 hours/total actual hours worked	0.03	0.04	0.01	0.04	0.07	The 2019 rate includes Nitrogen and Phosphate exposure hours while 2020, 2021, 2022 and 2023 include exposure hours for Retail (North America), Nitrogen and Phosphate, and Transportation & Distribution.	RT-CH-540a.1
Tier 2 process safety total incident rate	incidents * 200,000 hours/total actual hours worked	0.03	0.05	0.12	0.12	0.27		
Non-accidental ammonia releases rate	releases per thousand railcar movements	0.00	0.04	0.00	0.00	0.00	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 remediation liabilities	\$ million	396	449	505	550	544	Calculated on a discounted basis.	
Internal SH&E audits	count	598	674	695	667	655		
Social								
Workplace								
Total employees	count	28,200	26,800	25,600	25,600	22,540	Includes full-time and part-time permanent, temporary and casual employees as of December 31.	
Permanent employees	count	25,900	24,700	23,500	23,100	22,300		
Temporary & casual employees	count	2,300	2,100	2,100	2,500	240		
Permanent employees by region:							Figures may not add to total due to rounding.	
North America	count	19,000	18,750	18,050	18,000	17,700		
South America	count	3,900	2,800	2,450	2,000	1,200	Includes Trinidad and Tobago.	
Australia	count	3,000	3,100	2,950	3,050	3,350		
Europe	count	50	50	50	50	50		
Total employee turnover rate	percent	14	12	15	13	13	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	10	9	12	9	9	The number of permanent employees who left the Company due to voluntary terminations as a percentage of average permanent employees for the year. Includes voluntary retirements and resignations.	
Involuntary employee turnover rate	percent	4	3	4	4	4		

Social (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Workplace (continued)								
Employee learning and development:								
Average learning and development spend	\$ per employee	814	838	517	380	435		
Average hours of training	hours per employee	26	22	32	26	18		
Employee engagement	percent	75	N/A	N/A	89	N/A	The 2023 score represents a 75% favorable response when it comes to the employee experience with Nutrien in dimensions like communication, work-life balance, leadership, purpose and engagement, with a survey participation rate of 56%. In 2020, the score represents the average response to five engagement questions, with a survey participation rate of 48%.	
Total employees covered by collective bargaining agreements	percent	24.4	20.5	20.1	19.3	16.7	Based on permanent full-time and part-time employees as of December 31.	EM-MM-310a.1
Employees represented by third-party trade unions	percent	10.9	16.1	15.9	15.4	NPR	Based on North American permanent full-time and part-time employees as of December 31. Includes employees represented by a formal third-party organization authorized to act on behalf of employees regarding wages and other working conditions of employment.	EM-MM-310a.1
Employees represented by another form of collective bargaining (not involving third-party trade unions)	percent	48.8	34.4	34.3	34.5	NPR	Based on non-North American permanent full-time and part-time employees as of December 31. Includes employees covered by a representative body or work council to negotiate wages and/or working conditions that are legally binding agreements between the employer and employees.	EM-MM-310a.1
Diversity								
Women at various levels:								
							Based on permanent full-time and part-time employees as of December 31.	
Board	percent	33	33	36	36	33		
Vice President and above	percent	22	21	23	25	25		
Director and above	percent	23	21	21	19	15		
Non-senior leaders	percent	13	14	15	15	16		
All management	percent	14	13	16	14	14		
All employees	percent	20	21	20	20	19		

N/A not applicable

NPR not previously reported

Social (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Diversity (continued)								
Permanent employee age profile:								
							Based on permanent full-time and part-time employees as of December 31.	
Under 25	percent	6	7	5	5	5		
25–34	percent	24	24	23	23	22		
35–44	percent	26	25	25	25	24		
45–54	percent	22	22	22	22	23		
55–64	percent	17	18	19	20	21		
Over 65	percent	5	4	4	5	5		
Safety								
Total recordable injury frequency	incidents * 200,000 hours/ total actual hours worked	1.01	1.16	1.11	1.13	1.29		RT-CH-320a.1
Employee recordable injury frequency	incidents * 200,000 hours/ total actual hours worked	1.14	1.30	1.25	1.30	1.46		
Contractor recordable injury frequency	incidents * 200,000 hours/ total actual hours worked	0.49	0.64	0.57	0.41	0.69		
Total lost-time injury frequency	incidents * 200,000 hours/ total actual hours worked	0.24	0.24	0.27	0.26	0.31		
Employee lost-time injury frequency	incidents * 200,000 hours/ total actual hours worked	0.28	0.26	0.31	0.30	0.38		
Contractor lost-time injury frequency	incidents * 200,000 hours/ total actual hours worked	0.09	0.14	0.11	0.09	0.07		
Employee lost-time days rate	lost-time days * 200,000 hours/ actual hours worked	7.22	7.60	7.14	7.66	12.72	Rates may change as the number of days lost can be incurred outside of the calendar year.	
Serious injury and fatality incidents (employee and contractor)	count	5	5	0	1	1		
Employee fatalities	count	1	0	0	0	1		RT-CH-320a.1, EM-MM-320a.1
Contractor fatalities	count	0	0	0	0	0		RT-CH-320a.1, EM-MM-320a.1

Social (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
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	34	33	32	32	33	Includes Nutrien North American manufactured fertilizer-feed-industrial and European distributed fertilizer products. Our fertilizer-feed-industrial Category 1 and 2 products generally fall into the corrosive (acids and ammonia) or irritancy (UAN, nitrate solutions, polyphosphates) categories.	RT-CH-410b.1
Percentage of GHS 1 and 2 products by revenue that have undergone a hazard assessment	percent	58	64	62	58	59	Includes Nutrien North American manufactured fertilizer-feed-industrial and European distributed fertilizer products.	RT-CH-410b.1
Percentage of products by revenue that contain genetically modified organisms (“GMOs”)	percent	6	5	6	7	7	2021 was restated to reflect improvements in data collection and increased data granularity.	RT-CH-410c.1
Governance								
Integrity								
Net production in countries with high levels of corruption risk	tonnes, saleable	0	0	0	0	0	High levels of corruption risk as determined by Transparency International’s Corruption Perception Index (countries in the 20 lowest ranks).	EM-MM-510a.2
Total compliance reporting rate	reports per 100 employees	1.11	0.77	0.74	0.67	0.66		
Total compliance reports	count	320	207	190	172	164	Compliance report categories were changed in 2021 to better align with the issue types used for internal reporting. As a result, the number of 2020 and 2019 reports by category do not sum to the total.	
Business practices	count	42	20	36	9	6		
Discrimination	count	22	20	14	24	22		
Environmental	count	3	0	0	NPR	NPR		
Financial matters	count	36	15	30	12	2		
Harassment	count	44	27	24	25	32		
Labor and employment	count	14	11	12	NPR	NPR		
Retaliation	count	9	6	2	NPR	NPR		
Worker safety and health	count	19	16	22	NPR	NPR		
Workplace conduct	count	117	79	46	NPR	NPR		
Other	count	17	13	4	14	19		

NPR not previously reported

Governance (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Integrity (continued)								
Participants in anti-corruption training:								
Live	count	470	320	200	390	1,010		
Online course	count	1,710	100	40	40	130		
Online refresher	count	27,630	5,030	22,850	3,930	20,770	In 2022, new hires and return-from-leave employees received a refresher on anti-corruption as part of the Code of Conduct training.	
Participants in fair competition training:								
Live	count	500	390	305	410	610		
Online course	count	2,370	0	NPR	NPR	NPR		
Online refresher	count	27,630	5,030	22,850	3,930	20,770	In 2022, new hires and return-from-leave employees received a refresher on fair competition as part of the Code of Conduct training.	
Participants in data privacy training:								
Online refresher (as part of Code of Conduct training)	count	27,630	25,740	22,850	3,930	20,770		
Cybersecurity								
Tabletop exercises to practice responding to cybersecurity events	count	3	3	2	2	3		
Participants in online cybersecurity refresher (as part of Code of Conduct training)	count	27,630	25,740	22,850	23,900	20,770		
Participants in focused cybersecurity training for higher-risk business areas	count	26,810	24,600	8,310	8,750	7,900		
Cybersecurity Education and Training Sessions Held for Our Community Partners and Stakeholders	count	5	5	5	NPR	NPR		

NPR not previously reported

Governance (continued)	Units	2023	2022	2021	2020	2019	Footnotes	SASB Ref.
Economic								
Economic value generated:								
Sales	\$ million	29,056	37,884	27,712	20,908	20,084	Other value generated is not material (such as earnings of equity accounted and dividends). Represents revenue from customers and other sources. Certain immaterial figures have been reclassified for 2019.	
Economic value distributed:								
Operating costs	\$ million	22,862	24,240	19,426	15,911	15,547	Represents costs and expenses incurred during the period excluding specific costs presented separately. 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. Excludes depreciation and amortization expense and impairment of assets.	
Wages and benefits	\$ million	2,858	2,968	3,007	2,455	2,205	Includes salaries and wages, employee benefits, and share-based compensation. See the nature of expenses note in our annual report. Certain immaterial figures have been reclassified for 2019.	
Interest payments, dividends declared and share repurchases	\$ million	2,843	6,078	2,764	1,709	3,186	Includes finance costs, dividends declared and share repurchases on an accrual basis.	
Taxes and royalties paid	\$ million	1,375	3,917	1,776	286	628	Includes corporate income, property, sales, excise and production taxes.	
Community investments	\$ million	23	33	19	18	17	Represents cash disbursements, matching of employee gifts and in-kind contributions of equipment, goods and services, and employee volunteerism (on corporate time). In 2022, Nutrien allocated additional funds on a one-time basis to advance our strategic priorities.	
Coverage of defined benefit retirement obligations	percent	92	89	87	83	79	Calculated on an accounting basis for registered defined benefit pension plans, and other post-employment benefit plans.	
Employees who are active members of defined benefit pension plans	percent	9	9	14	13	19	For North America, the remaining eligible employees can participate in a defined contribution retirement plan.	
Political donations in Canada	\$ CAD	1,000	10,500	11,500	6,000	8,000		
Political donations in the US	\$ USD	117,250	40,250	17,000	52,500	0		
Political donations in Australia	\$ AUD	0	0	0	NPR	NPR		
Number of community partners	count	2,800	3,000	2,700	2,500	2,300	Represents unique charitable and not-for-profit organizations within a community or region.	
Company context								
All figures are provided on a gross production basis.								
Potash production (KCl tonnes produced)	thousand tonnes	12,998	13,007	13,790	12,595	11,700		
Nitrogen production (NH ₃ tonnes produced)	thousand tonnes	5,357	5,759	5,996	6,063	6,164		
Phosphate production (P ₂ O ₅ tonnes produced)	thousand tonnes	1,406	1,351	1,518	1,444	1,514	Excludes Redwater.	

NPR not previously reported

SASB Index

SASB Reference	Metric	Page
Environment		
GHG Emissions		
RT-CH-110a.1, EM-MM-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	91
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	25-29 82-84
Air Quality		
RT-CH-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N ₂ O), (2) SOx, (3) volatile organic compounds (“VOCs”), and (4) hazardous air pollutants (“HAPs”)	92
EM-MM-120a.1	Air emissions of the following pollutants: (1) CO, (2) NOx (excluding N ₂ O), (3) SOx, (4) particulate matter (PM ₁₀), (5) mercury (Hg), (6) lead (Pb), and (7) VOCs	92
Energy Management		
RT-CH-130a.1 EM-MM-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, and (4) total self-generated energy	92
Water Management		
RT-CH-140a.1 EM-MM-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	93
RT-CH-140a.2 EM-MM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards and regulations	(not available)
RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	36-38
Hazardous Waste Management		
RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	94
EM-MM-150a.1	Total weight of tailings waste, percentage recycled	94
EM-MM-150a.2	Total weight of mineral processing waste, percentage recycled	94
Biodiversity Impacts		
EM-MM-160a.1	Description of environmental management policies and practices for active sites	33-35*
EM-MM-160a.3	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	(not available)

* Partially meets the disclosures suggested by the SASB Standards

SASB Reference	Metric	Page
Social		
Safety and Environmental Stewardship of Chemicals		
RT-CH-410b.1	(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	98
RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	30-32
Workforce Health and Safety		
RT-CH-320a.1	(1) Total recordable incident rate (“TRIR”) and (2) fatality rate for (a) direct employees and (b) contract employees	97
RT-CH-320a.2	Description of efforts to assess, monitor and reduce exposure of employees and contract workers to long-term (chronic) health risks	45-51
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	97*
Operational Safety, Emergency Preparedness and Response		
RT-CH-540a.1	Process Safety Incidents Count (“PSIC”), Process Safety Total Incident Rate (“PSTIR”), and Process Safety Incident Severity Rate (“PSISR”)	94-95
Community Relations		
RT-CH-210a.1 EM-MM-210b.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	65-67
EM-MM-210b.2	Number and duration of non-technical delays	(not available)
Labor Relations		
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, broken down by US and foreign employees	96
Security, Human Rights and 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	59-61 74-76
Genetically Modified Organisms		
RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (“GMOs”)	98
Governance		
Management of the Legal and 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	79
Business Ethics and Transparency		
EM-MM-510a.1	Description of the management system for prevention of corruption and bribery throughout the value chain	59-61 74-76
EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index	98

* Partially meets the disclosures suggested by the SASB Standards

GRI Index

GRI Indicator	Page
Disclosures for All Organizations	
Organizational Details, Activities And Strategy	
2-1	Organizational details 2023 Annual Report pages 104 and 151 6, 89
2-6	Activities, value chain and other business relationships 2023 Annual Report pages 12-27 5-6
2-7	Employees 6, 95
2-22	CEO message 1-2
2-23	Policy commitments Policies and Practices Feeding the Future Plan
3-3	Management of material topics 7-11
Governance and Ethics	
2-9	Governance structure and composition 69-73
2-26	Mechanisms for seeking advice and raising concerns 76
Stakeholder Engagement	
2-29	Approach to stakeholder engagement 87-88, Stakeholder Engagement
2-30	Collective bargaining agreements 63
Reporting Practices and Disclosures on Material Topics	
2-2	Entities included in sustainability reporting 89
2-3	Reporting period, frequency and contact point 89, back cover
2-4	Restatement of information from previous reports 91-100
2-5	External assurance 26, ESG Document Hub
3-1	Process to determine material topics 11
3-2	Material topics 11

GRI Indicator		Page
Topic Specific Disclosures		
Climate Change		
305-1	Direct GHG emissions	91
305-2	Indirect energy GHG emissions	91
305-4	GHG emission intensity	91
305-5	Reduction of GHG emissions	26-29
Biodiversity		
304	Management approach	33-35
Water		
303-3	Water withdrawal by source	93
306-1	Water discharge	93
Safety: Occupational Safety		
403-9	Work-related injury rates and fatalities	97
Safety: Public Safety		
Company indicator	Non-accidental Ammonia Release Rate	95
Diversity and Inclusion		
405-1	Diversity breakdown of board and employees (by age, gender and any other)	70, 96-97
Ethics and Human Rights		
205-2	Number of employees who received anti-corruption training	99
Responsible Supply Chain		
414-1	New suppliers that were screened using social criteria	59-61

* Partially meets the disclosures suggested by the GRI Standards

TCFD Index

Category	Disclosure	Page
Governance		
Governance (a)	Board oversight	72
Governance (b)	Management's role	72
Strategy		
Strategy (a) and (b)	Identified climate-related risks and opportunities and their impacts	82-84
Strategy (c)	Climate resiliency and climate-related scenarios	81
Risk Management		
Risk Management (a) and (b)	Identification and assessment of climate-related risks	80
Risk Management (c)	Process for integrating climate-related risks	80, 85
Metrics and Targets		
Metrics and Targets (a), (b) and (c)	Climate-related metric and targets	85

VCMDA Disclosure

Nutrien AB-1305 Disclosure

Disclosure provided pursuant to the California Voluntary Carbon Market Disclosures Act (“VCMDA”)

Nutrien has set targets, and reports on its progress, to reduce GHG emissions intensity (Scope 1 and 2) by 30 percent per tonne of our products produced, from a baseline year of 2018 by 2030. The information in the table on the right represents details related to the disclosures required under Section 44475.2 of the VCMDA.

Reductions to Nutrien’s GHG emissions	Read more
How interim progress is being measured	<ul style="list-style-type: none"> • Read more about emissions related to our operations, page 26 • Read more about our TCFD metrics and targets, page 07
Relevant methodology	<ul style="list-style-type: none"> • Read more about emissions related to our operations, page 26 • Read more about how we are working towards sectoral decarbonization pathways, page 28
Whether there is independent third-party verification of the company data	KPMG LLP provided limited assurance over our 2023 Scope 1 and 2 GHG emissions and their assurance report can be found here .

Forward-looking Statements

Certain statements and other information included in this document 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”, “project”, “intend”, “plan” or other similar words). All statements in this document, other than those relating to historical information or current conditions, are forward-looking statements, including, but not limited to: Nutrien’s business strategies, plans, prospects, opportunities and its sustainability, climate change and ESG plans, initiatives and strategies; Nutrien’s sustainability and ESG opportunities and expectations and the risks related thereto; expectations regarding Nutrien’s *Feeding the Future* Plan commitments, targets and goals for 2024 and beyond, its 2030 commitments, targets and goals for 2024 and beyond and ESG performance commitments, targets and goals; Nutrien’s 2030 GHG emissions reduction commitments, targets and goals, including its plans, expectations, programs and strategies with respect thereto and anticipated capital expenditures required to achieve such commitments, targets and goals; the potential deployment of additional emissions abatement projects; Nutrien’s initiatives to promote sustainable and productive agriculture and food production and its commitments and goals related thereto, including our 75 million sustainable agriculture acres target; our ability to integrate energy efficiency initiatives throughout our operations; expectations regarding global population growth; expectations with respect to and the anticipated benefits of our innovative Retail products, including our plant nutrition, crop protection and biofungicide products; expectations regarding operational water use and our water stewardship goals and projects, including the installation of additional pumps at our Aurora Phosphate facility and the continued use of the WAVE program; expectations regarding our waste management

goals, including the expected benefits and continued use of our Global Waste Minimization Standard and the launch of Retail products reducing packaging and plastic waste and/or increasing plastic reuse; our commitment to invest in new technologies to support a transition to low- and zero-carbon fertilizers, including low-carbon and clean ammonia as well as the use of CCUS infrastructure; our initiatives and projects relating to the reduction of Scope 1 and 2 GHG emissions and assessments of Scope 3 GHG emissions, including, but not limited to, process improvements at Nutrien’s Nitrogen facilities, including the Redwater, AB vent sweep project and N₂O abatement project at Geismar, LA, energy efficiency initiatives for its Nitrogen and Potash operations and cogeneration projects and plans related thereto; Nutrien’s near-term focus on economically maximizing CO₂ capture and sequestration; the implementation of our Carbon Program and the anticipated benefits to Nutrien and growers therefrom; expectations and anticipated benefits of the expansion of our light-duty EV fleet; Nutrien’s ability to implement technology to reduce GHG emissions and leverage data analytics in our pursuit to meet our ESG commitments; our commitment to leverage partnerships and investments to drive innovation and inclusion and the anticipated benefits thereof; our expectations regarding Nutrien Financial and our commitment to create new financial solutions to strengthen social, economic and environmental outcomes in agriculture; our equity, diversity and inclusion initiatives, targets and goals, and expected timing thereof; our expectations regarding future ESG reporting, including ESG ratings; our strategies, plans, opportunities and initiatives relating to the decarbonization priority project areas and related expectations; Nutrien’s ability to successfully reclaim land and its asset retirement obligations, including the cost, timing and anticipated results of future reclamation expenditures, including the reclamation of the Fox Mine TMA and phosphogypsum stacks; expected market

and industry conditions with respect to planted acres; our ability to implement changes to make our business processes more resilient to cyberattacks; expectations regarding our health and safety initiatives and goals, including achieving top-quartile safety performance across all of our operating segments and the future reporting of results and performance in connection therewith; expectations regarding our learning and leadership initiatives, including our High Performance Institute; Nutrien’s community relations and investment initiatives, including its ability to implement its strategic sustainability priorities and the impact therefrom; our expectations and anticipated benefits regarding our Indigenous inclusion initiatives; expectations regarding our cybersecurity programs; and expectations in connection with our ability to deliver long-term value for all stakeholders. 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, having regard to our experience and our perception of historical trends, the assumptions set forth below are not exhaustive of the factors that may affect any of the forward-looking statements and the reader should not place undue reliance on these assumptions and such forward-looking statements. Current conditions, economic and otherwise, render assumptions, although reasonable when made, subject to greater uncertainty.

In respect of our GHG emissions reduction commitments, targets and goals and other sustainability and climate-related initiatives and targets, we have made assumptions with respect to, among other things: that such target is achievable by deploying capital into N₂O abatement at our nitric acid production facilities, energy efficiency improvements, carbon capture, utilization and storage, the use of natural gas to generate electricity and waste heat recovery; our ability to successfully deploy capital and pursue other operational measures, including the successful application to our current and future operations of existing and new technologies; the successful implementation by Nutrien of proposed or potential plans in respect thereof; projected capital investment levels, the flexibility of Nutrien’s capital spending plans and the associated sources of funding; our product mix; grid decarbonization; our ability to otherwise implement all technology necessary to achieve our GHG emissions reduction commitments, targets and goals and other sustainability and climate-related initiatives and targets; and the development, availability and performance of technology and technological innovations and associated expected future results. Key assumptions with respect to our 2030 commitment of a 30 percent intensity reduction in GHG emissions (Scope 1 and 2) per tonne of our products produced, from a baseline year of 2018, include growth in potash production volumes, operating rates within expected parameters and grid decarbonization progressing on expected timelines.

Additional key assumptions that have been made in relation to the operation of our business as currently planned and our ability to achieve our business objectives include, among other things: assumptions with respect to our ability to successfully complete, integrate and realize the anticipated benefits of our already completed and future acquisitions and divestitures, and that we will be able to implement our standards, controls, procedures

Forward-looking Statements (continued)

and policies in respect of any acquired businesses and realize the expected synergies on the anticipated timeline or at all; assumptions regarding our ability to meet our ESG and sustainability commitments, targets and goals, and complete the related initiatives and programs on the anticipated timeline or at all; that future business, regulatory and industry conditions will be within the parameters expected by us, including with respect to prices, expenses, margins, demand, supply, product availability, shipments, consumption, weather conditions, supplier agreements, product distribution agreements, availability, inventory levels, exports, crop development and cost of labor and interest, exchange, inflation and effective tax rates; the receipt, in a timely manner, of regulatory and third-party approvals; assumptions with respect to global economic conditions and the accuracy of our market outlook expectations for 2024 and beyond; our expectations regarding the impacts, direct and indirect, of certain geopolitical conflicts, including the war between Ukraine and Russia and the conflict in the Middle East on, among other things, global supply and demand, including for crop nutrients, energy and commodity prices, global interest rates, supply chains and the global macroeconomic environment, including inflation; 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; our ability to successfully negotiate sales and other contracts; our ability to successfully implement new initiatives and programs; Nutrien's ability to successfully deploy capital and pursue other operational measures, and the anticipated benefits therefrom; the successful implementation by Nutrien of proposed or potential strategies and plans in respect thereof; projected capital investment levels; the flexibility of Nutrien's capital

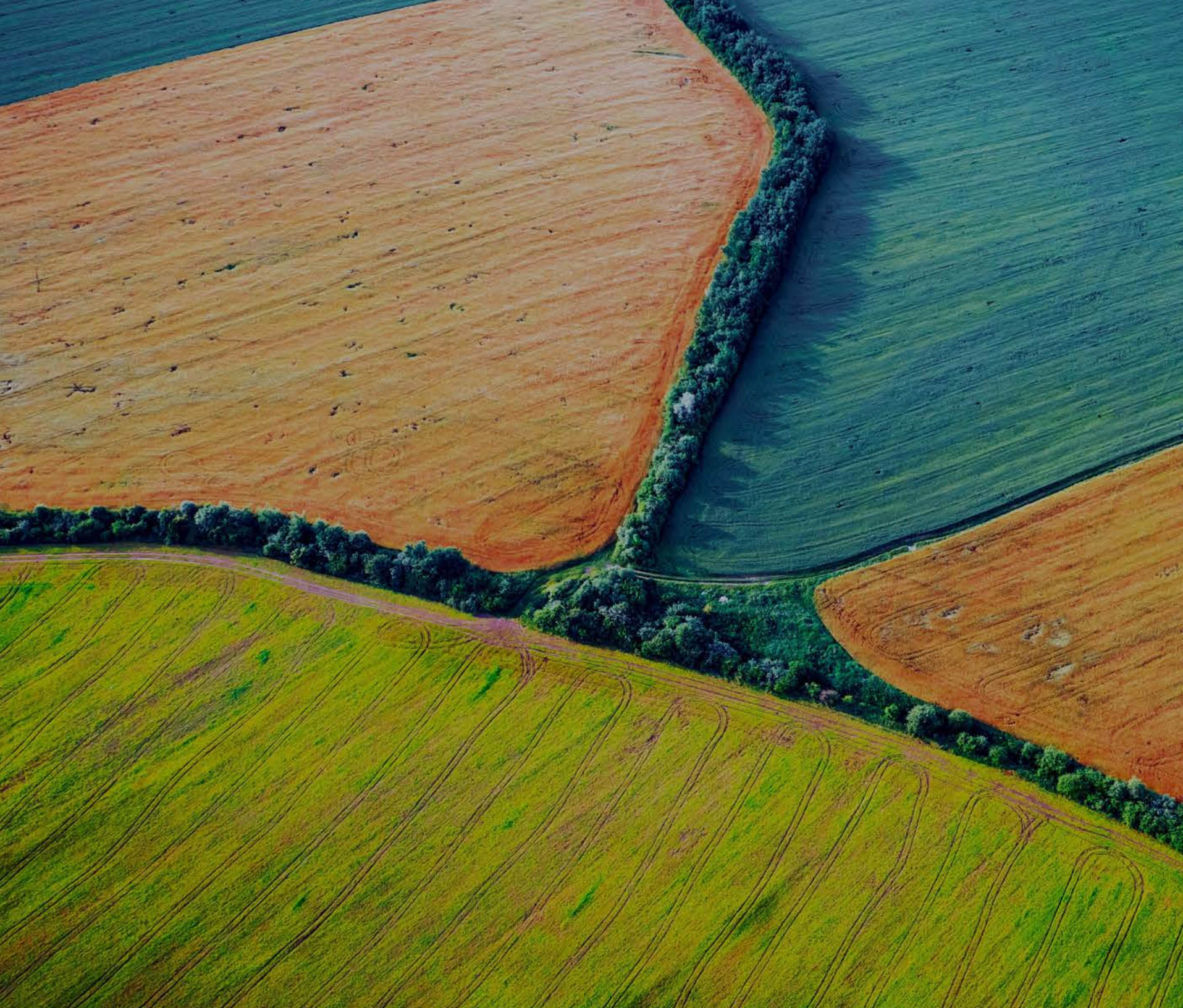
spending plans and the associated source of funding; and the development and performance of technology and technological innovations and the future use and development of technology and associated expected future results. Additional key assumptions relating to the operation of Nutrien's business as currently planned and the ability to achieve its business objectives are detailed from time to time in Nutrien reports, including its 2023 annual report dated February 22, 2024 and its annual information form dated February 22, 2024 for the year ended December 31, 2023, filed with the Canadian securities regulators and the Securities and Exchange Commission in the US.

Events or circumstances could cause actual results to differ materially from those in the forward-looking statements. Such events or circumstances include, but are not limited to: (i) with respect to Nutrien meeting its 2030 climate and GHG emissions reduction commitment, including: our ability to deploy sufficient capital to fund the necessary expenditures to implement the necessary operational changes to achieve this commitment; our ability to implement requisite operational changes; our ability to implement some or all of the strategy and technology necessary to efficiently and effectively achieve expected future results, including in respect of such GHG emissions reduction commitment; the availability and commercial viability and scalability of emission reduction strategies and related technology and products; the ability for the grid to decarbonize; the development and execution of implementing strategies to meet such GHG emissions reduction commitment; (ii) in respect of Nutrien's other 2030 commitments, targets and goals, including: our ability to deploy sufficient capital to fund the necessary expenditures to implement the necessary operational changes to achieve these commitments, targets and goals; our ability to implement requisite operational changes; our ability to implement some

or all of the technology necessary to efficiently and effectively achieve and measure expected future results; the availability and commercial viability and scalability of required technology and products; development and growth of end market demand for sustainable products and solutions; the performance of third parties; the development and execution of implementing strategies to meet such commitments, targets and goals; and (iii) with respect to Nutrien's business generally and its ability to meet its other targets, commitments, goals, strategies, and related milestones and schedules disclosed in this document: 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; the successful and timely implementation of capital projects; seasonality, 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, and changes in environmental, tax, antitrust, and other laws or regulations and the interpretation thereof; political or military risks, including civil unrest, actions by armed groups, or conflict and malicious acts including terrorism and industrial espionage; our ability to access sufficient, cost-effective and timely transportation, distribution and storage of products; the occurrence of a major environmental or safety incident or becoming subject to legal or regulatory proceedings; innovation and cybersecurity risks related to our systems, including our costs of addressing or mitigating such risks; counterparty and sovereign risk; delays in completion of turnarounds at our major facilities; interruptions of or constraints in availability of key inputs, including natural gas and sulfur;

any significant impairment of the carrying amount of certain assets; the risk that rising interest rates and/or deterioration of business operating results may result in further impairment of assets or goodwill attributed to certain cash-generating units; risks and uncertainties associated with obtaining regulatory, third-party and stakeholder approvals outside of Nutrien's control for its operations, projects, initiatives and activities and the satisfaction of any conditions to such approvals; the impact of technology and risks associated with developing and implementing new technologies; the accuracy of cost estimates; risks related to reputational loss; certain complications that may arise in our mining processes; the ability to attract, engage and retain skilled employees; labor strikes or other forms of work stoppages; geopolitical conflicts, including the war in Ukraine, the conflict in the Middle East, and their potential impact on, among other things, global market conditions and supply and demand, including crop nutrients, energy and commodity prices, interest rates, supply chains, and the global economy generally; and other risk factors detailed from time to time in Nutrien's reports, including its 2023 annual report dated February 22, 2024 and its annual information form dated February 22, 2024 for the year ended December 31, 2023, filed with the Canadian securities regulators and the Securities and Exchange Commission in the US.

The forward-looking statements in this document are made as of the date hereof and Nutrien disclaims any intention or obligation to update or revise any forward-looking statements in this document 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 initiatives.

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

Nutrien

 [Nutrien.com](https://www.nutrien.com)

 [facebook.com/nutrienltd](https://www.facebook.com/nutrienltd)

 [linkedin.com/company/nutrien/](https://www.linkedin.com/company/nutrien/)

 [youtube.com/nutrien](https://www.youtube.com/nutrien)

 [@nutrienltd](https://www.instagram.com/nutrienltd)