NOBIAN

SUSTAINABILITY REPORT 2022

GROW GREENER TOGETHER

Message from the CEO

Dear Reader,

Welcome to Nobian's second annual Sustainability Report. In 2022 we launched our sustainability program, Grow Greener Together, to kick-start our ambition to become one of Europe's most sustainable chemical companies. I can safely say that while it has been a challenging year, at the same time we have started many successful sustainability initiatives.

As an industry leader in salt, essential chemicals and energy solutions, the energy crisis in Europe, with unprecedented record high energy prices and volatility, had an impact on our company and business. These challenges, however, also provided us with opportunities and have shown us, in addition to the climate challenge, that we need to further reduce our dependency on fossil resources. It has highlighted that we must keep working to create sustainable and independent value chains.

Despite these challenges, our sustainability results were also in line with our Grow Greener Together sustainability strategy and targets. It gives me confidence that we are on track to realize our ambition of becoming climate neutral in Scope 1 and 2 by 2040, with 100% renewable energy. To further realize our ambitions, we will continue to invest in reducing our emissions, developing our portfolio of green products, the production of green hydrogen, creating underground energy storage solutions, and honor our safety mission by ensuring everyone returns home safely, every day.

It makes me very proud that in 2022 our sustainability performance has been awarded a platinum EcoVadis rating. This achievement also raises the bar for future expectations and underlines the need to keep delivering. We also signed an expression of principles as part of the tailor-made approach between the Dutch government and industrial companies in the Netherlands to further accelerate our reduction of CO_2 emissions. A key component in this cooperation is our aim to drive the electrification of our production processes. At Nobian, sustainability is at the heart of everything we do, and our commitment to our ambitions is as firm as ever.

Creating positive impact through sustainability is not something we can do alone. We passionately believe the way to grow and become greener is by working together with strong partners, such as knowledge-based institutions, tech startups and other innovative organizations. Testimony to this commitment is the successful first edition of our Grow Greener Together innovation challenge. By working with innovative startups we develop solutions to improve the storage of energy at our sites, to make our production more flexible and to make maximum use of renewable energy sources.

At Nobian, we are committed to delivering on our ambition to become one of the most sustainable chemical companies in Europe. Please read more about our sustainability initiatives, achievements, and plans in this report. I want to thank all our employees for truly living our values – Care, Excellence, Ownership and Safety – and demonstrating their engagement with sustainability, our communities, customers and our partners throughout this past year.

We look forward to the future as we Grow Greener Together. Enjoy reading this report!

Michael Koenig
Chief Executive Officer
Nobian

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Introduction
This is Nobian

As a leading European producer of salt, essential chemicals, and energy for industry, we have a strong drive to take a leading role in the energy transition and to contribute to a more sustainable world.
Being at the start of the chemical value chain, we support the transition towards green chemistry and green products, driving sustainability throughout the chain. We want to Grow Greener Together.

We do this through integrated chemical clusters and our production sites in Rotterdam, Delfzijl, and Hengelo in the Netherlands, Frankfurt, Ibbenbüren and Bitterfeld in Germany, and Mariager in Denmark.

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Nobian, Rotterdam | © Nobian / Studio Dijkgraaf

Where some might just see products, we see so much more: the indispensable elements that help keep industries, the economy, and society going. With our deep expertise in salt production, electrochemistry and developing energy storage caverns, we transform indispensable and strategic raw materials into products which are essential to everyday life, for the energy transition, and which contribute to the strategic independence of Europe.

The value of salt

Salt is an irreplaceable and essential raw material and is the basis for many of the products we use every day. Our heritage in salt production dates back more than a century to 1918. Our high purity salt is extremely suitable for chemical applications and a wide variety of materials that are found in many essential products. Salt is needed to produce the sustainable technologies of the future and to help make our world a little greener.[1]

Salt extraction in the Netherlands and Denmark ensures the Netherlands and Western Europe always have access to this indispensable raw material for both our industry and society, supporting independent value chains and economic autonomy in Europe.

Essential chemicals

The products and chemicals we provide are indispensable and are used in applications ranging from construction and cleaning to pharmaceuticals and water treatment. Our customers rely on us to keep their businesses going.

Chlorine is an essential chemical and a major building block for the chemical and pharmaceutical industries. It is produced through the electrolysis of salt brine, together with caustic soda and hydrogen. Some 55% of European chemical production relies on this process and many chemicals, plastics and medicines depend on chlorine during the manufacturing process. Caustic soda is an essential chemical used in, for example, purification of drinking water, wastewater treatment, the production of personal care soaps, paper, and cardboard, in construction materials, and many other activities. Chloromethanes are used as intermediates in the production of pharmaceuticals, agrochemicals, refrigerants, silicone polymers and fluoropolymers, automotive, water treatment, cookware and electronics.

Our chemicals play a role in the production of important materials for the energy transition, such as solar panels, batteries, insulation materials, LED lights and wind turbines.

[1] Salt impact study. The societal and economic importance of sustainable salt mining in the Netherlands (2022), Roland Berger B.V. https://www.nobian.com/en/products/salt

Energy

We are helping our customers to reduce their carbon footprint with our green products. We accelerate growth in new markets that will have a positive impact on our world and the energy transition. We source, use, produce and enable the storage of energy, and will continue to do so in the future.

Nobian is currently the largest producer of green hydrogen from chlor-alkali electrolysis in the Netherlands. Green hydrogen is used in the decarbonization of key industries such as aviation, steel, chemicals and refineries, as well as transportation. We are involved in the scaling of safe, reliable, and affordable green hydrogen solutions through the Hydrogen Chemistry Company (HyCC), our joint venture with Macquarie's Green Investment Group (GIG).

We have in-depth experience in underground energy storage. Our salt mining enables the creation of safe and reliable underground capacity to store green energy; salt caverns are suitable for storing the large quantities of hydrogen the Netherlands/ Europe will need in the future, as well as for storing compressed air (CAES) to supply and balance the electricity network with energy derived from wind and sun energy.

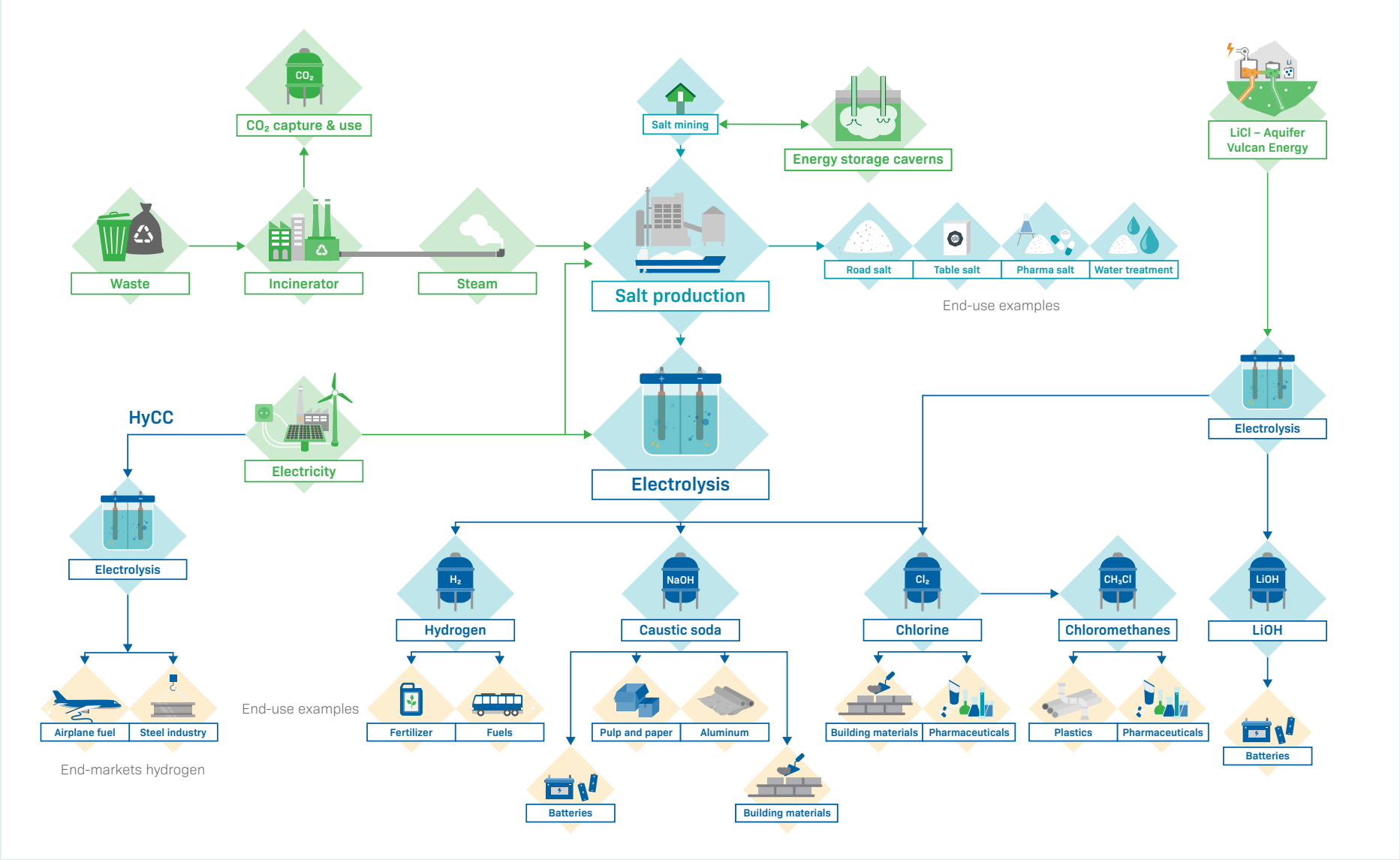
Nobian, Rotterdam | ©Nobian/Studio Dijkgraaf

Sustainability report 2022

In our second sustainability report, we further explain our ESG program and ambitions, and we report on our performance to date. We do this based on concrete examples of our achievements as well as information about our activities and plans. We are proud of what we have achieved so far. At the same time, we realize that we cannot rest on our laurels. To reach our goal of becoming one of Europe's most sustainable businesses, we need fresh thinking and new approaches. Through collaboration and meaningful engagement with our people, stakeholders, and communities we move forward and find new ways to up our game.

This is how we strive to 'Grow Greener Together' every day. This is Nobian.

Nobian's products and value chain



Our approach and our journey towards a sustainable future

Our production processes are energy-intensive, therefore we have a natural focus on reducing our greenhouse gas emissions, increasing our renewable energy share and becoming more energy efficient. This isn't anything new – we have been doing it for years. Since 1990 we have cut our emissions by 55% and increased our renewable energy share to 35% over the same period. But this isn't enough, which is why we have set ourselves even more ambitious targets. By 2040, we aim to be carbon neutral in Scope 1 and 2 with 100% renewable energy – ahead of the Paris Agreement goals.

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Key Performance Indicators and targets[2]

Climate	CO_2 reduction	• Scope 1 and 2 reduction: 25% by 2025, 50% by 2030 and 100% by 2040 compared to 2020 • Scope 3 reduction: 2% by 2025, 20% by 2030, 50% by 2040 • Carbon neutral in Scope 1 and 2 by 2040
	Renewable Energy	• 50% share of renewable energy by 2025 • 66% share of renewable energy by 2030 • 100% renewable energy by 2040
	Energy Efficiency and Storage	• Develop salt caverns for renewable energy storage. First one ready for use by 2026 • 25% of electricity based production capacity available for grid stabilization by 2023 • Run a pilot for industrial scale electricity storage at one of the production sites in 2024
Circular	Green Products	• Be able to supply at least 40% of total sales volume with low carbon footprint products by 2025 • Have Environmental Product Declarations (EPD®) available for all low carbon footprint products in 2024
	Carbon to Chemicals	• 10 kton CO_2 captured based products in our value chain by 2025 • Circular methanol available as source for our chloromethane production by 2030
	Recycling	• 100 kton salt is reused from salty waste streams by 2025
Care	Health & Safety	• Zero people and process incidents by choice
	Community	• Have an active local community program at all sites by 2023 • Have an active local community program for all new salt mining projects from start of salt production
	People	• Launch and act on the employee engagement survey outcomes • Act on the Nobian Inclusion & Diversity plan for 2023, including social economic council (SER) reporting

[2] Updated in 2023.

2.1. Grow Greener Together

In 2022 we launched our Grow Greener Together sustainability program. Our ambition is to become one of the most sustainable chemical companies in Europe. We plan to deliver on our climate targets ahead of the Paris Agreement goals, help our customers reduce their carbon footprint with our green products, accelerate growth in new and impactful markets and build strong connections with the communities in which we are located as well as with our own employees.

Grow Greener Together is founded on three pillars. Each pillar consists of three focus areas which has tangible key performance indicators (KPIs) and targets. These can be found in the table to the left. We have aligned the pillars with the UN Sustainable Development Goals where we feel we can make the biggest impact; these can be found in section 2.2.

We want to play an important role in the transition to a sustainable economy and Grow Greener Together is an integral part of this ambition. Together with our customers, industry partners, suppliers and governmental and non-governmental organizations, we are confident that we can realize this ambition.

Reporting and independent validation

Our approach and data are independently verified and we are transparent when it comes to reporting our progress. We aim high from the outset by participating in three internationally recognized standards. Our sustainability management system and performance are validated via EcoVadis[3] and we are proud that in 2022, after our first submission, we achieved a platinum rating that puts us in the top 1% of the best rated companies.

We have also joined the Science Based Targets initiative (SBTi)[4] in order to get our climate targets scientifically evaluated. Additionally, we joined CDP[5], which means we will be reporting our progress on both our climate ambitions and water management in detail.

Our sustainability report and ESG data complies with the Sustainability Accounting Standards Board (SASB)[6] and our ESG data and sustainability report are independently assured[7].

[3] https://ecovadis.com/
[4] https://sciencebasedtargets.org/
[5] https://www.cdp.net
[6] https://www.sasb.org/
[7] DNV Business Assurance Germany GmbH

What did we achieve in 2022?

p. 9
We launched our Grow Greener Together program

p. 2
We issued our first sustainability report which was independently assured

p. 40
We attained EcoVadis platinum rating after our first submission

p. 21
We signed an expression of principles with the Dutch government to accelerate our climate plans

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We are fully on track to reach our 2025 climate targets

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We calculated our Scope 3 emissions

GREENHOUSE GAS PROTOCOL

ISCC
International Sustainability & Carbon Certification

p. 24
We received our first order for ISCC+ certified product

p. 10
We joined SBTi and CDP

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION
CDP
DISCLOSURE INSIGHT ACTION

2.2. UN Sustainable Development Goals

We believe our values and plans allow our company to contribute to the prosperity and well-being of a more sustainable society. We support the UN Sustainable Development Goals (SDGs); the six pictured on the right are those where we feel we can make the strongest contribution.

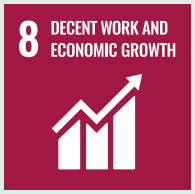
Progress towards SDGs

The Sustainable Development Goals are an integral part of our sustainability approach, so we have reported our progress on these in the relevant sections of this report. Specifically, significant progress has been made or continuous good performance shown on *affordable and clean energy* and *climate action* (see chapter 3), *decent work and economic growth* via our green products approach (see section 4.1), *good health and well-being* and *responsible consumption and production* (see chapter 5).

UN Sustainable Development Goals (SDGs) where we can make the biggest impact[8]

Human health and safety are at the heart of our operations and one of our top priorities. We strive for zero pollution to ensure our operations have the minimum impact on our workplace, the environment and our surroundings. We actively engage with the communities around our production facilities, sharing our knowledge and supporting social initiatives.

As an energy-intensive company, we want to lead when it comes to energy transition in our industry. Our unique processes and know-how allow us to produce green hydrogen and enable renewable energy storage. We actively participate in the development of new wind parks, help to stabilize the power grid and reduce energy consumption.



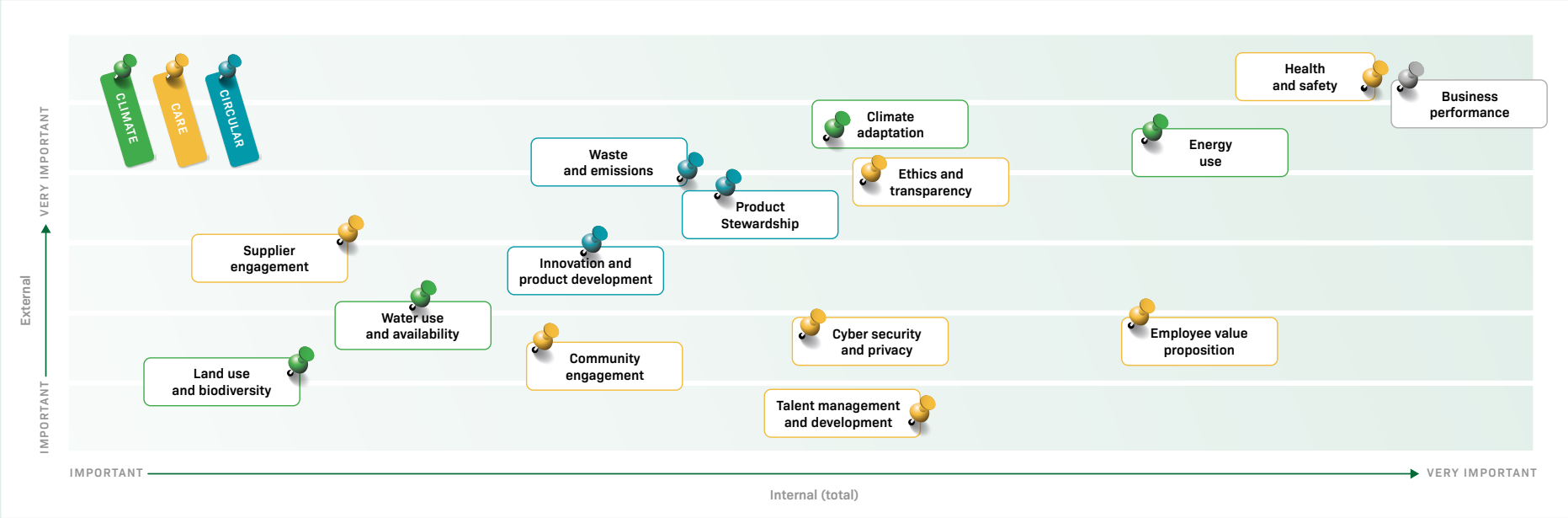
We firmly believe business performance and sustainability go hand in hand. To this end, we invest in renewable energy and green products that can deliver sustainable growth. We also work hard to empower our employees and create a high-performing, diverse and inclusive workplace that reflects our values and the nature of our company.

To reach our sustainability targets we need innovation and new ways of working. This is why we collaborate with our partners throughout the value chain to develop and commercialize pioneering solutions, we are investing in state-of-the-art technologies for renewable energy storage, battery production and new chemistry to make the cement industry more sustainable.

As a chemical company, we contribute to a circular economy for our own production as well as downstream in the value chain. We invest in exploring ways to convert CO_2 to useful chemicals and work continuously to become more efficient by re-using residual and energy streams from both our own production processes and those of our customers.

Climate action is about more than reducing our CO_2 emissions. We are also investing in circular chemistry to convert CO_2 into useful chemicals for our own production, as well as working with others to reduce their carbon footprint. We believe in leading by example and our actions clearly demonstrate our commitment to reducing greenhouse gas emissions.

[8] UN SDGs not part of assurance by DNV.



Materiality assessment.

2.3. Stakeholder and materiality assessment

To identify the environmental, social and governance (ESG) issues that are most important to our stakeholders, we carried out a materiality assessment which was done in 2021[9].
This involved an online survey with selected customers, members of senior management and young, up-and-coming talent from across the business. A number of in-depth follow-up interviews were held with some respondents so we could gain an even deeper understanding of the topics they felt were most important.

The list of topics that featured in the survey was compiled through research into sector issues, media reporting, non-governmental organization (NGO) reports, and international corporate social responsibility (CSR) frameworks and standards. The results, which you can see in the figure above, helped us define the pillars and focus areas of our sustainability approach, including KPIs and target setting, partnerships and engagement programs. In some cases the leadership team has decided to give higher priority to specific topics, such as community engagement.

[9] Materiality assessment not part of assurance by DNV.

Climate

Reducing our environmental footprint

Our focus is on reducing our CO_2 emissions. We have been doing this for years; we have cut our emissions by 55% since 1990 and increased our renewable energy share to 35% over the same period.
By producing more flexibly, we can increase or reduce the amount of electricity that we consume. This way we can help stabilize the power grid.
We are also involved in several innovative projects to develop large-scale renewable energy storage.

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Climate KPIs and targets

Climate

CO_2 reduction

- Scope 1 and 2 reduction: 25% by 2025, 50% by 2030 and 100% by 2040 compared to 2020
- Scope 3 reduction: 2% by 2025, 20% by 2030, 50% by 2040
- Carbon neutral in Scope 1 and 2 by 2040

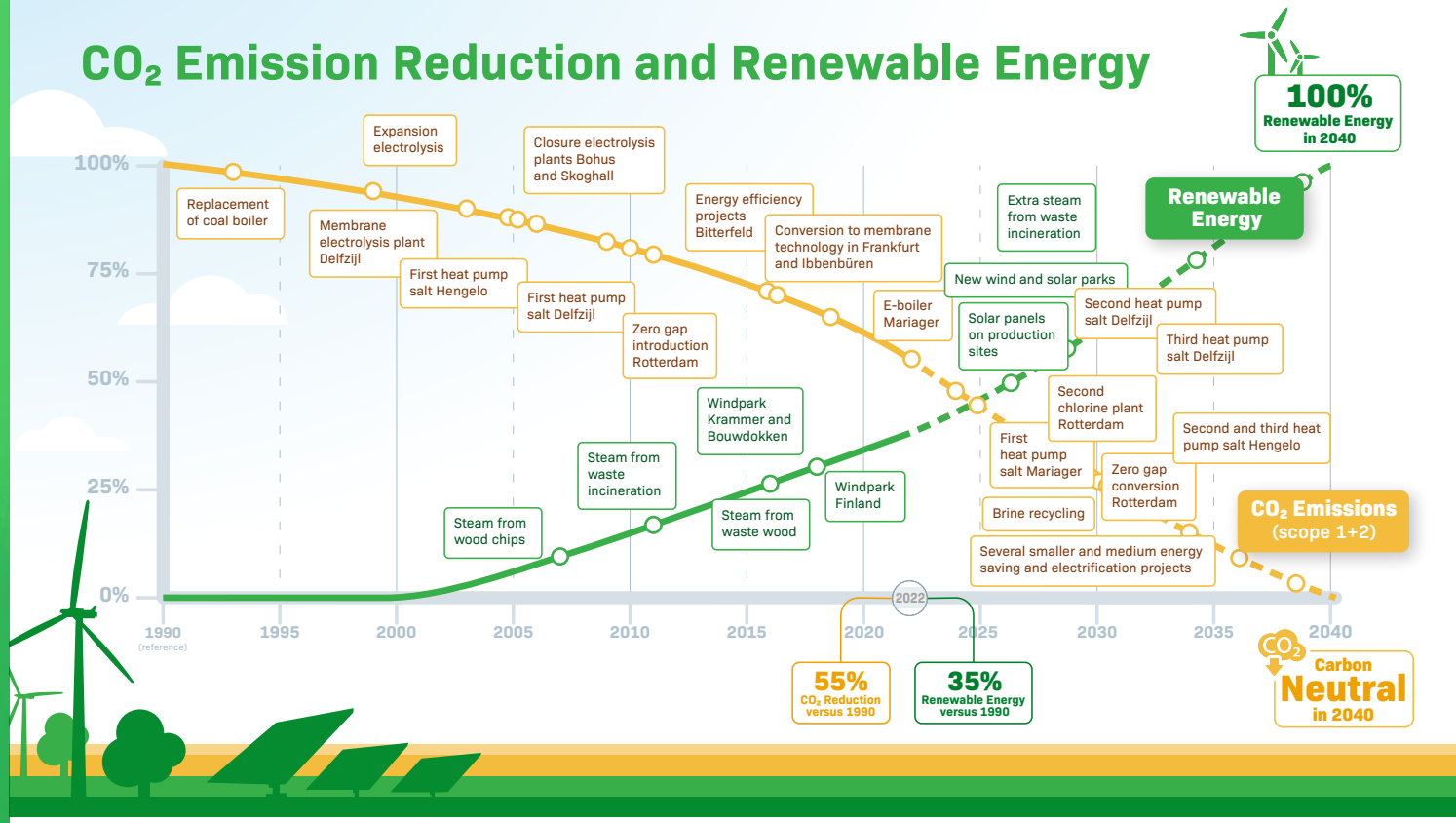
Renewable Energy

- 50% share of renewable energy by 2025
- 66% share of renewable energy by 2030
- 100% renewable energy by 2040

Energy Efficiency and Storage

- Develop salt caverns for renewable energy storage. First one ready for use by 2026
- 25% of electricity based production capacity available for grid stabilization by 2023
- Run a pilot for industrial scale electricity storage at one of the production sites in 2024

CO_2 Emission Reduction and Renewable Energy



3.1. Greenhouse gas emission reduction

To reach a net-zero carbon economy and drive sustainable growth, our ambition is to reduce our greenhouse gas emissions ahead of the Paris Agreement goals. We are committed to the Science Based Targets initiative (SBTi) and in 2023 our emission reduction targets will be scientifically evaluated.

Because our production processes are energy-intensive, reducing our Scope 1 and 2 emissions will enable us to make the biggest and fastest

Nobian, Hengelo | ©Nobian/Studio Dijkgraaf

impact on climate change. Our aim is to be carbon neutral in both scopes by 2040. You can see what we have done so far, along with our plans for the future, in the infographic on page 14. To reduce our CO_2 emissions even more quickly, we are working with the Dutch government on a tailor-made agreement aiming to accelerate our plans to reduce our Scope 1 emissions in the Netherlands by ten years to 2030 (see page 21).

In 2022 we achieved a 19,8% reduction in Scope 1 and 2 emissions compared to our baseline from 2020, putting us firmly on track to reach our short-term target of a 25% reduction by 2025. Our main source of Scope 1 emissions – the greenhouse gases (GHGs) we produce ourselves – is the combustion of natural gas that generates steam and electricity in our boilers and combined heat and power (CHP) plants.

Our Scope 1 emissions decreased from 2021 to 2022. This was partly due to a reduction in production levels and partly because of lower production of electricity for the Dutch grid at our Delesto-2 power plant in Delfzijl. Nobian's CO_2 footprint for electricity production is lower than the average public grid value due to the use of highly efficient gas-based CHP installations at our production sites in Delfzijl, Hengelo and Mariager.

The installation of an electrical boiler at our site in Mariager, Denmark, means we can now make part of our steam out of excess renewable energy, thereby reducing our natural gas consumption and associated CO_2 emissions. The boiler was commissioned in December 2022 and the subsequent reduction in Scope 1 emissions will take effect in 2023.

The considerable reduction in Scope 2 emissions is mainly due to the amount of contracted renewable energy, in line with our targets, combined with lower demand from our electrolysis plants. This has resulted in the use of more renewable electricity compared to fossil fuel based electricity.

In 2022, for the first time, we have also calculated our Scope 3 emissions for the full range of relevant categories. We are also working on concrete plans to cut our Scope 3 emissions by 50% by 2040.

A detailed breakdown of our Scope 1, 2 and 3 emissions is provided in the appendix on page 56.

Site director Søren Møller (left), and Mogens Jespersen, the Mayor of Mariagerfjord, in front of the e-boiler.

Case study

E-boiler installed in Mariager

A new electric boiler is now operating at our Mariager site in Denmark. It is the first e-boiler installed in our company and benefits the climate by reducing the use of natural gas. In addition it helps stabilize the grid by operating when an excess of renewable electricity is available. The boiler operates at 10,000 volts and consists of three electrode bundles in a vessel where the steam is produced. It can convert 50m³ water into steam per hour – which is the full load demand for the salt plant evaporation process when running at full pressure.

The new boiler makes our salt production much greener. It will enable us to save seven million m³ of natural gas per year, the equivalent of the average amount of gas used by more than 5,500 households.[10] In addition, this greater flexibility in our steam production allows us to reduce our costs and ensure our production plant remains fully operational when one of our other boilers needs maintenance.

[10] To calculate the equivalent per household, data from the Dutch Statics (CBS) are used: https://www.cbs.nl/nl-nl/cijfers/detail/81528NED

Nobian, Hengelo | © Twence

3.2. Renewable energy

Although we produce large quantities of steam and electricity in our own combined heat and power plants for our own plants, we also procure large amounts of energy from third parties. Increasingly, we are buying our energy from green sources. Steam is purchased from waste incinerators and biomass plants, while we have entered into several power purchase agreements (PPAs) to procure wind energy, which have resulted in a 35,7% renewable energy share for 2022.

Meanwhile, we intend to contract offtake agreements with some onshore renewable wind and solar projects. In addition, together with our Dutch industrial partners, we have initiated an approach for contracting renewable electricity from offshore wind (explained in Case Study VEMW Wind Consortium). This opportunity to secure a share of the electricity produced by the fast-growing offshore wind production sector is important given the expected increase in electricity demand due to our electrification ambitions.

Case study

VEMW Wind Consortium

In order to meet our renewable energy targets and create sufficient renewable electricity for the Dutch industry, Nobian launched an initiative to pool demand from thirteen Dutch companies – the so-called VEMW Wind Consortium. VEMW, Vereniging voor Energie, Milieu en Water, is the Association for Energy, Environment and Water. The consortium participated in the tender for the offshore wind park, Hollandse Kust West, in the Netherlands.

Although ultimately we did not win the bid, the initiative attracted positive reactions from many stakeholders, on (social) media and from the participants, as it shows energy-intensive industries in the Netherlands are keen to make their companies more sustainable and contribute to a more sustainable energy system. Meanwhile, a similar consortium initiative has been launched in Germany, with many energy-intensive companies across various sectors showing an interest. The consortium will continue to cooperate in future wind tender bids.


Nobian, Delfzijl | ©Nobian / Studio Dijkgraaf

3.3. Energy efficiency and storage

Energy efficiency

We strive for maximum energy efficiency at all our production sites. Our processes are energy-intensive, so we are continuously optimizing our energy use. Nobian has a standardized and ambitious energy efficiency program in place with clear governance. The portfolio of energy savings projects is monitored at our headquarters, discussed monthly with all sites and reported to Nobian's Leadership Team.

In addition, we are currently running a battery pilot program to determine the appropriate technology, size and operational requirements for on-site energy storage. The program aims to identify the optimal battery solution that can efficiently provide grid support services and increase the utilization of green energy. A first pilot project at one of our production locations is envisioned to start by end of 2023. The purpose of the pilot is to analyze the performance of the battery storage system and gather data for future developments.

Renewable energy storage in salt caverns

Renewable energy production, like wind and solar, requires large-scale storage solutions at times when there is a surplus of wind and solar energy. It can then be used to balance actual supply and consumption at those times when there is a low supply of sun or wind energy. Large-scale energy storage ensures a stable supply for every hour of every day of the year.

Renewable energy can be converted into different carriers like green hydrogen and compressed air, which can both be stored; underground salt caverns are considered the most promising solution, both technically and economically.[11]

Compressed air energy storage (CAES) technology is already being implemented successfully in Germany and the United States and allows stored compressed air to be converted back into electricity when energy supply is low.

Green hydrogen is increasingly important in the energy market, playing a key role in the decarbonization of our industry and the drive to achieve net zero targets by 2050. It can be used for mobility, energy, or as a raw material for new forms of green chemistry.

Our vast knowledge and experience in salt mining, coupled with our salt concession rights and salt manufacturing assets in the Netherlands and Denmark, means we are very well positioned to develop salt caverns for energy storage.

In Zuidwending, the Netherlands, we have already developed several caverns for natural gas storage for energy network operator Gasunie. We are planning to do the same with renewable energy, developing suitable caverns for hydrogen storage to act as a buffer for demand in the Netherlands and Europe.

In addition, we are working with Corre Energy to develop caverns for CAES. Once ready, Corre Energy will operate the caverns and, together with Eneco, supply renewable electricity to the market.

[11] Large-scale compressed hydrogen storage as part of renewable electricity storage systems, International Journal of Hydrogen Energy 46 (2021).

Case study

Compressed Air Energy Storage (CAES)

We are developing specially designed salt caverns specifically to store renewable energy in the form of compressed air energy storage (CAES). Together with our partner, Corre Energy, we are currently planning the development of two CAES caverns in the area of Zuidwending in the Netherlands.

The compressed air will be produced from surplus electricity from wind and solar parks. When needed, the stored compressed air will be transformed back to green electricity that will be supplied to the electricity grid. Via the CAES caverns, renewable electricity will be supplied to households and industry in the north of the Netherlands – even when there is no sun or wind.

Energy storage caverns are usually smaller than regular salt caverns. The brine produced during their development will, however, be transported via pipelines to our salt plant in Delfzijl, where we produce high purity salt for the chemical industry. In this way the development serves a dual purpose: salt production and renewable energy storage.

The CAES technology and the capacity of the caverns can supply electricity comparable to the energy consumption of 150.000 households. Nobian's role is to safely develop the caverns for the energy storage and thereby facilitate Corre Energy's activities in the renewable energy market. An important milestone was recently reached by Corre Energy signing an off-take agreement with a large energy company highly invested in renewable energy, leading the energy transition.

Case study

E-Flex

Growing volumes of wind and solar energy mean electricity supplies fluctuate, but the power grid should be balanced 24/7. We are transforming our chlorine plants so they can operate in a flexible way to support grid stabilization. In other words, rather than steady operation, we will be able to quickly reduce energy consumption when there is a shortage of power on the grid and then scale up again when there is sufficient supply. This means changing the process control, increasing automation, and altering our operational mindset.

One of our notable results in 2022 was to increase the flexibility of our Delfzijl plant from 30% to 50% in just fifteen minutes. We are employing a structured program, 'E-flex to the max', that will accelerate the flexibilization of all chlorine plants and the electrical part of salt production. We anticipate much progress in this area over the coming year.

The Delfzijl Flex-to-the-Max team.
FLTR: Marnix Bijstereld, Martin Veen, Gerard Valkema, Douwe Tuinstra, Hendrik Lohof, Leon Haverkort en Alessandra Kerremans.

Case study

Expression of principles with Dutch government to accelerate climate targets

Minister Adriaansens, of the Economic Affairs & Climate department, and Michael Koenig, Nobian's CEO, signed an expression of principles as part of agreement between the Dutch government and industrial companies in the Netherlands to accelerate the reduction of CO_2 emissions. State Secretary Vijlbrief, of Mining, and State Secretary Heijnen, of Infrastructure and Water Management, also signed the declaration.

The approach includes projects with which Nobian intends to reduce the current sustainability target of zero emissions by 2040 by another ten years, to 2030. A key element is the electrification of Nobian's salt and steam production in Delfzijl and Hengelo. Efforts will also be made to accelerate the replacement of electrolyzers in Rotterdam, reducing electricity consumption by 135 GWh per year, and further reducing emissions in the production of essential chemicals for industry. Together, the projects are expected to save around 550 kt of CO_2 emissions, 350 million m^3 of natural gas and 430 tons of NOx emissions. This equals 2.5% of the Dutch governmental carbon reduction target and 1% of the Dutch gas consumption (280,000 households).[12] The NOx emission reduction is equal to the average annual emissions of one hundred dairy farms.

Michael Koenig, CEO Nobian and Micky Adriaansens, Minister of Economic Affairs and Climate.

The various projects contributing to the acceleration of Nobian's sustainability agenda will be worked out in more detail and the plans evaluated by an independent committee. The aim is to come to conditional binding agreements by the end of 2023.

[12] To calculate the percentage of the Dutch gas consumption and equivalent per household, data from the Dutch Statics (CBS) are used: https://www.cbs.nl/nl-nl/cijfers/detail/00372, https://www.cbs.nl/nl-nl/cijfers/detail/81528NED,

The winners of our first Grow Greener Together Innovation Challenge.
FLTR: Maikel Remon (Sensorfact), Mathijs van Steen (Gradyent), Marco Waas (Director/VP R&D and Technology and Sustainability Nobian), Michael Koenig (CEO Nobian), Nelly Geranton (SLB), Ben Goulding (SLB), and Martin Schichtel (Kraftblock).

Case study

Grow Greener Together startup event

Creating positive impact through sustainability is not something we can do alone. That is why we organized our first Grow Greener Together innovation challenge last year in collaboration with Unknown Group. The event focused on energy storage flexibility, balancing energy volatility, CO_2 free heat and steam, and improved heat integration. We issued a challenge to promising startups and scale-ups from around the world – if they had an unconventional solution that fit with Nobian's strategy, we would support them in developing it. No fewer than forty-three startups applied, and eleven finalists were invited to the Netherlands. Over the course of two and a half days, we looked at the potential for collaboration with our businesses to co-develop their innovative solutions. In addition we offered the startups access to our global network and experts.

Finally, we rated four companies who we felt were the best fit with the challenge we had set.

- **Gradyent (the Netherlands):** A SaaS platform to optimize heat networks, together with solutions for demand forecasting, flow simulation and supply and demand matching
- **KRAFTBLOCK (Germany):** A sustainable, highly efficient and modular multifunctional high-temperature energy storage system to decarbonize vital industries
- **Sensorfact (the Netherlands):** A smart sensor installed on power cables to help identify potential savings
- **SLB (USA):** Stationary energy storage solutions powered by EnerVenue battery technology

Through collaborations with such promising ventures, we aim to Grow Greener Together and deliver the green solutions of tomorrow.

NOBIAN

Circular

Circular Economy and Green Products

Our products position us right at the start of the chemical value chain. An essential part of our approach to sustainability is bringing products to the market with the lowest possible impact on the environment. Our green products help our customers lower the environmental footprint of their products, eventually reducing the impact on the whole value chain.

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Circular KPIs and targets

Circular

Green Products

- Be able to supply at least 40% of total sales volume with low carbon footprint products by 2025
- Have Environmental Product Declarations (EPD®) available for all low carbon footprint products in 2024

Carbon to Chemicals

- 10 kton CO_2 captured based products in our value chain by 2025
- Circular methanol available as source for our chloromethane production by 2030

Recycling

- 100 kton salt is reused from salty waste streams by 2025

Salt, chlorine, caustic soda and hydrogen production is energy-intensive by nature. With our Grow Greener Together program we can make a significant impact in reducing the carbon footprint of our customers. Many of our plants are based in clusters with our customers, enabling us to recycle waste streams and enhance circular processes.

4.1. Green products

As our production processes are energy-intensive, we have the opportunity to significantly reduce the carbon footprint in the chain. Our product portfolio starts with high-purity vacuum salt and, from there, we produce chlorine, caustic soda and hydrogen, as well as other derivatives such as chloromethanes, hydrochloric acid and ferric chloride. Subsequently, they are used in key areas such as the production of aluminum, pulp and paper, polyvinyl chloride, polyurethanes, epoxy resins and steel.

We started building our portfolio of green products in 2018 with hydrogen certified under the CertifHy scheme[13] as being 100% produced with renewable energy. The hydrogen produced at our chlor-alkali plants in Rotterdam, Bitterfeld and Delfzijl is currently certified under this scheme. In 2022 we successfully concluded pilot audits to verify that our certified hydrogen is compliant with upcoming EU legislation.[14]

In 2022 we also extended our green product portfolio with low carbon ISCC+[15] certified chlorine and caustic soda produced using 100% renewable electricity in our electrolysis process at our production sites in Rotterdam, Delfzijl and Frankfurt. The use of renewable energy has a huge impact on a product's carbon footprint. For example, ISCC+ certified chlorine has a carbon footprint up to seven times lower than chlorine produced using fossil fuel-based electricity. We are continuously working on further reducing the carbon footprint of these products.

New value chains

As well as developing our own portfolio of green products, we are supporting the development of new value chains that drive sustainable use and reduce the global carbon footprint. Examples include the application of our caustic in battery production and working to reduce the carbon footprint of cement.

With the expected EU regulation to ban the production of fossil fuel cars, battery production for electrical vehicles in Europe is a potential growth market. At the same time there is a growing drive in

[13] https://www.certifhy.eu
[14] Renewable Energy Directive (2009/28/EC)
[15] https://www.iscc-system.org/certificates/valid-certificates/

Europe to become less dependent on raw material supply. Nobian has a natural role to play in the battery value chain and we are currently collaborating with Vulcan Energy in Germany. The company extracts lithium chloride from underground aquifers. We contribute with our extensive electrolysis knowledge to convert it into lithium hydroxide, the active compound used in batteries which is sought by many car manufacturers in Europe.

Simultaneously, research into alternative technologies to lithium – such as so-called sodium-based batteries – is ongoing. We are collaborating with startups active in this space and, given our experience when it comes to both developing battery materials and testing batteries, we have recently joined a Dutch consortium that files a subsidy proposal on batteries for the Dutch Growth Fund ('Groeifonds'). We are currently waiting evaluation for this.

Case study

Life Cycle Assessment

To be fully transparent about the environmental profile of our products, we are performing Life Cycle Assessments (LCA) in accordance with ISO 14021 on almost our complete range.

The scope of the LCA includes everything from raw materials through to delivery of the product to our customers. The collection and verification of all underlying data in 2022, as well as setting up the LCA models, has been done in collaboration with independent consultancy company, Ecomatters.

The first LCAs were published in April 2023 and the rest will follow throughout the year. In addition, the LCAs of all ISCC+ or CertifHy certified products will be submitted for independent verification to obtain an Environmental Product Declaration (EPD®).

4.2. Carbon to chemicals

In our chloromethane production, the main carbon-containing ingredient is methanol – which is why we are actively seeking sustainable sources with a low-carbon footprint. For example, we are looking at opportunities for using biogas. We are also monitoring the developments of the production of low-carbon methanol from CO_2 and hydrogen. To that extent we are active in several consortia that develop processes for producing low-carbon methanol, such as PROVE IT[16] in the Netherlands and Carbon2Chem in Germany (ThyssenKrupp, Clariant, Universities), via our joint venture with HyCC. We have also participated in the CarbonCycleMeOH consortium in Bitterfeld.

To ensure we stay up to date with what is happening in our value chains we participate in the Future Carbon NL[17] consortium. This initiative focuses on the research, development, demonstration and marketing of technologies that reduce CO_2 and convert CO_2 into new, sustainable materials, fuels and food.

[16] https://ispt.eu/projects/prove-it/
[17] https://futurecarbon.nl/en/

Case study

Blockchain pilot for certification of green hydrogen

Green hydrogen will play a key role in energy transition. As a major supplier of certified green hydrogen, we understand the demand for a transparent and fully traceable certification process along the whole value chain. To this end, together with envia THERM GmbH and Siemens Energy, we have started a pilot project to test Siemens Energy's Clean Energy Certification solution based on blockchain technology.

The pilot is running at Nobian's chlor-alkali electrolysis plant in Bitterfeld, Germany, where we have been providing green hydrogen since 2021, and which is the first under TÜV Süd CMS 70 certified chlor-alkali electrolysis plant in Germany. The pilot project fits perfectly with our industry 4.0 approach and the blockchain based certification is also an important part of growing our green products portfolio.

4.3. Recycling

To 'close the loop' and create a circular value chain, we develop routes to recycle our products and salty waste streams. We also support our customers to make their processes circular in turn.

The chlorine we provide to our customers is often re-released as hydrochloric acid or, when neutralized with caustic, sodium chloride. Rather than disposing of the sodium chloride, we are investigating how it can be recycled through our electrolysis operations. This is easier said than done as the salt needs to be of exceptional purity. We are now investigating at how we can purify salty waste streams and determining the level at which they are acceptable in our operations.

Next to this, we are active in the Dutch ARC-CBBC consortium[18], which is a collaboration between four companies and Dutch universities. Here we are looking at methods to improve the process for producing chloromethanes. Research on oxychlorination using hydrochloric acid has been finalized and published and work is currently ongoing on hydrodechlorination to recycle part of our chloromethane products, making the process more carbon efficient.

[18] https://arc-cbbc.nl/

Nobian, Rotterdam | © Nobian / Studio Dijkgraaf

Case study

Waste recycling at Mariager

At our salt plant in Mariager, Denmark, a focused initiative under the title ZeroWaste@ Mariager, has resulted in an increased recycling rate, from 40% in 2021 to 77% of all generated waste in 2022. At the same time, we decreased the amount of incinerated waste (with heat recovery) and the fraction sent to landfill significantly.

Niels Henrik Pontoppidan Nielsen and Louise Kristensen during the waste workshop.

Waste stream mapping, colleague engagement and close collaboration with existing and potential new waste handlers was a central focus, but an essential part of this success involved working on soft skills and increasing organizational awareness through waste workshops with all employees.

The journey started in 2021, mapping and looking into possibilities for more recycling. Waste disposal costs, the extent of our waste, and the potential for compressing more of it for optimal storage and disposal were all investigated to minimize the environmental impact of transportation. At the end of that year, we assessed the identified opportunities and conducted disposal trials in collaboration with waste handlers. Then we were ready to carry out the final recommendations – 2022 was the year of implementation, adjustment and consolidation.

In 2023 we will take the next steps, looking at how much of our waste goes to incineration and investigating if even more can be recycled. We will also focus on reducing the amount of waste alongside optimal waste handling streams.

To create a useful waste mapping process you need to be on the shop floor looking into the waste bins and talking to the people who handle the waste to identify relevant waste fractions for potential recycling. Only that way can you plan a waste sorting regime that makes sense to people and nudge them towards correct sorting processes.

Waste communication was a key factor in ensuring sustainable and long-lasting improvements. We put a great deal of effort into making it easy for people to sort waste correctly by making them aware of our reasoning and by communicating details of the new waste sorting regime clearly.

Water management

Water is an essential element in our products and processes. We use water as a coolant, solvent, in salt solution mining, for cleaning, and as a raw material. We are committed to using water responsibly within the value chain and at our production sites to help reduce water scarcity.

Droughts are happening more frequently, lasting longer and becoming more severe. Regionally this can cause water stress, meaning an imbalance between clean water availability and demand. Since water is essential for households, agriculture, power generation and industry, too large a gap between supply and demand can create shortages in periods of drought. We have already taken major steps to reduce our water consumption, such as installing state-of-the-art caustic evaporation units and mechanical vapor recompression (MVR) for salt production including full condensate recovery. In addition, low water levels are impacting important water transport routes.

Currently we are exploring an integral approach to water management. This will ensure we have the right focus and priorities to help us identify key opportunities for reducing our water consumption. The objective is to minimize our fresh water consumption, recycle and reuse wherever possible and minimize our emissions to environment. We stay

In front of the ED-XRF spectrometer.
FLTR: Hinno Drenth, Allert Schokker, Koen Weijers, Rein Kruger en Simon Snijders.

Case study

Water savings in Delfzijl

At our production site in Delfzijl we realized a significant saving in fresh water usage by reducing the amount of discharged brine to surface water. Brine is salt dissolved in water and it is the raw material needed to produce salt. A new high tech analytical device, an ED-XRF spectrometer, has been installed as part of our salt production process. This device can measure in real time the amount of bromide, sulphate and other elements present in the brine; controlling these concentrations is very important when producing high quality salt. Now, instead of discharging an excess of brine based on a measurement taken every eight hours, we can control it continuously based on actual real time values. As brine is produced by dissolving solid salt in fresh water, reducing the amount of discharged brine also reduces the amount of fresh water taken in. This has resulted in a saving of more than 50,000m^3 of fresh water per year, while reducing the amount of discharged brine.

Nobian, Bitterfeld | ©Nobian / Celine Paczkowski

up to date on regional water availability and opportunities. Our water management approach is planned to be ready in the third quarter of 2023 and will contain identified risks and opportunities, a concrete implementation plan, KPI's and targets.

4.4. Product stewardship

We recognize we have a role to play in the drive towards a greener, more sustainable society. This goes beyond manufacturing greener products. We support the aims of the European Green Deal and the EU Chemical Strategy for Sustainability[19].

Along with our joint ventures, CF Carbons and Neolyse, we have adopted an approach of product stewardship at both company and site level. By considering product safety and sustainability throughout the value chain, we are not only supporting regulatory compliance, but we are also helping to develop safer, more sustainable solutions for our customers and for society.

Risk assessment for safe use

We handle approximately sixteen hundred different chemical products at our production sites, including raw materials. Of these, twenty two are sold in various grades and used throughout the world. Eighteen of these products are classified after GHS as hazardous substances for adverse health or environmental properties in accordance with the EU's CLP regulation. The other four products are classified as non-hazardous.

Each GHS classified product has undergone a thorough hazard and risk assessment in line with current REACH[20] standards and, where applicable, EU Biocides law[21]. The risk assessments analyze any exposure to workers, consumers and the environment. Any necessary measures are communicated through safety data sheets and packaging labels according to legal requirements. In addition, we have customer brochures which include our products' technical properties and best practice guidelines for safe handling, as well as information about regulatory compliance and associated certificates.

[19] https://ec.europa.eu/environment/strategy/chemicals-strategy_en

[20] https://www.echa.europa.eu/web/guest/regulations/reach/understanding-reach

[21] Regulation (EC) No 528/2012 concerning the placing on the market and use of biocidal products (BPR). See here for more information: https://echa.europa.eu/regulations/biocidal-products-regulation/understanding-bpr

All products are carefully managed to ensure they are used safely at our sites and by our customers, conforming to applicable regional, national and international regulations and safety recommendations of our industry associations. This covers areas such as safe transport as well as controlled waste disposal and recycling.

Our comprehensive management system is ISO 9001, 14001, 45001 certified. It is designed to protect the environment and the health and safety of employees, contractors and residents from any adverse impact of chemicals and emissions, as well as other hazards arising from the operation of chemical production plants and associated logistics. We endorse the European Chemical Industry Council's (Cefic) Responsible Care® program[22].

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Internal and external site audits are performed regularly to assess safety levels, systems and processes, and to highlight any necessary improvements.

Supply chain safety

Before we supply an industrial customer for the first time, we carry out a first-delivery check to ensure products can be safely received and refilled. We also offer safety training for their personnel. We are committed to monitoring and investigating incidents at our own sites, reporting to our industry associations, and improving safety along the supply chain in accordance with Cefic's SQAS program[23].

To ensure professional incident management and clean-up along the supply chain, we have also put an emergency response system in place that comprises incident support on a global scale. Incident support can consist of general safety advice and product information by telephone or email (24/7) all the way up to assistance with personnel and equipment at the scene of an incident according to the Cefic's Intervention in Chemical Transport Emergencies (ICE) program[24].

In 2022, there were two distribution incidents by third parties where a limited amount of our products were released.[25] Both incidents were handed adequately and there were no adverse or long-term consequences – for either people or the environment.

[22] https://cefic.org/responsible-care/
[23] https://www.sqas.org
[24] https://www.ice-chem.org/
[25] Not part of assurance by DNV.

Nobian, Bitterfeld | © Nobian/Celine Raczkowski

Care

Care for people and communities

As care is one of our core values, we want to engage actively and meaningfully with our people and with the communities around our production facilities. We are partners to our communities, our customers and our stakeholders and we value the strong relationships we have with our local communities.

Care KPIs and targets

Care

Health & Safety

- Zero people and process incidents by choice

Community

- Have an active local community program at all sites by 2023
- Have an active local community program for all new salt mining projects from start of salt production

People

- Launch and act on the employee engagement survey outcomes
- Act on the Nobian Inclusion & Diversity plan for 2023, including social economic council (SER) reporting

Our production sites proactively engage with municipalities, residents, authorities and local interest groups to stimulate open dialogue, inform them about our activities and operations, share knowledge and support social initiatives. We believe it is not just the destination that matters – it is also how we get there. We are inclusive and respectful at all times, championing and supporting our diverse teams. We go the extra mile to engage with and empower the people at the heart of our company. We work continuously to provide a safe and healthy working environment, with zero accidents, for our employees, contractors and neighbors.

5.1. Health and safety

At Nobian we want to ensure that everyone returns home safely every day. We strive to deliver a leading performance when it comes to health and safety. We work tirelessly in these areas to benefit our employees, contractors, customers, neighbors and the planet, and our goal is to achieve zero injuries, waste and harm. We continue to be a top quartile performer[26] in people and process safety by significantly reducing the number of people and process safety incidents. We understand the key to improving safety performance lies in firm leadership and robust processes that are reviewed regularly to identify any areas for improvement. We need to ensure our employees have the knowledge and skills to apply these processes consistently across all our sites, and our Life-Saving Rules help prevent serious injury to employees, contractors and visitors.

Safety management systems

Our leading HSE management system conforms to global standards such as ISO 14001 and ISO 45001. These drive continuous improvement in the protection of all our employees and contractors. All our production sites are certified for ISO 14001 and ISO 45001.

[26] Based on annual Occupational Safety and Health Administration (OSHA) recordable injury rates versus chemical industry peers in the American Chemistry Council.

People safety

Our ambition is to have zero injuries. We consciously work every day to provide a safe and healthy workplace for our employees and contractors.

In 2022, we continued our established trend of reducing the number of people safety incidents year on year. There were neither any fatal incidents nor lost-time injuries involving our employees or contractors. We also encourage everyone to report hazards and near misses, as these leading indicators help us proactively create safer workplaces by taking mitigating action to prevent injuries. Reporting hazards and near misses also increases overall safety awareness and strengthens our safety culture.

We work hard to encourage everyone to identify unsafe behaviors through our Behavior Based Safety (BBS) program which is implemented at all our manufacturing sites. The program is a cornerstone in our five-year safety program to achieve zero injuries and involves all employees, from shopfloor to leaders, in conversations and dialogues that improve safety by promoting behavioral change. The result is a reduction of potential workplace hazards.

Our health and safety performance is monitored through key performance indicators (KPIs) and third-party verification of compliance with relevant safety standards. Total Incident Rate (TIR) and Lost Time Injury Rate (LTIR) for employees, temporary workers, and contractors are the main lagging KPIs for people safety. The data for these three groups is combined and can be found in the ESG fact sheet on page 47.

Safety Day

Our annual Safety Day is a company-wide tradition that aims to increase safety awareness and engagement, enable people to share expertise, and promote hazard recognition. It is also an opportunity to celebrate our achievements and reaffirm our promise to do whatever it takes to ensure everyone goes home safely, every single day. Our sites and offices plan exciting programs to engage everyone working with us, and our management team also actively participates.

Worker health

We have implemented site-specific health management systems to reduce the risk of occupational health hazards to everyone working at our locations. The risks vary according to the type of work, but hazards are typically categorized as being physical, chemical, biological, ergonomic or organizational. Each of our manufacturing sites

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Nobian, Hengelo | © Nobian / Studio Dijkgraaf

undergoes a Nobian Health Risk Assessment that meets local regulatory standards. Based on the outcome, improvement plans are in place to address any health concerns and implement additional exposure control measures where necessary. This might include phasing out certain substances or substituting them with alternatives; implementing technology to control worker exposure; risk assessments as part of long-term health studies; the use of personal protective equipment; or evaluation of alternative materials or processes.

We scrutinize the effectiveness of implemented exposure control measures at site level through industrial hygiene monitoring programs. Sampling and testing strategies are determined by qualified professionals, with third-party experts brought in when necessary.

We are also focused on our employees' personal health and well-being. As well as making sure we provide safe, comfortable working conditions, our sites are encouraged to support health and wellness activities, such as initiatives that promote the benefits of exercise or raise awareness of unhealthy lifestyle choices. All employees have access to on-site medical services, and we have procedures in place for medical emergencies, laid out in our Emergency and Community Awareness policy.

Contractor safety

We recognize that our contractors, not just our employees, help make sure we have a safe working environment. It is important that they too are able to challenge us on our safety culture and performance. We therefore choose to work with contractors who have the same safety principles and values that are in our Code of Conduct and our Life Saving Rules, with which they need to be compliant. Together with ISNetworld we evaluate contractor safety during the tendering process and ask for contractor feedback about our safety culture.

Process safety

All our operations follow an established process safety management (PSM) framework that adheres to industry standards and best practices. The primary goal of PSM is to prevent process safety events (PSEs) which could result in injury, environmental impact or asset damage, or have a negative impact on our neighbors and communities. It also underpins our aim of achieving zero injuries, waste and harm, and supports us in ensuring a reliable supply of products to our customers. We have set a five-year target for strengthening PSM at our manufacturing sites, which will result in highly focused, activity-based work processes being embedded throughout our businesses. By enabling our people to develop their knowledge and expertise, we will be able to further drive process safety performance. In 2022, we continued to raise awareness and improve reporting of process safety indicators. As our performance has improved, we have been able to shift our focus to leading indicators.

5.2. Engaging with our communities

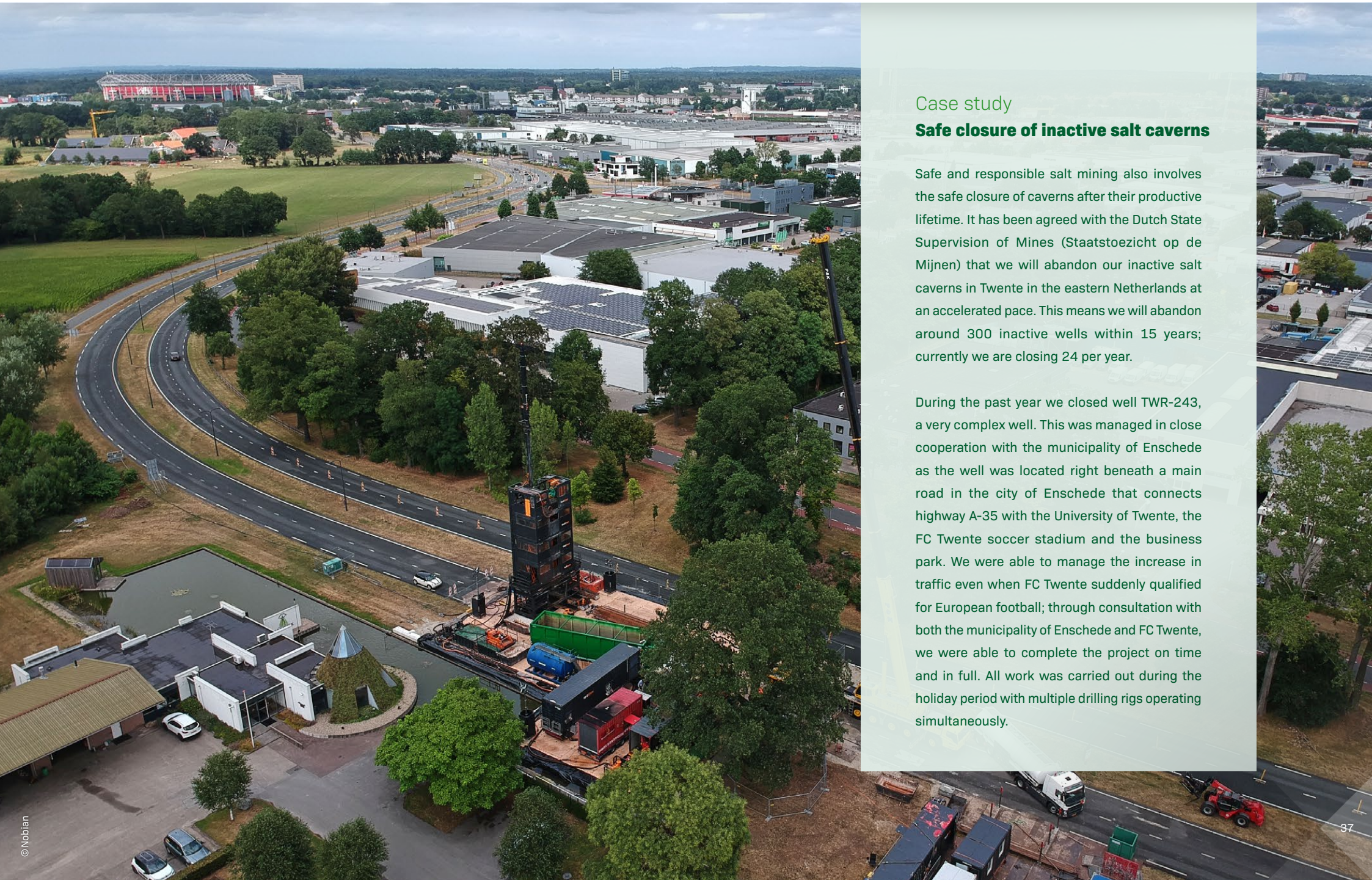
As a leading salt, essential chemicals and energy company, we operate in the Netherlands, Germany and Denmark. Our presence contributes to economic and social well-being as we are a major employer and purchaser of raw materials, energy, supplies and services. Our essential chemicals are crucial to the production of everyday items that are all around us – at home, at work, and as part of our professional and personal lives.

Our approach to community engagement starts with building strong relationships with neighboring stakeholders and engaging them in our HSE rules on emergency response and community awareness. We value being involved with and being part of the communities in which we operate, for example through our community program Go Further Together. Our sites are focused on building strong relationships with our neighbors and stakeholders.

Salt mining in the Netherlands and Denmark largely takes place outside the perimeter of the production sites. We maintain a continuous dialogue with the communities around these locations, proactively engaging with municipalities, residents and local interest groups to stimulate open discussion about our activities. We value direct contact, such as through community meetings, transparent information sharing and 'kitchen table' conversations. In Delfzijl, for example, we set up a guidance committee and organized information evenings to inform local stakeholders about new initiatives and to hear their views on them.

We take great care when it comes to making our mining operations more sustainable and more transparent. It is a process that is never finished, as new insights are frequently applied and discussed with the relevant stakeholders. We operate an active planning and monitoring program throughout the lifecycles of wells and salt caverns that includes continuous measuring and an extensive micro-seismic network. Developments are regularly discussed with municipalities, regional and local authorities, stakeholders and supervisors in regional steering groups.

It is important to us that we are part of the communities in which we operate, and we value strong relationships with our neighbors. We are committed to contributing to local economic and social well-being and, in 2023, we will identify how we can further engage with and invest in local initiatives through our community program 'Further Together'. This might include providing direct local contributions or organizing and participating in shared projects.



Case study

Safe closure of inactive salt caverns

Safe and responsible salt mining also involves the safe closure of caverns after their productive lifetime. It has been agreed with the Dutch State Supervision of Mines (Staatstoezicht op de Mijnen) that we will abandon our inactive salt caverns in Twente in the eastern Netherlands at an accelerated pace. This means we will abandon around 300 inactive wells within 15 years; currently we are closing 24 per year.

During the past year we closed well TWR-243, a very complex well. This was managed in close cooperation with the municipality of Enschede as the well was located right beneath a main road in the city of Enschede that connects highway A-35 with the University of Twente, the FC Twente soccer stadium and the business park. We were able to manage the increase in traffic even when FC Twente suddenly qualified for European football; through consultation with both the municipality of Enschede and FC Twente, we were able to complete the project on time and in full. All work was carried out during the holiday period with multiple drilling rigs operating simultaneously.

5.3. People

Our people

In an increasingly complex and fast-moving world, we know that engaged, empowered and happy employees are the key to growing a competitive, innovative, safe and successful organization. We aim to build an equal, diverse and inclusive workforce where people are safe and feel valued for their contribution and who they are. To achieve this, we strive for an open culture and understand the importance of investing in the development and training of our employees.

Our aim is to achieve sustainable business growth and have a positive impact on people's everyday lives through our actions as well as our essential products. To achieve this, we support, develop, listen to and empower our employees and local communities. We engage and collaborate with customers, partner companies, universities, industry peers and governments. These relationships help us drive growth and, at the same time, become a safer, more sustainable and more innovative company.

In 2022 we continued to build upon our Nobian values and behaviors, which you will find on page 44 of this report. Of these, 'care' and 'safety' focus explicitly on our employees' well-being and ensure we are a caring partner to our customers, stakeholders and the communities in which we operate. Our core values are the backbone of the performance-driven culture we are creating, forming a strong framework that empowers our employees and enables us to successfully deliver on our company's purpose and strategy.

Diversity, inclusion and equality

Nobian aims to provide equal employment opportunities and is resolved to avoid discrimination in the workplace or against job applicants, customers or business partners. Diversity and Inclusion (D&I) are important to the long-term health of our organization. We want to attract and develop diverse talent and see individual differences as an opportunity for innovation and growth. We cultivate an environment where behaviors and social norms are welcoming and respectful, and employees are provided with equitable access to resources and opportunities.

As a next step we have set up our talent network which focuses on our young professionals. We are eager to learn from them and seek their views across a range of areas, as well as helping them develop both professionally and personally so we can retain them as fulfilled, valuable members of our organization. We are also increasing our work around diversity and inclusion, bringing together people from across our company to identify and carry out initiatives that bring our D&I policy to life.

Improve and supporting diversity in our workforce is an ongoing process. Female representatives make up 33% of our Executive Core Team, while there is a 50:50 split between Dutch and German members.

We continue to assess the diversity of our workforce and we also plan to review all aspects of our employees' life within the company, from 'hire' to 'retire'. This should ensure our hiring, engagement, reward and promotion processes support their needs. Diversity awareness will continue to play an important role as we recruit senior personnel and directors, and we will actively monitor our progress and challenge ourselves to make improvements. In 2023 we will launch our employee engagement survey which includes questions on inclusion, mental safety and health. We know that to live up to our promise to increase employee motivation and engagement, and to ensure our focus is on the right challenges and subjects, gaining insight from our own people is of utmost importance.

Nobian, Bitterfeld | ©Nobian/Celine Paszkowski

Social dialogue and working conditions

Our structured communication between employer and employee representatives includes discussions, consultations, dialogue and negotiations across various economic and social topics.

In all countries (Denmark, the Netherlands and Germany) there are monthly meetings with the Central Works Councils and Local Works Councils. In the Netherlands we also have quarterly updates with Dutch Unions and the Advisory Council.

Working conditions at Nobian are negotiated with the respective unions via Collective Labor Agreements (CLA) within the Netherlands, Germany and Denmark. All agreements cover working hours, social benefits and wages, policies and duties and responsibilities of both the employee and employer.

Both the social dialogues and the clear working conditions contribute to providing an engaged place of work and sound relationships between employer and employee.

5.4. Sustainable sourcing

Ensuring sustainability is not only the right thing to do, it is also an opportunity to deliver value for our customers and society by providing new solutions with smaller footprints or additional benefits. We believe that striving for a sustainable future means being a safe and reliable partner for customers, employees, business partners, and communities. We identify potential sustainability issues from the first stages of supplier selection to eliminate risks and begin joined improvements on sustainable performance. We only do business with suppliers who share and support our standards. All our business partners, including suppliers of (raw) materials and services, must comply with our Code of Business Conduct & Ethics. We ensure all our suppliers adhere to local and European legislative requirements (including REACH) through mandatory acknowledgement in all new contracts and in all purchase order terms and conditions. More information on the Code of Business Conduct & Ethics can be found in section 5.5.

We use multiple methods of engaging our business partners to jointly improve our sustainability performance.

One of these is sustainability assessment through Ecovadis. In 2022 we assessed the top 80% of our suppliers in terms of spend on energy, raw materials, logistics and indirect spend using the EcoVadis CSR platform15. We measured and tracked their sustainability performance based on their policies, actions, and results. The EcoVadis assessment covers topics related to the environment, ethics, labor practices and human rights, as well as sustainable procurement. If our suppliers' Ecovadis scores are not up to our standards, we engage with them to improve their sustainability performance.

In 2022 we completed a detailed inventory of our Scope 3 emissions, including those from energy, raw material and logistics vendors. The results helped us determine which of our partners have the highest impact, helping us to decide where we should focus our efforts to reduce GHG emissions. A workshop involving people with different levels of expertise from across the company identified opportunities for improvement and set targets to reduce our Scope 3 emissions. These targets will be validated through the Science Based Targets initiative and opportunities to reduce emissions will be further pursued. To this end we further engage and partner with suppliers to help them achieve greenhouse gas emissions reduction, such as already being done with raw material and logistics suppliers.

Case study

First inland ship on green hydrogen

On March 30, 2022, Minister Harbers of Infrastructure and Public Works (I&W) officially opened construction of the ms Antonie, the first hydrogen-driven electric inland ship in the Netherlands. The vessel will transport approximately 3,700 tons of salt per voyage from Nobian's salt plant in Delfzijl to its chlor-alkali electrolysis plant in Rotterdam. That is the equivalent of 120 trucks, entirely emission-free. Nobian produces green hydrogen in the Netherlands both in Delfzijl and Rotterdam and the project showcases how this can enable reduced emissions when transporting goods using large inland shipping fleets. It also contributes to our Scope 3 emission reduction targets.

The project is the result of a partnership between Nobian, Lenten Scheepvaart, HyEnergy TransStore, and the inland ship cooperative NPRC. The ship's propulsion is based on the fuel cell technology of Nedstack which has been tested for many years at Nobian's production site in Delfzijl. Hydrogen is a by-product of chlorine and caustic soda production. The first of its kind, the construction of the ms Antonie focuses on safety and the deployment of the regulatory framework to enable large-scale use of green hydrogen in inland shipping.

The additional costs for the development and propulsion outfitting of this 135m-long ship are covered by both regional and national Dutch and European funds. The vessel's hull arrived at Rotterdam harbor from China in February 2023 to be fitted with the technologies, and the ship is expected to embark on its maiden voyage in mid-2023. The project is seen as an important first step to realize the European goal of emission-free inland shipping by 2050.

Mark Harbers, Minister of Infrastructure and Public Works (I&W) and Michael Koenig, CEO Nobian.

5.5. Sustainability memberships and compliance

Policy engagement and memberships

We actively engage with industry and trade associations to take a constructive and proactive approach to relevant EU initiatives. We bring our expertise and solutions to the table on topics such as raw materials strategy, a vision for salt extraction energy, carbon reduction and circular chemistry. This involvement helps further our sustainability objectives and ensures public policy decisions are grounded in sound data and science.

Our engagements involve a diverse set of stake-holders focused on chemical-related and climate mitigation and adaptation issues, such as product design for energy efficiency, material safety, energy management in business and manufacturing operations and industry collaboration.

Managing engagement on public affairs

All direct and indirect engagement with policy makers and related organizations follows a formal process managed by our communication and public affairs team. This covers the scope and business impact of specific policy issues and is integrated into annual business review meetings and our risk management assessment process. The process ensures any activities that could influence public policy are consistent with our business strategy.

In line with the Nobian Business Code of Conduct & Ethics and our company policies, we do not provide financial contributions or endorsements to political parties or politicians.

Advocacy actions related to sustainability

We seek to engage constructively with governments, regulators and legislators on proposed policies that are relevant to our business. This can cover a wide range of areas, from tax and employment issues to safety and chemical management. We seek to support policies that are sufficient, clear, stable, predictable, comprehensive, economically efficient and well designed, that deliver society's goals at the least cost. We also support policies that align with our position in areas such as our sustainability ambitions.

We have actively engaged with industry and trade associations to take a constructive and proactive approach to relevant EU sustainability and industry initiatives, for example Fit for 55, Critical raw Materials, and the EU Chemicals Strategy for Sustainability. We not only focus on the risks and challenges these new proposals have for our industry, we also concentrate on opportunities via new business models and innovation and actively drive a value chain approach. Through our memberships with several associations in the EU and the Netherlands, we have also actively

Memberships and associations

The best way of becoming a force for good and creating a positive impact through sustainability is by working together. That is why we strongly believe in collaborations and partnerships with other expert institutions and organizations. To this end, Nobian is a member of:

cefic
eurochlor 17. A sector group of Cefic
CertifHy
eusalt European Salt Producers' Association
ENVAQUA
ISCC International Sustainability & Carbon Certification
Institute for Sustainable Process Technology
SPRINT ROBOTICS
VCI
Koninklijke vemw
VNCI
VNO NCW

Nobian, Delfzijl | ©Nobian/Studio Dijkgraaf

engaged with policy makers on creating the right conditions and policy approach for energy storage and green hydrogen.

Code of Business Conduct & Ethics

Nobian's Code of Business Conduct & Ethics requires employees to always act ethically and comply with anti-bribery/anti-corruption laws, antitrust/competition laws, data protection laws, and economic sanctions laws. This Code applies to all employees and contractors and, as part of our commitment to a sustainable future, everyone must complete at least one compliance training on ethical business conduct each year.

Our compliance program helps our employees and contractors understand and abide by our high standards of ethical business conduct, comply with our legal and regulatory requirements, and embodies our values. The program consists of training, policies and procedures, external party due diligence and monitoring, and investigating and remediating concerns of unethical, illegal or inappropriate conduct. This commitment to compliance and ethics is supported at the highest levels of our business, with the Board of Directors and audit committee receiving regular updates from our General Counsel and Chief Compliance Officer.

Our values

In February 2022, we introduced our four company values: Safety, Excellence, Ownership and Care. We created awareness of these values during the year. The values are widely known throughout the business and are actively used in our strategy and day to day activities, such as townhalls and performance appraisals. They continue to guide our behavior and are a crucial part of our identity and company culture. The values demonstrate what we stand for – as a corporate citizen, as a business partner and as an employer.

Business partners

We require our suppliers to adhere to our Code of Business Conduct & Ethics. We also require certain third parties to undergo a due diligence process where they provide information on their ownership, compliance programs and any past relevant legal/ regulatory issues, including economic sanctions. They are monitored through an online platform, and we receive daily updates of any sanctions, regulatory fines, or adverse media. Business partners also have access to our ethics reporting hotline, SpeakUp!.

Reporting concerns: SpeakUp!

Employees, suppliers, customers and other business partners can report any suspected policy violations, inappropriate behavior and illegal or unethical practices through SpeakUp!, our confidential reporting hotline. SpeakUp! is a direct channel that enables people to anonymously highlight their concerns, and issues are heard and addressed in a timely manner. To ensure everyone is aware of SpeakUp! it is publicized on our intranet, our external website and at every office and manufacturing site, along with contact information. It is also highlighted in our Code of Business Conduct & Ethics and employees are instructed on its use and about the protection they are afforded under our non-retaliation policy. Reports to SpeakUp! can be made anonymously in English, German, Dutch or Danish.

Our values

Our values guide our behavior and are a crucial part of our strong identity and company culture. They demonstrate what we stand for as a corporate citizen, as a business partner and as an employer. Our values guide our relationships with our partners, suppliers and stakeholders.

ESG Factsheet

GROW GREENER TOGETHER

ESG Factsheet

Environment

	Unit	2010 (baseline)	2020	2021	2022[27]	% change 2022 vs. 2020
Company carbon footprint						
Direct emissions (Scope 1)	kton CO_2-eq	696	714	792	776	8.7%
Indirect emissions (Scope 2)	kton CO_2-eq	1,957	972	1,006	576	-40.7%
Total operational emissions (Scope 1 and Scope 2)	kton CO_2-eq	2,653	1,685	1,798	1,352	-19.8%
Value chain emissions (Scope 3)	kton CO_2-eq	–	1,221	1,437	1,269	3.9%
Emissions covered under emission-limiting regulations	% of direct emissions	99.1	97.9	98.3	98.2	–
Energy management						
Total energy consumption	GWh	6,367	6,239	6,129	5,893	-5.5%
Percentage renewable energy	%	–	28.9	35.5	35.7	–
Percentage renewable electricity	%	–	18.8	35.3	37.9	–
Percentage renewable steam	%	–	37.1	35.7	33.9	–
% grid energy	%	–	30.3	41.6	31.9	–
Total self-generated electricity	GWh	911	978	1,219	1,076	10.1%
Total self-generated steam	GWh	1,991	2,592	2,439	2,667	2.9%
Air quality						
NO_x absolute emissions	ton	443	563	608	545	-3.0%
NO_x emission intensity	kg/ton production	0.0450	0.06	0.06	0.06	4.5%
SO_x absolute emissions	ton	17.0	0.4	0.3	19.2	4,462%[28]
SO_x emission intensity	kg/ton production	0.0017	0.00004	0.00003	0.00219	4,815%[28]
Volatile Organic Carbon (VOC)[29] emissions	ton	1.8	3.0	2.7	2.6	-12.9%
VOC emission intensity	kg/ton production	0.0002	0.0003	0.0003	0.0003	-6.2%

	Unit	2010 (baseline)	2020	2021	2022[27]	% change 2022 vs. 2020
Emissions to water (COD)						
COD emissions	ton	101	104	100	98	-6.3%
COD emissions intensity	kg/ton production	0.01	0.01	0.01	0.01	0.9%
Water management						
Fresh water intake	1000 m^3	96,568	42,540	41,042	48,125	13.1%
Fresh water intake intensity	m^3/ton production	9.8	4.5	4.3	5.5	21.9%
Percentage water in stressed regions	%	39.0	6.2	9.1	10.1	–
Fresh water consumption						
Fresh water consumption	1000 m^3	14,422	15,429	16,030	15,767	2.2%
Fresh water consumption intensity	m^3/ton production	1.5	1.6	1.7	1.8	10.1%
Percentage water in stressed regions	%	3.5	4.6	4.8	4.8	–
Waste management						
Total waste	ton	13,874	4,279	3,697	5,253	22.8%
Waste intensity	kg/ton production	1.4	0.5	0.4	0.6	32.3%
Hazardous waste	ton	–	2,683	2,411	2,419	-9.8%
of which disposed to landfill	ton	–	77.2	33.9	22.5	-70.9%
Percentage reusable hazardous waste	%	–	93.4	92.3	93.7%	–
Production						
Total Nobian	kton	9,839	9,414	9,471	8,737	-7.2%
Sustainable sourcing						
Suppliers assessed on sustainability	%	–	0%	65%	80%	–
Management systems						
Manufacturing sites with ISO 140001/RC-14001 certifications	%	–	100%	100%	100%	–

[27] DNV assurance 2022.

[28] Due to temporary switch from gas to fuel oil at one production site.

[29] VOC emissions include all applicable organic hazardous air pollutants (HAPS). Applicable inorganic HAPS are reported on site level and not consolidated centrally.

ESG Factsheet

Social

	Unit	2020	2021	2022[30]
Workforce data				
Global headcount Nobian employees	#	–	1,541	1,527
% female in workforce	%	–	14.7%	14.1%
% female in senior positions	%	–	11.8%	14.3%
Employee turnover rate (voluntary and involuntary)	%	–	2.4%	0.5%
Safety				
Total reportable incident rate (TRR) for employees, temporary workers and contractors	per 1000,000 hours worked	1.09	0.51	1.07
Lost time injury rate (LTIR) for employees, temporary workers and contractors	per 1000,000 hours worked	0.82	0.51	0.00
Total reportable incident rate (TRR) for employees, temporary workers	per 1000,000 hours worked	0.42	0.00	0.95
Lost time injury rate (LTIR) for employees, temporary workers	per 1000,000 hours worked	0.42	0.00	0.00
Total reportable incident rate (TRR) for contractors	per 1000,000 hours worked	2.29	1.30	1.23
Lost time injury rate (LTIR) for contractors	per 1000,000 hours worked	1.53	1.30	0.00
Fatalities	#	0	0	0
Process safety				
Process safety incident counts - level 1	#	3.00	0.00	0.00
Process safety incident counts rate - level 1	per 1000,000 hours worked	0.82	0.00	0.00
Process safety incident counts - level 2	#	3.00	0.00	0.00
Process safety incident counts rate - level 2	per 1000,000 hours worked	0.82	0.00	0.00
Process Safety Total Incident Rate (PSTIR) combined	per 1000,000 hours worked	1.64	0.00	0.00
Management systems				
% of manufacturing sites with ISO 45001 certification	%	100%	100%	100%

Governance

	Unit	2021	2022[30]
Board			
Directors	#	6	6
Average director tenure	years	2.1	2.9
Independent directors	#	0	0
Independent directors percentage	%	0	0
Board diversity			
Women on the board	#	3	3
Women on the board percentage	%	50%	50%
Board coverage of ESG issues			
Frequency of board updates on ESG	Periodically	Quarterly	Quarterly
Board oversight of climate strategy	Y/N	Y	Y
Policies			
Code of Conduct, anti-discrimination, anti-harassment	Y/N	Y	Y
Anti-corruption, anti-bribery	Y/N	Y	Y
Business partner Code of Conduct, including suppliers	Y/N	Y	Y
Health, Safety, Environment and Security (HSE&S), including product stewardship	Y/N	Y	Y
Sensitive country policy	Y/N	Y	Y

[30] DNV assurance 2022.
Nobian became a stand-alone company in 2021. Social and governance data for 2010 not available.

Appendices

Basis of reporting

SASB Index

Breakdown of greenhouse gas emissions

Sustainability governance

Impact, risks and opportunities

Independent assurance statement

GROW GREENER TOGETHER

Basis of reporting

History

Nobian became a standalone company in July 2021. This is our second sustainability report covering our activities and achievements in 2022.

Independent assurance

This report and ESG data have been independently assured by DNV Business Assurance Germany GmbH. Details of the assurance can be found on page 60.

Reporting standards

The report and its content has been prepared in accordance with SASB reporting standards. The index of SASB metrics is provided on page 55.

Scope and data

The scope of our environmental and health and safety data comprises our seven production sites in the Netherlands (Delfzijl, Hengelo and Rotterdam), Germany (Frankfurt, Ibbenbüren and Bitterfeld) and Denmark (Mariager). Administrative offices were not included as their contribution is negligible. For the remaining social and governance data, the full company is included. Data reported for 2022 is compared to that of 2020 and 2021. The data from 2022 has been included in the assurance process. For environmental data 2010 serves as a reference baseline year. For social and governance no data from 2010 are available. At each production site, environmental data is reported quarterly, whereas health and safety data is reported monthly. Our data collection method and management system comply with ISO 14001 and ISO 45001.

Calculation methodology

We followed the SASB standard guidelines to report our environmental KPIs.

Scope 1 emissions

As indicated in SASB, the Greenhouse Gas Protocol was used to calculate Scope 1 CO_2 emissions. Our Scope 1 emissions are the combustion of fossil fuels to generate steam and electricity at our energy facilities. The emission factors we used to calculate our CO_2 emissions were based on the Dutch Energy Carrier list, providing emission factors per fuel type.

Scope 2 emissions and renewable energy

Our Scope 2 emissions are derived from purchased steam and electricity. To calculate our CO_2 emissions, we used the internationally recognized Ecoinvent database to calculate emissions per MWh.

For steam from combined heat and power (CHP) systems, we have used the EU heat benchmark methodology[31] to calculate the CO_2 emission factor for steam produced in a boiler or CHP system. Reference efficiencies for natural gas were used.

[31] Guidance Document n°3 on the harmonized free allocation methodology for the EU ETS post 2020, section D. III Cogeneration tool: https://ec.europa.eu/clima/system/files/2019-03/p4_gd3_data_collection_en.pdf

The use of steam from municipal waste incineration plays an important transitional role in our goal to become climate neutral. It is the fastest and most efficient way to cut down CO_2 emissions overall, while we are also working on projects for the full electrification of our production processes. In a fully circular economy, municipal waste incineration (MWI) in general will be greatly reduced and will, ideally, eventually disappear. Until then, steam from MWI is considered a useful source of renewable steam for achieving Dutch CO_2 emission reduction targets.

There is no conclusive guidance from the greenhouse gas protocol whether and/or how to include Scope 2 MWI steam emissions. The most concrete guidance is from the widely used LCA methodology, EN 15804+A2, a standard often used for Environmental Product Declaration (EPD®). It follows the polluter pays principle (PPP), meaning CO_2 emissions are carried by waste generator and thus do not need to be included in the carbon footprint of the steam itself. In line with this guidance, Scope 2 MWI steam emissions are not included in the company's Scope 2 emissions.

Scope 3 emissions

The calculations for our Scope 3 greenhouse gas (GHG) emissions are based on the GHG Protocol, 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'[32] and recommendations of the World Business Council for Sustainable Development (WBCSD) Chemicals Sector Working Group, 'Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain'[33]. In the GHG protocol standard, Scope 3 emissions are divided into 15 categories. The description and approach per category can be found on the next pages.

We included 50% of emissions from joint ventures, taking an equity share approach.

Energy

Energy consumption was calculated as the total steam and electricity consumption (both internally produced and purchased) and converted to gigawatt hours. The energy reduction from return condensate of steam (hot water) usage is subtracted from the total. A certain percentage of our steam and electricity was procured from renewable sources.

The renewable energy content of steam from Municipal Waste Incineration (MWI) is calculated based on the biogenic share of the waste as set annually by Rijkswaterstaat (54% in 2022). This percentage is, where needed, corrected for the possible additional fossil fuels used in the incineration process, and is used for calculating the contribution of renewable steam from MWI into our total renewable energy percentage.

Other environmental and social KPIs

Our air and water emissions have been tracked in accordance with national environmental regulations, as well as water intake and consumption.
The Aqueduct Water Risk Atlas tool from the World Resource Institute has been used to map the use of water in water stressed regions. Waste quantities have been tracked at waste processing facilities and the classification of nonreusable and reusable waste is in accordance with the Basel Convention.

For the people safety data, we deviated from the SASB standard. Instead of calculating the OIR, we instead calculated the TRR, which is the industry standard in Europe. However, the OIR (per 200,000 hours worked) can be calculated by dividing with factor five to obtain the TRR (per 1,000,000 hours worked).

[32] SGHG protocol: 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard', 2011 and 'Technical guidance for calculating scope 3 emissions (version 1.0)', 2013.

[33] WBCSD Chemicals Sector Working Group: 'Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain', 2013.

Description and approach of Scope 3 categories | 1 – 3

Category 1 **Purchased goods and services**	
Category description	Extraction, production and transportation of goods and services, including packaging, purchased or acquired, not otherwise included in categories 2 – 8.
Type and source of data	Procurement data was used for purchased raw materials and packaging, including tolling activities and re-sale. For third party services, an expert estimation based on spent was used to calculate corresponding CO_2-eq emissions.
Methodologies, allocation methods and assumptions	Raw materials and packaging Emission factors from relevant datasets from the ecoinvent database (version 3.7.1 for 2020/2021 and 3.8 for 2022) were used. This database is an internationally accepted database for CO_2-eq. For a few raw materials, a proxy data set was used if no exact matching dataset was available. Services The CO_2-eq emissions per monetary unit spent on service activities were derived from 2013 data from the Department for Environment, Food and Rural Affairs (DEFRA)[34] as per the recommendation of the WBCSD Chemicals Sector Working Group.

Category 2 **Capital goods**	
Category description	Extraction, production and transportation of capital goods purchased or acquired.
Type and source of data	Primary data on monetary amount spent on capital goods, subdivided into expenditure on steel and concrete based on expert estimation was used.
Methodologies, allocation methods and assumptions	The CO_2-eq emissions per monetary unit spent on service activities were derived from 2013 data from the Department for Environment, Food and Rural Affairs (DEFRA)[34] as per the recommendation of the WBCSD Chemicals Sector Working Group.

Category 3 **Fuel and energy related activities** ***not included in Scope 1 or Scope 2***	
Category description	Extraction, production and transportation of fuels and energy purchased or acquired, not already accounted for in Scope 1 or Scope 2.
Type and source of data	Primary data on total volumes of fuel and energy sources were used.
Methodologies, allocation methods and assumptions	Emission factors from relevant datasets from the ecoinvent database (version 3.8) were used. These datasets represent the average Scope 3 emissions required per country or region (Europe). For transmission and distribution losses in electricity an average 5% was taken, based on the US Energy Information Administration.

[34] Department for Environment, Food and Rural affairs (DEFRA), Annex 13 – indirect emissions from the supply chain, 2013. Link: https://webarchive.nationalarchives.gov.uk/ukgwa/20130402151656/http:/archive.defra.gov.uk/environment/business/reporting/pdf/annex13-supply-chain-emissions-110405.pdf

Description and approach of Scope 3 categories | 4 – 6

Category 4
Upstream transport and distribution

Category description	All **inbound** logistics of raw materials from external suppliers to own operations, both Nobian-arranged transport and supplier-arranged transport. Transport from own operations to storage locations arranged by Nobian was changed from category 4 to category 9 in 2022.
Type and source of data	Primary data of raw materials purchased by Nobian, including supplier locations and modality were used to calculate the transport distance to the Nobian site.
Methodologies, allocation methods and assumptions	The raw materials that contributed to 99% of Scope 3 emissions in category 1 were included in category 4. Emission factors per tonne-kilometer were derived from the GLEC framework/ Cefic[35] that provides logistic emissions for the European chemical industry.

Category 5
Waste generated in operations

Category description	Emissions from third-party disposal and treatment of waste generated in own or controlled operations in the reporting year.
Type and source of data	Primary data on the amount of non-reusable waste was used. Waste sent for recycling or for incineration with energy recovery was not included as the GHG protocol uses a cut-off approach where emissions from recycling will be included in the secondary system.
Methodologies, allocation methods and assumptions	Calculations were made according to guidance of the WBCSD Chemical sector (2013).[36]

Category 6
Business travel

Category description	Transportation of employees for business-related activities in vehicles not owned or operated by Nobian.
Type and source of data	Primary data on total expense claims for flights, public transport and car drives were used. For car drives, the actual total kilometers were available and used.
Methodologies, allocation methods and assumptions	Emission factors for passenger-kilometre (.km) for flights, train and car transport were derived from the UK government[37], based on WBCSD Chemicals sector guidance.

[35] GLEC framework & Cefic: 'Calculating GHG transport and logistics emissions for the European Chemical Industry, Module 5 of the GLEC Framework written in partnership with Cefic', 2021.

[36] WBCSD Chemicals Sector Working Group: 'Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain', 2013.

[37] UK government, Department of Business, Energy and Industrial Strategy, Greenhouse gas reporting: conversion factors 2020 / 2021 / 2022. Link: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

Description and approach of Scope 3 categories | 7 – 11[38]

Category 7
Employee commuting

Category description	Transportation of employees between their homes and worksites in vehicles not owned or operated by Nobian.
Type and source of data	Primary data on home-work distance of Dutch employees was used.
Methodologies, allocation methods and assumptions	Emission factors for passenger. kilometre (pkm) for train and car transport were derived from the UK government[39], based on WBCSD Chemicals sector guidance. Mode of transportation was assessed based on travel from home address to working location. The emissions for the Netherlands were extrapolated to Germany and Denmark based on the number of employees.

Category 9
Downstream 3 transportation and distribution

Category description	All **outbound** transportation and distribution of products sold between own operations and customers or storage locations. Transport from own operations to storage locations arranged by Nobian was changed from category 4 to category 9 in 2022.
Type and source of data	Primary data on total kilometers and tonnage were used. For transportation not arranged by Nobian an expert estimation was made.
Methodologies, allocation methods and assumptions	Emission factors per tonne-kilometer were derived from the GLEC framework/ Cefic[40] that provides logistic emissions for the European chemical industry. Some emission factors for Nobian-arranged transport were corrected for increased payload for transport where accurate data were available.

Category 10 & 11
Processing of sold products and use of sold products

Category description	**Category 10:** Emissions generated during processing of intermediate products sold. **Category 11:** Emissions that are directly emitted during the use-phase of goods and services sold.
Type and source of data	For most products, these categories are excluded as Nobian's basic chemicals are used in a wide array of products. As such there is no longer any relation between CO_2 emissions from processing and use of sold products. For a few products that that also have greenhouse gas properties, emissions were included. Primary data on production was used to calculate emissions during the further processing and use of these products.
Methodologies, allocation methods and assumptions	Expert judgement and EU-wide data was used to estimate the emissions. The Global Warming Potentials (GWPs) as provided in the 6th IPCC assessment report were used to calculate the total CO_2-eq emissions.

[38] *Category 8* ***Upstream Leased Assets*** is not applicable for Nobian.

[39] UK government, Department of Business, Energy and Industrial Strategy, Greenhouse gas reporting: conversion factors 2020 / 2021 / 2022. Link: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

[40] GLEC framework & Cefic: 'Calculating GHG transport and logistics emissions for the European Chemical Industry, Module 5 of the GLEC Framework written in partnership with Cefic', 2021.

Description and approach of Scope 3 categories | 12 & 13[41]

Category 12 **End-of-life treatment of sold products**	
Category description	Waste disposal and treatment of products sold at the end of their life.
Type and source of data	Primary data on the total volume of purchased raw materials and packaging was used.
Methodologies, allocation methods and assumptions	Based on the carbon content of the purchased raw materials/packaging, the corresponding CO_2-eq emissions per input material were calculated. The emissions of the products already reported in categories 10 and 11 were excluded.

Category 13 **Downstream leased assets**	
Category description	Operation of assets leased by the reporting company, not included in Scope 1 and Scope 2.
Type and source of data	Primary data for downstream leased assets for dry and liquid bulk storage was used.
Methodologies, allocation methods and assumptions	For bulk liquid storage, Scope 2 emissions from one vendor was extrapolated to the total tonnage of bulk stored. For dry bulk storage specific fuel use for from one vendor was extrapolated to the total tonnage.

[41] *Categories 14* ***Franchises*** and *15* ***Investments*** are not applicable for Nobian.

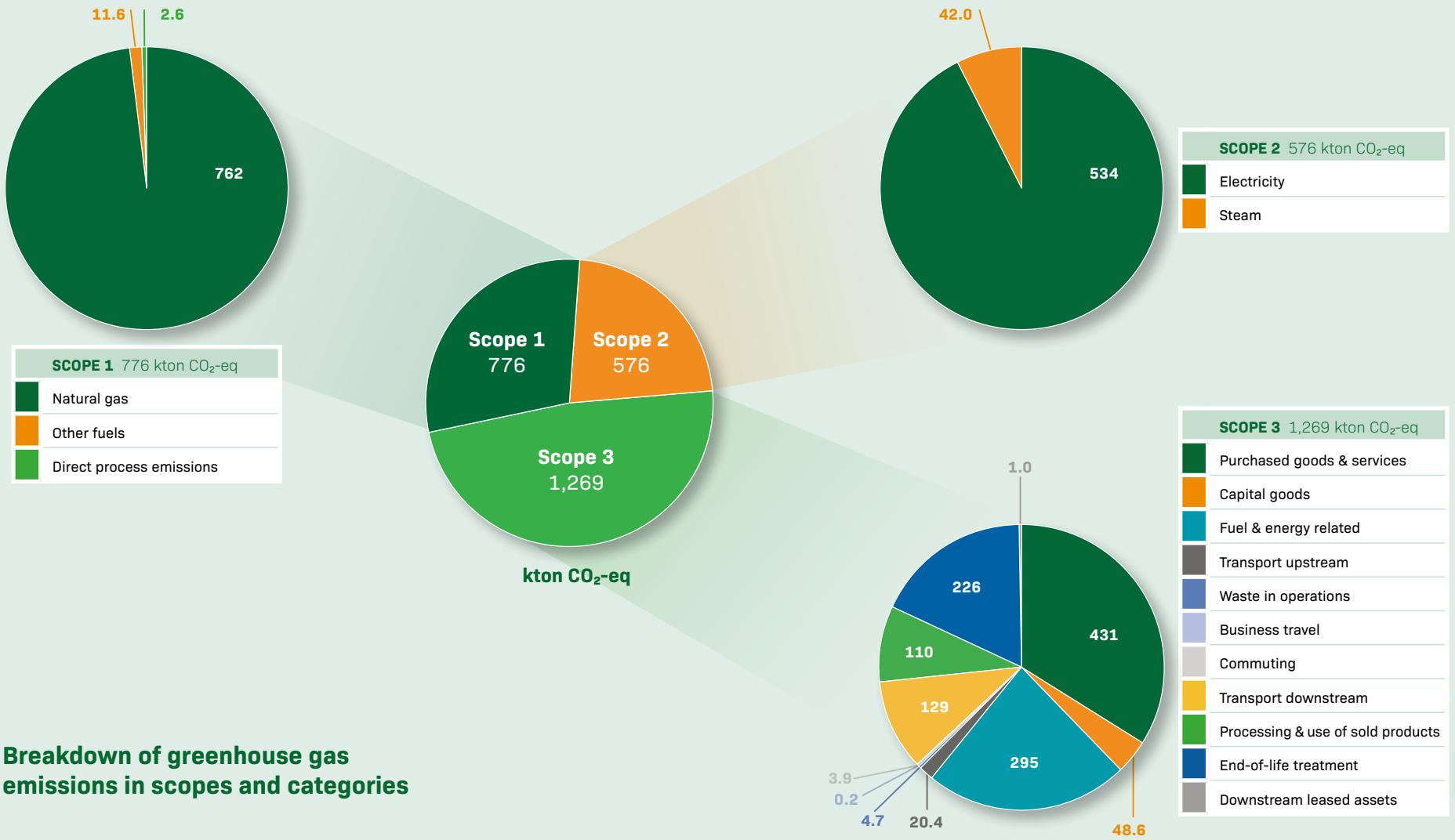
SASB Index

TOPIC	METRIC	CODE	PAGE
Greenhouse gas emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	RT-CH-110a.1	ESG Factsheet, page 46
	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	RT-CH-110a.2	Section 3.1, page 14
Air quality	Air emissions of the following pollutants: (1) NOX (excluding N2O); (2) SOX; (3) Volatile organic compounds (VOCs); (4) Hazardous air pollutants (HAPs)	RT-CH-120a.1	ESG Factsheet, page 46
Energy management	(1) Total energy consumed; (2) Percentage grid electricity; (3) Percentage renewable; (4) Total self-generated energy	RT-CH-130a.1	ESG Factsheet, page 46
Water management	(1) Total water withdrawn; (2) Total water consumed, percentage of each in regions with high or extremely high baseline water stress	RT-CH-140a.1	ESG Factsheet, page 46
	Number of incidents of non-compliance associated with water quality permits, standards and regulations[42]	RT-CH-140a.2	ESG Factsheet, page 47
	Description of water management risks and discussion of strategies and practices to mitigate those risks	RT-CH-140a.3	Section 4.3, page 29
Hazardous waste management	Amount of hazardous waste generated; percentage recycled	RT-CH-150a.1	ESG Factsheet, page 46
Community relations	Discussion of engagement processes to manage risks and opportunities associated with community interests	RT-CH-210a.1	Section 5.2, page 36
Workforce health and safety	(1) Total recordable incident rate (TRIR) and (2) Fatality rate for (a) direct employees and (b) contract employees	RT-CH-320a.1	ESG Factsheet, page 47
	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	RT-CH-320a.2	Section 5.1, page 33 and 34
Safety and environmental stewardship of chemicals	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	RT-CH-410b.2	Section 4.4, page 30
Genetically modified organisms	Percentage of products by revenue that contain genetically modified organisms (GMOs)	RT-CH-410c.1	Zero
Management of the legal and regulatory environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	RT-CH-530a.1	Section 5.5, page 42
Operational safety, emergency preparedness and response	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)[43]	RT-CH-540a.1	ESG Factsheet, page 47
	Number of transport incidents	RT-CH-540a.2	Section 4.4, page 31

[42] These incidents are included in Process safety numbers.

[43] PSISR is not used by Nobian. We use Process safety incident counts rate – level 1 as KPI for this.

Breakdown of greenhouse gas emissions



Breakdown of greenhouse gas emissions in scopes and categories

Sustainability governance

Our sustainability approach is focused on making sustainability an integral part of our strategic decisions and daily operations. For this reason, the governance structure for sustainability matters is embedded as far as possible in existing processes, controls and procedures and identifies roles and responsibilities.

Board of Directors & Corporate Responsibility Committee

The Corporate Responsibility Committee (a Board Committee) has been tasked by the Board of Directors to execute certain oversight responsibilities relating to Nobian's policies, practices and performance with respect to its corporate responsibility, including the Company's environmental, health, safety, sustainability, product quality, social policies and programs and other matters that may impact its public reputation.

Executive and Leadership Team

The Leadership team, which is led by the CEO and includes all members of the Executive Team, sets the strategic direction for sustainability and monitors progress against the set KPI's, under the initiative and leadership of the Vice-President R&D, Technology and Sustainability.

Sustainability core team

The central responsibility for the development of, implementation, monitoring and reporting on the sustainability program lies with the cross-functional Sustainability core team. This team is headed by the Sustainability Manager. The members of the core team come from all relevant functions each having their own specific focus area for which they are responsible. Each member has a sponsor from the leadership team accountable for the specific focus area.

Sustainability theme	Focus area	Grow Greener Together core team lead	Leadership Team member
Climate	CO_2-reduction	Technology manager energy	VP R&D, Technology and sustainability
	Renewable energy	Director energy	Chief Commercial Officer & Head of Strategy
	Energy efficiency and storage	Technology manager energy	VP R&D, Technology and sustainability
Circular	Green products	Sustainability manager	Chief Commercial Officer & Head of Strategy
	Carbon to Chemicals	Business development manager new technology	VP R&D, Technology and sustainability
	Recycling	Business development manager new technology and HSE&S specialist	VP R&D, Technology and sustainability and ISC Director
Care	Health and safety	HSE&S specialist	Chief Integrated Supply Chain Officer
	Community	Director communications and public affairs	General Counsel
	People	Chief Human Resources Officer	Chief Human Resources Officer
Other	Sustainability reporting and assurance	Sustainability manager	VP R&D, Technology and sustainability
	EcoVadis, SBTI, CDP	Sustainability coordinator	VP R&D, Technology and sustainability
	Investor relations	Director Treasury & Investor Relations	Chief Finance Officer
	Legislation and compliance	Deputy General Counsel & Chief Compliance Officer	General Counsel
	Sourcing	Procurement Director	Chief Integrated Supply Chain Officer

Policies

Since sustainability is an integral part of our strategic decisions and daily operation, specific items related to sustainability are integrated in the policies of the specific function where applicable, such as the procurement policy, HSE policy and Cyber security policy.

Reporting

On a yearly basis the sustainability KPIs and targets are reviewed and updated when applicable. Progress on the KPIs is reported by the team leads in the Grow Greener Together core team meetings which are held periodically. On a quarterly basis the progress on targets is reported to the Executive Team and the Board of Directors' Corporate Responsibility Committee by the Vice-President R&D, Technology and Sustainability.

Impact, risks and opportunities

This appendix describes the processes through which we identify sustainability related impacts, risks and opportunities and assess their materiality.[44] The methodologies are in line with the TCFD[45] framework and the draft European Sustainability Reporting Standards, ESRS 2, General disclosures[46].

Methodology

Each year Nobian updates its risk profile as part of its Enterprise Risk Management (ERM) process. The ERM sessions are held with all relevant functions and departments, in which strategic, operational, financial, compliance, HSE and reputational risks are assessed and rated using a uniform methodology. As such, the identification of sustainability related impacts, risks and opportunities are fully integrated in our ERM process.

Within these ERM sessions, in-depth discussions were held with relevant stakeholders to identify and classify the potential risks and opportunities that could materially affect our business. The TCFD framework was used to assess sustainability related impacts, risks and opportunities. The scope included the transition risks (related to the shift to a lower-carbon economy, including policy and legal risks, technology risks, market risks and reputational risks) and physical risks (due to a changing climate, and which include acute risks such as extreme weather-related events and chronic risks such as volatile water levels).

These sessions identified several sustainability-related risks and opportunities. Each risk and opportunity was assigned a timeline for when it could impact the company: short (one to three years), medium (three to ten years) or long (ten to 15 years). The risks were rated on potential impact and the likelihood this would happen within the stated timeframe. Similarly, the opportunities were scored according to their anticipated positive impact on our business and wider society and the chance of this materializing in the expected time.

[44] Not part of assurance by DNV.
[45] Task Force on Climate-related financial disclosures: https://www.fsb-tcfd.org/
[46] https://www.efrag.org/

Three significant risks

The table below shows a summary of three of the main sustainability risks that have been identified during the various Enterprise Risk Management (ERM) sessions which could have a significant impact on our company performance.

Selection of identified risks

Topic	Time span	Initiatives in place
Investment cost to transition to lower carbon emissions technology.	Short	Tailor-made agreements with Dutch government. Innovative business models with equipment suppliers. (See section 3.1, 3.3 and case study on page 21.)
Access to affordable renewable energy and power purchase agreements for industry.	Short	Consortium with other energy-intensive companies to jointly participate in offshore wind tenders. Bilateral discussions with renewable energy suppliers for Power Purchase Agreements. (See section 3.2 and case study on page 18.)
Effect of volatile water levels on production and transport.	Short	Water management and technology development to reduce freshwater use consumption. Contingency plans for supply chain by using different modalities (barges, trucking rail). (See section 4.3 on page 29.)

Our analysis shows that most of the key risks relate to the transition to low carbon technologies, such as electrification of our production processes and the access to affordable renewable electricity to fuel existing and new processes. These topics form part of our discussions with the Dutch government for the tailor-made agreements.

The effect of volatile water levels has already been seen to some extent in recent years, such as the longer periods of drought in Western Europe impacting the transport of raw materials and products over waterways due to low water levels. As it might also impact our ability to extract surface water for our production process, we have accelerated the set up of a companywide water management policy which will be completed during 2023. This includes concrete opportunities for freshwater savings at our production locations.

Three significant opportunities

Likewise, we identified several opportunities that can lead to substantial business growth and cost savings. Three such opportunities are listed below.

Selection of identified opportunities

Topic	Time span	Initiatives in place
Acceleration of reaching our climate targets supported by tailor-made agreements with the Dutch government.	Short	Tailor-made agreements with Dutch government. (See section 3.1 and case study on page 21.)
Renewable energy storage in salt caverns in the Zuidwending area in the province of Groningen in the Netherlands.	Medium	Development projects in place with external partners. (See section 3.3 and case study on page 20.)
Further increasing the flex capacity of our production to help stabilize the electricity grid.	Medium	Projects in place to expand our E-flex capabilities at all production sites. (See section 3.3 and case study on page 21.)

Our key opportunities lie in the field of becoming an important contributor to the ambition of the Dutch government to accelerate the reduction of CO_2 emissions with 55% by 2030 in line with the EU's Fit for 55 plans[47].

Other important opportunities relate to the storage of renewable energy in salt caverns and increasing the flexible use of electricity in our production plants, where we can provide a significant contribution to the energy transition in the Netherlands and by helping to stabilize the electricity grid.

[47] https://www.government.nl/topics/climate-change/eu-policy

Independent assurance statement

WHEN TRUST MATTERS

Independent Assurance Statement

Nobian Industrial Chemicals B.V. ("Nobian" or "Group") commissioned DNV Business Assurance Germany GmbH ("DNV", "we", or "us") to provide limited assurance over the Subject Matter presented in Nobian's Sustainability Report 2022 ("Report") for the reporting year ending 31st December 2022.

Our observations and areas for improvement will be raised in a separate report to Company's Management. Selected observations are provided below. These observations do not affect our conclusions set below.

- Overall, for the performance data in scope, we have confidence in the processes and systems to ensure the information presented in the Report is accurate. During our site visits, we observed some inconsistencies in the audit trail for the data reported for consolidation. We recommend that Group provide all sites with further guidance on maintaining evidence for their reported performance. We encourage all sites to refine their documentation on data collection and reporting procedures to help ensure consistency and continuity.

Subject Matter

The scope and boundary of our work is restricted to the following areas (collectively the "Subject Matter"):

1. Selected information

The performance indicators included within the Report (the "Selected Information"), listed below:

- Direct emissions (Scope 1) (kton CO2-eq)
- Indirect emissions (Scope 2) (kton CO2-eq)
- Total operational emissions (Scope 1 and 2) (kton CO2-eq)
- Value chain emissions (Scope 3) (kton CO2-eq)
- Emissions covered under emission-limiting regulations (% of direct emissions)
- Total energy consumption (GWh)
- Percentage renewable energy (%)
- Percentage renewable electricity (%)
- Percentage renewable steam (%)
- Percentage grid energy (%)
- Total self-generated electricity (GWh)
- Total self-generated steam (GWh)
- NOx absolute emissions (ton)
- NOx emission intensity (kg/ton production)
- SOx absolute emissions (ton)
- SOx emission intensity (kg/ton production)
- Volatile Organic Carbon (VOC) emissions (ton)
- VOC emission intensity (kg/ton production)
- COD emissions (ton)
- COD emissions intensity (kg/ton production)
- Fresh water intake (1000 m3)
- Fresh water intake intensity (m3/ton production)
- Percentage water in stressed regions (%)
- Fresh water consumption (1000 m3)
- Fresh water consumption intensity (m3/ton production)
- Percentage water in stressed regions (%)
- Total waste (ton)
- Waste intensity (kg/ton production)
- Hazardous waste (ton)
- Of which disposed to landfill (ton)
- Percentage reusable hazardous waste (%)
- Total Nobian production (kton)
- Suppliers assessed on sustainability in terms of spend (%)
- Manufacturing sites with ISO 14001 certificate (%)

Our competence, independence and quality control

DNV established policies and procedures which are designed to ensure that DNV, its personnel and, where applicable, others are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. Our multi-disciplinary team consisted of professionals with a combination of environmental and sustainability assurance experience.

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- Global headcount Nobian employees (#)
- % Female in workforce (%)
- % Female in senior positions (%)
- Employee turnover rate (voluntary and involuntary) (%)
- Total reportable incident rate (TRR) for employees, temporary workers and contractors (per 1.000.000 hours worked)
- Lost time injury rate (LTIR) for employees, temporary workers and contractors (per 1.000.000 hours worked)
- Total reportable incident rate (TRR) for employees, temporary workers (per 1.000.000 hours worked)
- Lost time injury rate (LTIR) for employees, temporary workers (per 1.000.000 hours worked)
- Total reportable incident rate (TRR) for contractors (per 1.000.000 hours worked)
- Lost time injury rate (LTIR) for contractors (per 1.000.000 hours worked)
- Fatalities (#)
- Process safety incident counts - level 1 (#)
- Process safety incident counts rate - level 1 (per 1.000.000 hours worked
- Process safety incident counts - level 2 (#)
- Process safety incident counts rate - level 2 (per 1.000.000 hours worked
- Process Safety Total Incident Rate (PSTIR) combined (per 1.000.000 hours worked)
- Manufacturing sites with ISO 45001 certificate (%)
- Directors (#)
- Average director tenure (years)
- Independent directors (#)
- Independent directors (%)
- Women on the board (#)
- Women on the board (%)
- Frequency of board updates on ESG (Periodically)
- Board oversight of climate strategy (Y/N)
- Code of Conduct, anti-discrimination, anti-harassment (Y/N)
- Anti-corruption, anti-bribery (Y/N)
- Business partner Code of Conduct, including suppliers (Y/N)
- Health, Safety, Environment and Security (HSE&S), including product stewardship (Y/N)
- Sensitive country policy (Y/N)

Inherent limitations

All assurance engagements are subject to inherent limitations as selective testing (sampling) may not detect errors, fraud or other irregularities. Non-financial data may be subject to greater inherent uncertainty than financial data, given the nature and methods used for calculating, estimating and determining such data. The selection of different, but acceptable, measurement techniques may result in different quantifications between different entities.

Our assurance relies on the premise that the data and information provided to us by Nobian have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Limited Assurance Report.

To assess the Selected Information, which includes an assessment of the risk of material misstatement in the Report, we have used Nobian's Basis of Reporting (the "Criteria"), which can be found on pages 49-54 (online version) and pages 52-57 (print version) of the Report.

2. SASB Indicators

RT-CH-110a.1, RT-CH-110a.2, RT-CH-120a.1, RT-CH-130a.1, RT-CH-140a.1, RT-CH-140a.2, RT-CH-140a.3, RT-CH-150a.1, RT-CH-210a.1, RT-CH-320a.1, RT-CH-320a.2, RT-CH-410b.2, RT-CH-410c.1, RT-CH-530a.1, RT-CH-540a.1, RT-CH-540a.2

We have not performed any work, and do not express any conclusions, on any other information outside of the Subject Matter that may be published in the Report or on Nobian's website for the current reporting period or for previous periods.

Our conclusions

1. Selected Information

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information is not fairly stated and has not been prepared in all material respects, in accordance with the Criteria. This conclusion relates only to the Selected Information and is to be read in the context of this Independent Limited Assurance Report, in particular the inherent limitations.

2. SASB Indicators

Based on the work undertaken, nothing has come to our attention that causes us to believe that the Selected Indicators are not fairly stated and has not been prepared in all material respects in accordance with the Industry standard Chemicals Sustainability Accounting Standard 2018, prepared by the Sustainability Accounting Standards Board (SASB).

Responsibilities of the Management of Nobian and DNV

The Directors of Nobian have sole responsibility for:

- Preparing and presenting the Selected Information in accordance with the Criteria;
- Designing, implementing and maintaining effective internal controls over the information and data, resulting in the preparation of the Selected Information that is free from material misstatements;
- Measuring and reporting the Selected Information based on their established Criteria; and Contents and statements contained within the Report and the Criteria.

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Criteria and to report to Nobian Group in the form of an independent limited assurance conclusion, based on the work performed and the evidence obtained. We have not been responsible for the preparation of the Reports.

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Standard and level of Assurance

We performed our work using DNV's assurance methodology VeriSustain™, which is based on our professional experience and international assurance best practice including the International Standard on Assurance Engagements 3000 ("ISAE 3000"). We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our Assurance Opinion. We are providing a 'limited level' of assurance.

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement; and the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. We planned and performed our work to obtain the evidence we considered sufficient to provide a basis for our opinion, so that the risk of this conclusion being in error is reduced but not reduced completely.

Basis of our conclusion

1. Selected Information

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information; our work included, but was not restricted to:

- Conducting interviews with Nobian's management, to obtain an understanding of the key processes, systems and controls in place to generate, aggregate and report the Selected Information;
- Conducting on-site visits to Delfzijl (Netherlands) and Ibbenbueren (Germany), and teleconferences with different sites including the headquarter to review processes and systems for preparing site level data consolidated at Group level. We were free to choose the sites on the basis of their material contribution to Nobian's data;
- Performing limited substantive testing on the most significant contributors, to check that their data had been appropriately measured, recorded, collated and reported;
- Reviewing that the evidence, measurements and the context provided to us by Nobian for the Selected Information is prepared in line with the Criteria;
- Assessing the appropriateness of the Criteria for the Selected Information;
- Reading the Report and narrative accompanying the Selected Information within it with regard to the Criteria; and
- Review of supporting evidence for key claims in the Report; our checking process prioritised the most material claims at a group level.

2. SASB Standards

We are required to plan and perform our work in order to form an opinion over the reporting of selected indicators in accordance with the Chemicals Sustainability Accounting Standard 2018, prepared by the Sustainability Accounting Standards Board (SASB).

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DNV Business Assurance Germany GmbH

Essen, Germany
11 May, 2023

DNV Business Assurance Germany GmbH is part of DNV – Business Assurance, a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance. www.dnv.com

Colophon

Cautionary statement and reference information

This report contains forward-looking statements which are subject to risks and uncertainties, and actual results and events may differ considerably from those expressed within them. Many of these risks and uncertainties relate to factors that Nobian is unable to control or estimate precisely, such as future market and economic conditions, the behaviour of other market participants, costs of raw materials, changes in law, technological developments and legal judgements and stipulations of regulatory bodies that affect the activities of Nobian. You are cautioned not to place undue reliance on these forward-looking statements. Nobian does not undertake any obligation to update the forward-looking statements contained in this report.

This report is a Nobian publication

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SUSTAINABILITY REPORT 2022

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