

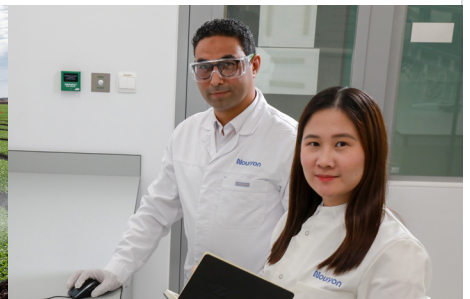
Sustainability Report 2022 – Executive Summary

Nouryon is Contributing to a Sustainable Future



Our Commitment:

We partner with our customers, suppliers, and employees to deliver innovative solutions, drive progress, and create a safe and sustainable today and tomorrow for everyone.



CONTINUOUSLY IMPROVE
our safety and environmental performance

GROW AND INNOVATE
to create sustainable solutions that answer our customers' needs

ENGAGE AND PARTNER
with employees, customers, and suppliers to drive sustainable progress

Key sustainable development goals:



Key sustainable development goals:



Key sustainable development goals:



Our ambitions and targets



Safety ambition:

Zero injuries and harm

- By the end of 2030, we have targeted reducing our absolute Scope 1 & 2 GHG emissions by **40%**, vs. a 2019 base year
- By the end of 2030, we have targeted reducing our total waste intensity by **10%**, and water consumption intensity by **10%**, vs. a 2019 base year¹

- By 2050, we aspire to be a **net zero** organization

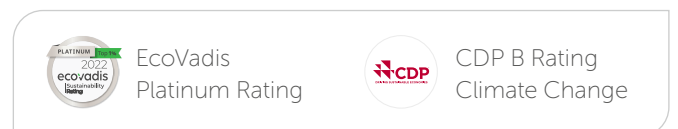
2030

2050

Our memberships and partnerships



Our 2022 ratings



¹ The base year selected for Scope 1 and Scope 2 emissions is 2019, as it the first year Nouryon reported Environmental Health and Safety metrics as an independent company.

Continuously Improve our Safety and Environmental Performance

Sustainability is at the core of Nouryon's operations. We are focused on continually improving our safety performance and further reducing our environmental footprint for the benefit of our employees, contractors, customers, communities, and the environment. In 2022, Nouryon established a GHG emission reduction roadmap with tangible actions to achieve the Company's 2030 targets. Between 2019 and 2022, Nouryon decreased its total absolute Scopes 1 and 2 greenhouse gas (GHG) emissions by 1.3%. and 34% of the Company's energy came from renewable sources such as hydro, wind, solar, biomass for power, and steam from waste biomass.

	<p>-79% process safety incident rate (PSIR) and -12% OSHA incident rate (OIR)²</p>		<p>We established a GHG emission reduction roadmap to reach our targets</p>		<p>34% of total energy is based on renewable sources</p>
	<p>Eco-efficiency tracking in place at 100% of manufacturing sites</p>		<p>5% reduction of our fresh water consumption intensity between 2019 and 2022</p>		<p>39% of total electricity is based on renewable sources</p>

Progress towards our targets

We aim to reduce our GHG emissions and achieve our 2030 targets and 2050 aspiration by focusing on key areas: Carbon Operational Excellence, Energy Transition, Innovation and Value Chain Collaboration. 2022 examples of progress include:

Scope 1: improving efficiency in our operations and optimizing our fuel mix. Achievements include:

- In Kvarntorp, Sweden, we are partnering with Adven to source steam produced from renewable wood pellets and avoid having to create steam on site using fossil fuels. Supply expected to start in the second quarter of 2023.

Scope 2: increasing our use of renewable energy through power purchase agreements (PPA), on-site renewables, and green utility programs. Achievements include:

- Our site in Mons, Belgium, is a leader for our Company, with one solar field in operation, another planned, and a wind farm under consideration.
- Our site in Guangzhou, China, runs on 100% electricity from renewable sources.
- Five manufacturing sites we operate in Brazil achieved carbon neutrality since 2021 (see infographic on the right).

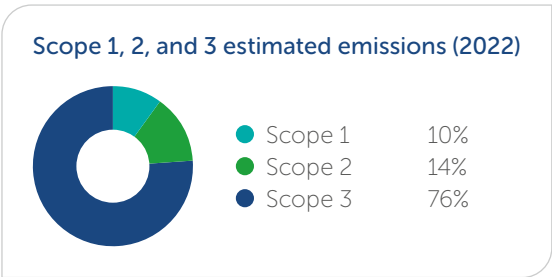
Scope 3: analyzing and reducing indirect GHG emissions from activities across our value chain. Achievements include:

- Evaluating potential lower-carbon raw materials with suppliers.

The five carbon neutral sites in Brazil operated by Nouryon (Imperatriz, Eunápolis, Três Lagoas (2) and Jacarei), offer on-location sodium chlorate and/or chlorine dioxide production.

- Nouryon uses renewable energy from our customers sourced primarily from biomass.
- Reused resources effectively lower the carbon footprint of the site.
- On-site production reduces transportation requirements.







The infographic illustrates a circular relationship between 'Nouryon's unit' and 'The pulp mill'. A dashed green circle encloses the 'Nouryon's unit' and 'Electricity' components, with an arrow pointing from the unit to the electricity. Another dashed green circle encloses 'The pulp mill' and 'Chlorine dioxide' components, with an arrow pointing from the mill to the chlorine dioxide. A solid blue arrow points from 'Electricity' to 'The pulp mill', and another solid blue arrow points from 'Chlorine dioxide' back to 'Nouryon's unit'.













² Reductions of both PSIR and OIR between 2018 and 2022.

Grow and Innovate to Create Sustainable Solutions that Answer Our Customers' Needs

As a leading global provider of sustainable solutions, we are dedicated to helping our customers achieve their sustainability goals and to growing in our attractive end-markets. These are areas in which we have a privileged position, and we pursue them by investing resources.

 34% of Revenues from Eco-Premium Solutions ³	 Megatrends drive Growth for our Sustainable Solutions	 ~77% of our R&D product pipeline focused on solutions with sustainability benefits ⁴
 11 strategically located Innovation and Application Centers	 We acquired ADOB, expanding our offering in biodegradable micronutrients	 Retention rate of more than 98% over the past six years for our top 250 customers

We are responding to continued growth in customer sustainability demands with our innovative solutions

	Customer sustainability drivers	How we are responding	% Eco-Premium Solutions ³	Innovation examples
	<ul style="list-style-type: none"> • Biodegradable • Lower carbon footprint • Bio-based 	<ul style="list-style-type: none"> • Innovations: sustainable innovation pipeline focused on increasing share of biobased and biodegradability, resulting in new product launches • Start-ups: investing in emerging and sustainable technologies • Product data: responding to increasing customers demand lifecycle assessment (LCA) requests. Piloting LCAs, aligned with new "Together for Sustainability" standards⁵ • Acquisitions: recent acquisitions expand our sustainable product offering • Ratings: EcoVadis Platinum and CDP B. 	~26%	Agrilan®
	<ul style="list-style-type: none"> • Biodegradable • Bio-based • Fossil-free • Lower carbon footprint 		~33%	SolAmaze®
	<ul style="list-style-type: none"> • VOC-free • Biocide-free • Reduced environmental impact 		~34%	 Witbreak® NEO
	<ul style="list-style-type: none"> • VOC-free • Biocide free paint • Lower carbon footprint 		~46%	 Bermocoll® Flow
	<ul style="list-style-type: none"> • Circular strategies (using recycled or renewable materials) 		~32%	 Perkadox® PM  Trigonox® 501
	<ul style="list-style-type: none"> • Lower carbon footprint 		~49%	Partnership with Renewcell on sustainable textile recycling

³ Our Eco-Premium Solutions are products that offer significant sustainability benefits over mainstream alternatives in the market while providing the same or better functionality.

⁴ In 2022.

⁵ Together for Sustainability is an industry consortium of chemical companies, with combined annual sales over €500 billion, focused on supply chain sustainability. In 2022, Tfs launched new guidelines that will require more LCA reporting.

Engage and Partner with Employees, Customers and Suppliers to Drive Sustainable Progress

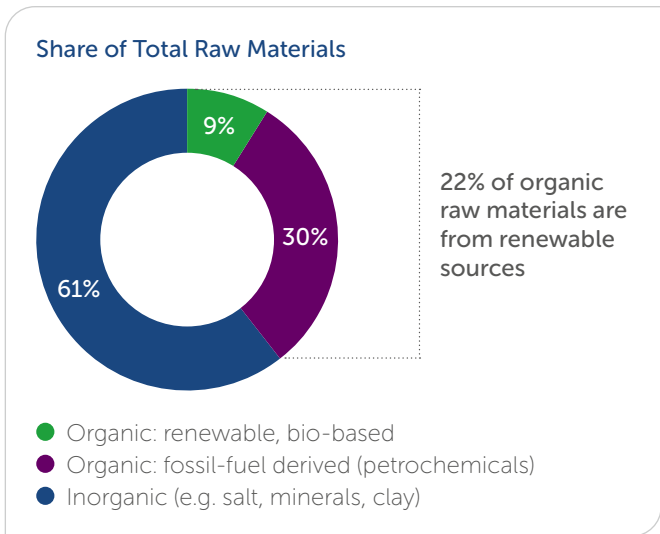
Nouryon actively engages and partners with our employees, customers and suppliers to drive progress. We empower our people to successfully deliver on our Company purpose and strategy through our Values: 'We aim high', 'We own it', and 'We do it right'. These form the backbone of our performance-driven culture.

 36% gender and ethnic diversity represented on our Board of Directors ⁶	 23% of mid-level managers and above are female in 2022 ⁷	 Global Inclusion & Diversity Network ⁸
 94% of suppliers were assessed for CSR risk using the EcoVadis Risk IQ tool ⁹	 Global Mentoring Program	 Four Business Resource Groups (BRGs) ¹⁰

Driving Sustainability with Our Suppliers







In 2022, 94% of suppliers were assessed for CSR risk using the EcoVadis Risk IQ tool (% of external spend), and 60% of suppliers were measured on their CSR performance by EcoVadis score¹¹ (% of external spend). This enables us to drive sustainability in our supply chain and serve our customers credibly and confidently.

Based on this supplier assessment, we are also able to reward compliance with our sustainability standards, taking their EcoVadis raw materials score in addition to exceptional partnership in sustainability, reliability, and special-event support into consideration.



Compliance and Ethics

Our global footprint exposes us to increasingly stringent laws and regulations on a broad range of subjects, such as: safe use of hazardous substances; operational impacts; historical soil and groundwater contamination; product liability; human rights concerns; economic sanctions; antitrust laws; and anti-corruption laws.

 SpeakUp! Hotline and Non-Retaliation Policy	 Code of Conduct and Business Partner Code of Conduct	 100% of our in-scope ¹² employees completed mandatory Compliance trainings
 Conflict-minerals risk assessment and due diligence	 Anti-Corruption Policy	 Modern slavery and forced labor risk assessment

⁶ Board Members who are female and/or of a US racial/ethnic minority.

⁷ Mid-level managers are defined as the management paygrade below the first senior executive level. Source data, December 2022.

⁸ With 50 representatives from 35 Nouryon locations, to localize and activate Inclusion and Diversity (I&D) initiatives.

⁹ In terms of all external spend (product, non-product, energy, logistics, etc.) The Risk IQ tool considers industry segment risk, country risk and EcoVadis scores from the complete EcoVadis database. Based on 2022 spend.

¹⁰ Nouryon Women's Network, Pride Network, Veterans Network, and BOOST.

¹¹ Based on policies, actions, results. For more information: <https://ecovadis.com>

¹² Office-based employees and site management

	Unit	2009	2018	2019	2020	2021	2022	Progress toward target ¹⁴
Company carbon footprint								
Total absolute direct and indirect emissions market-based (Scopes 1 and 2)	Kton CO ₂ -eq	1,194	1,329	1,451	1,427	1,403	1,432	-1.3%
Carbon intensity (Scopes 1 and 2 combined)	Kg CO ₂ -eq/ton of production	454	371	420	428	406	422	n/a
Direct absolute emissions (Scope 1) ¹⁵	Kton CO ₂ -eq	526	533	545	554	569	583	n/a
Direct emissions (Scope 1) intensity	Kg CO ₂ -eq/ton of production	200	149	158	166	165	172	n/a
Indirect emissions market-based (Scope 2): including allocated RECs ^{15,16}	Kton CO ₂ -eq	668	796	906	872	835	849	n/a
Indirect emissions market-based (Scope 2) intensity	Kg CO ₂ -eq/ton of production	254	222	262	262	242	250	n/a
Indirect emissions location-based (Scope 2)	Kton CO ₂ -eq			1,267	1,186	1,190	1,244	n/a
Estimated Scope 3 total absolute emissions ¹⁷	Kton CO ₂ -eq						4,427	n/a
Total absolute emissions (Scope 1, Scope 2 market-based, and Scope 3)	Kton CO ₂ -eq						5,859	n/a
Direct emissions, covered by emissions-limiting regulations	% of direct emissions		26%	24%	27%	27%	28%	n/a
Energy Management								
Total energy consumption ¹⁸	Mln GJ	23.0	29.1	30.0	30.3	32.2	32.9	n/a
Total energy consumption intensity ¹⁸	GJ/ton of production	8.74	8.12	8.67	9.09	9.33	9.70	n/a
Percentage renewable energy ¹⁹	%			30%	38%	38%	34%	n/a
Percentage energy from grid electricity	%		70%	62%	61%	60%	60%	n/a
Unbundled RECs	MWh						40,312	n/a
Total self-generated electricity	Mln GJ	-	-	-	-	-	-	n/a
Air Quality								
NOx absolute emissions	Ton	889	497	460	466	496	509	n/a
NOx emission intensity	Kg/ton of production	0.34	0.14	0.13	0.14	0.14	0.15	n/a
SOx absolute emissions	Ton	5,286	3,264	3,413	2,995	3,111	3,143	n/a
SOx emission intensity	Kg/ton of production	2.01	0.91	0.99	0.90	0.90	0.93	n/a
VOC absolute emissions	Ton	717	789	669	1,172	1,938	1,792	n/a
VOC absolute emission intensity	Kg/ton of production	0.27	0.22	0.19	0.35	0.56	0.53	n/a
Hazardous air pollutants	Ton					374	357	n/a
Hazardous air pollutants intensity	Kg/ton of production					0.11	0.11	n/a
Emission to Water – Chemical Oxygen Demand (COD)²⁰								
COD absolute emissions to surface water	Ton	968	1,134	845	768	896	854	n/a
COD emission intensity to surface water	Kg/ton of production	0.37	0.32	0.24	0.23	0.26	0.25	n/a
COD absolute emissions to external waste water treatment	Ton			15,245	16,503	17,905	18,435	n/a
COD emission intensity to external waste water treatment	Kg/ton of production			4.41	4.96	5.18	5.43	n/a
Water Management								
Absolute fresh water intake	1,000 m ³	162,148	142,953	134,721	147,122	161,482	153,211	n/a
Fresh water intake intensity	M ³ /ton	61.7	39.9	39.0	44.2	46.7	45.2	n/a
Percentage in regions with high water stress	%	0.3%	1.8%	2.3%	2.0%	1.6%	2.0%	n/a
Absolute fresh water consumption ²¹	1,000 m ³	14,552	15,551	15,280	14,639	14,179	14,302	n/a
Fresh water consumption ²¹ intensity	M ³ /ton	5.5	4.3	4.4	4.4	4.1	4.2	-4.7%
Percentage in regions with high water stress	%			20%	20%	18%	18%	n/a
Waste Management								
Total absolute waste	Ton	47,746	51,365	53,328	50,872	53,068	59,040	n/a
Total waste intensity	Kg/ton of production	18.2	14.3	15.4	15.3	15.4	17.4	12.8%
Absolute non hazardous waste	Ton	33,306	34,562	36,109	33,329	32,194	31,722	n/a
Non hazardous waste intensity	Kg/ton of production	13	10	10	10	9	9	n/a
Absolute hazardous waste	Ton	14,440	16,802	17,219	17,543	20,874	27,317	n/a
Absolute hazardous waste to landfill	Ton	1,615	312	417	465	268	548	n/a
Hazardous waste reused	%	39%	20%	24%	28%	33%	22%	n/a

¹³ For all figures, minor corrections to historical data may be made to improve accuracy or based on methodology updates.

¹⁴ Percentage change 2019-2022.

¹⁵ Scope 2 emissions calculations for 2019 until 2022 are based on the Green House Gas Protocol. Prior period calculations were based on electric utility fuel mix data.

¹⁶ In addition to RECs retired on our behalf for utility supplied renewable electricity and other utility contractual instruments.

¹⁷ The estimated Scope 3 total GHG emissions reported include estimates for categories 2, 8, and 15 representing approximately 1.7% of the total Scope 3 emissions we report. These categories of emissions were excluded from ERM CVS Assurance engagement.

¹⁸ Energy consumption is expressed in mln GJ, which is the sum of the actual consumed by the sites. The energy consumption for 2009 was derived from the consumption expressed in Fuel Equivalents that year by applying a factor expressing the relation between direct consumption in GJ and Fuel Equivalents for 2018, 2019, 2020, 2021, and 2022.

¹⁹ Renewable-energy data include renewable fuels like biomass, purchased renewable steam, renewable electricity from solar, wind, and hydro power. This does not consider certifications for biomass and hydro power, which are not currently tracked.

²⁰ Until 2018, only COD discharge to surface water was measured.

²¹ Total fresh water consumption (excluding once through cooling water intake) [1,000m³].

Environment Continued

	Unit	2009	2018	2019	2020	2021	2022	Progress toward target ²²
Production								
Performance Formulations	Kton		1,844	1,792	1,708	1,725	1,645	n/a
Technology Solutions	Kton		1,740	1,662	1,622	1,729	1,747	n/a
Sustainable Sourcing								
Suppliers screened using Risk IQ ²³	% of spend					96%	94%	n/a
Suppliers measured on EcoVadis performance ²⁴	% of spend					50%	60%	n/a
Suppliers acknowledging our Business Partner Code of Conduct ²⁵	% of spend					98%	100%	n/a
% of bio-based raw materials (portion of organic materials)	% of organic portion (by mass)			20%	21%	22%	22%	n/a
Management Systems²⁶								
% of manufacturing sites with ISO-14001/RC-14001 certifications	%				Per April, 2021	Per Feb. 28, 2022	Per March 23, 2023	
					77%	84%	98%	n/a
% of manufacturing sites with ISO-9001 certifications	%					88%	88%	n/a

Social

	Unit	2018	2019	2020	2021	2022
Workforce Data²⁷						
Global headcount Nouryon employees	#	10,395	10,389	9,730	7,771 ²⁸	7,909
% female in workforce	%	23%	24%	23%	25%	25%
% female mid-level managers and above ²⁹	%	26%	25%	24%	24%	23%
Employee turnover rate (voluntary and involuntary)	%	12%	17%	14%	14%	15%
Safety						
Total Recordable Incident Rate (TRIR) – Nouryon Employees, temporary workers and contractors	Per 200,000 hours worked	0.34	0.26	0.23	0.17	0.30
Lost Time Incident Rate (LTIR) – Nouryon Employees, temporary workers and contractors	Per 200,000 hours worked	0.15	0.07	0.13	0.09	0.16
Management Systems						
% of manufacturing sites with OHSAS-18001/RC-18001 and ISO45001 certifications	%			Per April 2021	Per Feb. 28, 2022	
				39%	39%	44%

Governance

	Unit	2018	2019	2020	2021	2022
Board						
Directors	#	Per December 31, 2018	Per December 31, 2019	Per December 31, 2020	Per December 31, 2021	
		9	9	10	11	11
Average director tenure (years)	#	0	1	2	2	3
Independent directors	#	8	8	9	10	10
Independent directors (%)	%	89%	89%	90%	91%	91%
Board Diversity						
Women on the Board	#	Per December 31, 2018	Per December 31, 2019	Per December 31, 2020	Per December 31, 2021	
		1	0	1	3	3
Women on the Board (%)	%	11%	-	10%	27%	27%
Board members of racial/ethnic minority	#	1	0	0	1	1
Board members of racial/ethnic minority (%)	%	11%	-	-	9%	9%
Board diversity	%	11%	-	10%	36%	36%
Board Coverage of ESG Issues						
Frequency of Board updates on ESG issues		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly
Board oversight of climate strategy? (Y/N)		Y	Y	Y	Y	Y
Policies and Statements						
Code of Conduct, anti-discrimination, anti-harassment		N	Y	Y	Y	Y
Anti-corruption, anti-bribery		N	Y	Y	Y	Y
Business Partner Code of Conduct, including suppliers		N	Y	Y	Y	Y
Health, Safety, Environment and Security (HSE&S), including product stewardship		N	N	Y	Y	Y
Palm oil statement		N	N	Y	Y	Y
Sensitive Country Policy		N	N	Y	Y	Y

²² Percentage change 2019-2022.

²³ In terms of all external spend (product, non-product, energy, logistics, etc.) The Risk IQ tool considers industry segment risk, country risk and EcoVadis scores from the complete EcoVadis database. Based on 2022 spend.

²⁴ Based on policies, actions, results. For more information: <https://ecovadis.com/>

²⁵ Tracked by acceptance of a Nouryon Purchase Order or a signed Nouryon contract.

²⁶ Our ISO certification percentage metric includes sites that have been in our portfolio for one year. This is to allow sufficient time required for activities reviewed by the certification process (e.g., pre-start up safety reviews, management reviews, production,

and/or internal audits if relevant). Any exceptions will be identified.

²⁷ Workforce data prior to 2021 includes Nobian employees (Nobian's separation from Nouryon occurred in 2021). 2021 workforce data excludes Nobian employees.

²⁸ Headcount and similar metrics may differ slightly, depending on exact collection date, due to timing of reporting schedules, divestments, and acquisitions, as well as regular workforce fluctuations.

²⁹ Mid-level managers are defined as the management paygrade below the first senior executive level. Source data, December 2022.