2023 SUSTAINABILITY REPORT

ELEVATING SUSTAINABILITY

Leveraging Our Foundations for a Resilient Future

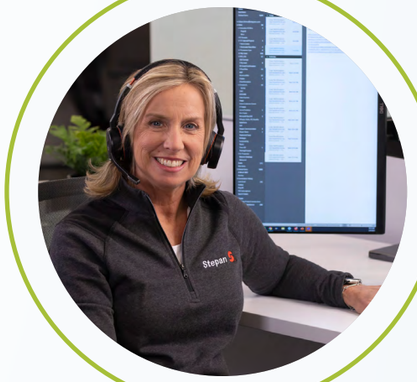
Stepan

CONTENTS

About This Report

GRI 2-3

Stepan Company ("Stepan" or the "Company") invites you to read our annual Sustainability Report, which demonstrates our commitment to promoting ethical and responsible business practices, as well as social and environmental responsibility. This report emphasizes our current initiatives and performance in 2023, unless otherwise stated. It provides an update to our 2022 Sustainability Report, published in June 2023. Stepan reports in accordance with the 2021 Universal Global Reporting Initiative (GRI) Standards, which apply from January 1, 2023, to December 31, 2023, as well as the Sustainability Accounting Standards Board (SASB) Chemicals Standard. We also map our climate disclosures with the Task Force for Climate-Related Financial Disclosure's (TCFD) guidelines. For this report, ERM CVS provided external limited assurance of our 2023 Scopes 1 and 2 greenhouse gas emissions and energy data, as well as limited assurance for restated 2020 and 2021 Scope 1 emissions, based on the Greenhouse Gas Protocol reporting criteria. We continue building our readiness strategy toward further data assurance for water use and waste by standardizing data collection and reporting criteria. For more information on Stepan, please visit stepan.com. If you have any questions or comments, please contact us at sustainability@stepan.com.



MESSAGE FROM EXECUTIVE LEADERSHIP

Message from the CEO

As a global specialty chemicals manufacturer, Stepan proudly serves diverse markets with solutions that enrich everyday life. Through our advancements in manufacturing capabilities, sustainability focused innovation work and strategic supply chain management, we continue to leverage the foundations we've established over the past decades for a resilient future.

While 2023 was a challenging year for the chemical industry, our skilled and dedicated teams drove progress toward our long-term sustainable growth strategy. Our work and collaboration with customers and other key stakeholders accelerated and was centered around a cleaner and more sustainable world. We continued work on scale-up of fermentation technologies that will diversify the markets in which we participate.

At our manufacturing sites, we expanded investments for renewable electricity, including completion of on-site solar power generation at our Salto, Brazil facility and a Power Purchase Agreement (PPA) at our Voreppe, France facility. We now source more than 50% of our electricity from renewable sources, a key lever for reducing our carbon footprint. We also implemented wastewater reduction and resource efficiency projects. In 2023, we achieved a 42% reduction of water withdrawn for sites we've been tracking since 2016, and we worked to find opportunities to reuse resources and reduce waste. Teams across our facilities helped drive other sustainability-focused initiatives, including optimizing logistics planning and attaining International Sustainability and Carbon Certification (ISCC) PLUS supply chain certifications for managing sustainable raw materials and products across our value chains. Each of these initiatives help us reduce our environmental footprint and operate more efficiently.

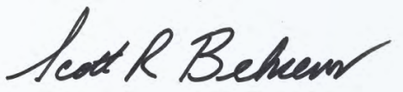
Our teams focus on finding ways to improve our products and processes through innovation, optimization and integration of new technology. In 2023, we worked to develop a new Safe and Sustainable by Design framework that will integrate current tools for product carbon footprinting and product safety evaluations into a unified approach for our innovation and development programs. This work, along with our supplier engagement efforts, will enable us to expand our portfolio of more sustainable products and processes.

Close customer partnership continues to guide our business focus, and we've invested to deliver a growing number of products with biobased, biocircular or other sustainability-related attributes. Our teams remain dedicated to working closely with customers and industry partners to explore solutions to challenging issues such as end-of-life material re-use and new technologies to reduce carbon emissions. These partnerships are critical for gaining diverse perspectives that can lead to new innovation to address these challenges.

Everything we do is driven by our experienced and dedicated workforce, and our top priority is ensuring the safety of our employees and our communities of operation. As we push for top quartile safety performance, we remain committed to investing in the tools, training and resources our teams need to drive a safety mindset every day. In 2023, we took a step backward from our progress toward a Total Recordable Incident Rate (TRIR) of 0.25, and we are determined to get back on track for our ambitious goal. We continue to offer robust training and development programs that help our employees develop necessary skills and pursue their career ambitions. We know that we are stronger because of the diversity of perspectives, skillsets and abilities represented by our employees, and we want our employees to know their contributions are valued.

Our goal over the past years has been to integrate sustainability across functions and to standardize a sustainability mindset. While work remains, we have made great strides by establishing sound foundational elements and building out the key management systems, programs and practices that are described in this report. These initiatives allow for a more structured approach to sustainability and improved data management practices, allowing stronger communication to our various stakeholders. With growing requirements for mandatory reporting, Stepan will work to remain agile and responsive while also continuing our commitments to organizations such as the TCFD and the United Nations Global Compact (UNGC) and its Ten Principles for Businesses.

In closing, I would like to extend my appreciation to Stepan's employees and our many partners for helping us progress in our commitment to sustainability. Your efforts have not only made a significant impact for our organization, but also for our planet. I am proud of the work you do every day. Thank you for your hard work, your innovative ideas and your dedication to our shared vision. I am confident we will uphold our established success and build toward a more sustainable, resilient tomorrow.



Scott R. Behrens
President and Chief Executive Officer

Perspectives From Stepan's Executive Leadership Committee: Jason Keiper (Chief Technology & Sustainability Officer) and Rob Haire (Executive VP, Supply Chain)

What are some of the key strategies that Stepan is prioritizing for longer-term sustainability?

JK: Stepan is taking a multifaceted approach to build out our sustainability ambitions, with a focus on broadening our portfolio of safe and sustainable products and processes. This requires work across our teams, from raw material procurement to supply chain certifications, data analytical capabilities, innovative research and development, process optimization and more. Over the past few years, we formalized processes related to a sustainable raw materials (SRM) program, invested significantly in new technologies, opened new opportunities for products delivering sustainability benefits and partnered with our manufacturing sites to find ways to do our work more efficiently. To transition toward a more sustainable business, we'll depend on growing a sustainability mindset across each Company function, much like safety at Stepan is today.

RH: Operational excellence is the key focus for our Supply Chain team. This includes prioritizing process safety and safety for all our workforce. It also includes a focus on running our plants efficiently and reliably. These principles tie directly to sustainability and are foundational to other sustainability-focused opportunities. By eliminating spills or accidental releases, we reduce environmental impact, costs to the company and risk to employees and communities. By operating our plants with a focus on efficiency, we work to be smart about the energy and materials we purchase, we build strategic industry partnerships to keep resources in use and we reduce waste. This is good for Stepan and good for the environment.

How does Stepan integrate sustainability thinking into its various functions?

JK: This is ongoing work. We've driven a lot of progress over the past years and see exciting shifts across the Company. Some of the key efforts have focused on innovation and technology development in areas with clear sustainability drivers. Successful growth related to our fermentation capabilities depends on collaboration across many teams—Quality, Research and Development (R&D), Process Technology Development, Procurement and Marketing. We're also prioritizing a Safe and Sustainable by Design approach that brings together broad functions to drive product innovation based on qualitative and quantitative evaluation. Being able to quantify our environmental impact and having quality data for monitoring and tracking is a significant area of focus and ties together diverse functions. Other examples are the work we have done to establish Regional Supply Chain Sustainability Councils across our areas of operation and restructuring our Environmental, Social and Governance (ESG) Steering Team to prioritize topics such as Sustainable Growth and Environment and Resources. You can read more about the team's work in this report, but key benefits have been stronger and more integrated engagement across our sites and functions, as well as regular two-way communications for understanding potential challenges and emerging opportunities.

RH: For our Supply Chain team, we have strong safety initiatives and processes in place, as well as clearly defined goals focused on eliminating spills and accidental releases. We have regional and cross-regional engagement opportunities for reviewing incidents or challenges that our sites experience, lessons learned and actions implemented to reduce future risk. Environmental performance monitoring is part of the focus as well. We continue work to roll out our environmental Key Performance Indicator (KPI) tracking process, and each of our sites helps to deliver data needed for tracking water, waste, energy use and safety metrics.

How does Stepan balance competing priorities that can sometimes delay progress on sustainability goals?

JK: We certainly take the long view with our program, and we know there will be periods with quick successes and other periods of slower gains. With new sustainability-focused requirements and an evolving technological landscape, it takes time to establish new systems, capabilities and processes to deliver on longer-term goals. Building effective partnerships, both internally and externally, is key to helping overcome hurdles and enabling breakthroughs.

RH: We do sometimes see trade-offs in terms of environmental performance associated with regulations or growth in new areas. For example, we have diverse regulations that we have to respond to. Sometimes, actions that we take to comply with a regulation for one issue can impact our performance in a different area. In some cases, we may be unable to avoid the trade-off, but having strong data at each stage of project development will help us make more informed decisions about near- and long-term performance. We also work to have our sites certified to recognized frameworks such as the International Organization for Standardization (ISO) standards. This helps maintain focus on best practices and operational excellence, with ongoing opportunities for improvement. When robust foundational processes are in place, we are more likely to see sustainability-related improvements, even when faced with competing priorities.

Jason Keiper

Jason Keiper
Vice President and Chief Technology and Sustainability Officer (CTSO)

Rob Haire
Executive Vice President, Supply Chain

ABOUT STEPAN

GRI 2-1, 2-6

Stepan Company delivers innovative chemical solutions for a cleaner, healthier, more energy efficient world.

Stepan is committed to providing innovative chemical solutions for a cleaner, healthier, more energy efficient world. We are a leading global manufacturer of specialty chemicals, and we aim to leverage our capabilities to deliver products that help address market challenges and build on opportunities. As part of our mission, we continue to grow our business in areas that offer sustainability benefits while building on our core chemistries. With growth into new markets, supply chain practices that enable products with lower overall environmental impact and innovation strategies that help deliver new technologies and services, Stepan is positioned to bring sustainable value to our customers and contribute to a resilient future.

IN THIS SECTION

Company Values →

Stepan at a Glance →

Our evolving portfolio of chemistries, products and services promotes diverse applications and delivers benefits related to the environment, human health and well-being, energy savings and agricultural productivity. As we progress on our sustainability journey, we work to implement and maintain best practices related to environmental and resource management. In 2023, we expanded our efforts to promote efficient use of resources and improve product footprint from product ideation to customer end use.

We take great pride in our employees as they devote their careers to producing chemical solutions in accordance with our Company Values. We work alongside our customers, suppliers and other partners to facilitate development of more sustainable and economically viable solutions that contribute to a sustainable future.

Stepan's nearly 2,400 permanent full-time employees across 14 countries (Brazil, Canada, China, Colombia, France, Germany, India, Mexico, the Netherlands, the Philippines, Poland, Singapore, the United Kingdom and the United States) are committed to continuously improving our practices and executing our strategic goals. Our extensive network of 22 production facilities enables us to meet the manufacturing and product requirements of our customers and expands our capabilities and expertise globally.

Stepan delivered nearly 1,200 products to more than 2,500 consolidated customers (each individual customer potentially having multiple subsidiaries) across a diverse set of industries in 2023 through our work in three core business segments: Surfactants, Polymers and Specialty Products.

Stepan's Surfactants segment serves a multitude of consumer uses ranging from personal care, cleaning and disinfecting, and provides custom applications for the agriculture, oilfield and construction markets. In the Polymers segment, Stepan offers a variety of innovative products for insulation, coating, adhesive, sealant and elastomer (C.A.S.E.) applications, as well as components for automotive, boating and other industrial products. In the Specialty Products segment, Stepan is a leader in production of flavors, emulsifiers and solubilizers used in the food, flavoring, nutritional supplement and pharmaceutical industries.

Serving our customers and maintaining our position as an industry leader of chemical solutions in these three business segments depends on Stepan's ongoing investments in growth and innovation.

Our global network of technical experts, based across 14 R&D Centers, specializes in synthesis, product design and development, formulation development, process technology and analysis. This team is vital to develop goods that solve real world needs with an ongoing focus on safety for people and the environment. Our growing product offerings include alternatives with sustainability benefits such as being biobased or having reduced impact, solutions focused on enhancing agricultural systems, products that support human health and sanitation and products that encourage responsible use of resources.

Company Values

While 2023 was a challenging year for Stepan—as well as for the chemical industry more generally—we continued to drive progress on key strategies for long-term growth into new and existing markets with our products, sustainable solutions and services. Notably, we established capabilities to deliver biobased and biocircular polymers to the market and positioned ourselves to offer more diverse products carrying sustainability attributes. Stepan advanced efforts to build capabilities in fermentation technology through ongoing R&D investments and pilot-scale production, and our Agricultural Formulation Services team delivered new formulations around biological solutions.

Key to our long-term growth is the expansion of our alkoxylation capacity and growth opportunities in core surfactant technologies for various end-use markets including agriculture, construction and household goods, to be offered by our Pasadena, Texas facility. Construction at the site continued to progress in 2023. We also continued to integrate the recently acquired surfactant business and associated assets of PerformanX Specialty Chemicals, LLC, further strengthening our standing as a leader in specialty alkoxylates.

In response to regulatory limits on 1,4-dioxane, in 2023, we finalized investments at two manufacturing facilities in North America to produce low 1,4-dioxane products. Stepan now operates the largest installed low 1,4-dioxane production capacity for the North American merchant market.

As part of our commitment to continuous improvement across our operations, we prioritize the safety of our employees and communities while conducting business according to the highest ethical and environmental standards. In 2023, Stepan conducted a Voice of Customer Survey, and 91% of the respondents agreed or strongly agreed that Stepan Company operates with integrity. Our manufacturing teams seek to reduce our environmental impact and implement projects that conserve energy and resources. This includes converting to on-site solar power at our Salto, Brazil facility; investment in Stepan's first PPA for renewable energy at our Voreppe, France facility; work to reduce waste and energy consumption; and a focus on ISO certifications for environmental and energy management. Ongoing training and implementation of tools and strategies to promote workplace safety were priorities for 2023, as in prior years.

In 2023, our Sustainable Growth team fostered detailed discussions with our customers and suppliers regarding Stepan's sustainability strategy and our product lines. We promoted a strategy that expanded the use of more sustainable raw materials, increased supplier engagement for near-term impact and enhanced mid-term portfolio management and long-term innovation strategies, which received positive feedback from stakeholders. Part of this effort included working with our suppliers to obtain primary product carbon footprints (PCF) for existing raw materials and exploring opportunities for lower PCF alternatives. Looking ahead, this information will support development of product lines centered on reduced global warming potential.

Stepan's recent ISCC PLUS certifications opened new opportunities for sustainability focused products beginning in 2023. We also progressed our supplier assessment program, achieving evaluation of 80% of our raw materials and packaging suppliers by spend through the EcoVadis sustainability assessment tool and expanding evaluation of our transportation and logistics services suppliers.

We operate with an unwavering focus on responsibility and integrity, and we strive to establish ourselves as a preferred partner for our customers. Looking forward, we plan to continue diversifying the markets we serve and identifying growth opportunities aligned with global environmental and societal needs. We will concentrate our efforts on energy efficiency, resource conservation, health and sanitation, soil health and circularity.

91%

of respondents to our Voice of Customer Survey agreed that we operate with integrity

STEPAN AT A GLANCE

MARKETS SERVED

- Personal Care
- Phthalic Anhydride
- Industrial Products
- Coatings, Adhesives, Sealants and Elastomers
- Pharmaceutical, Medical Nutrition and Dietary Supplements
- Household, Industrial and Institutional Cleaning and Disinfection
- Insulation
- Construction
- Agriculture
- Oilfield

HEADQUARTERS
Northbrook, Illinois, USA

TOTAL EMPLOYEES
2,393

FORMULATIONS
390

YEAR FOUNDED
1932

BUSINESS SEGMENTS
Surfactants, Polymers and Specialty Products

OPERATIONS
22 manufacturing sites in 12 countries

PRODUCTS
1,194

2023 NET SALES
$2.3 billion

We believe a foundation of ethical business practices and focus on growth and product innovation leads to long-term success.

GOVERNANCE

GRI 2-12, 3-3

Stepan maintains an ongoing commitment to the highest standards of corporate governance, ethics, integrity and compliance. Our governance framework prioritizes delivery of long-term value and accountability to our stockholders, customers and other stakeholders. We believe that a foundation of ethical business practices and a focus on growth and product innovation leads to long-term success. Our Code of Conduct outlines the practices and behaviors that we expect of our employees and other workers, and our Third-Party Code of Conduct outlines analogous expectations for ethical and responsible practices by our business partners. We publicly communicate our Inclusion and Diversity Policy on the Company website, available in multiple languages.

IN THIS SECTION

Sustainability Governance →

Board of Directors

Stepan's Board of Directors is comprised of eight members, six of whom are independent (through part of 2023, there were seven members). The Directors collectively oversee global operations and execution of our strategic growth, leveraging a range of experience, qualifications, skills and perspectives. Selection of Board members considers a candidate's expertise, business background, industry experience and other demographics. Stepan's current Board is made up of five men and three women, reflecting our commitment to gender diversity.

Our Corporate Governance Guidelines and committee charters outline expectations for and responsibilities of the Board and its four committees—Audit; Compliance; Human Capital and Compensation; and Nominating and Corporate Governance.

Top row, left to right: F. Quinn Stepan, Jr. (Chairman of the Board), Scott R. Behrens (President and CEO), Lorinda A. Burgess, Randall S. Dearth

Bottom row, left to right: Joaquin Delgado, Susan Lewis, Jan Stern Reed, Edward J. Wehmer

Governance Framework

Operating Committee
Stepan's Executive Leadership team

- **ESG Subcommittee**
- **Cost & Operational Excellence Subcommittee**
- **Growth & Innovation Subcommittee**

Sustainability Governance

Stepan recognizes that sustainability-related issues could affect company activity and performance, as well as our customer base, value chain partners and the environments in which we operate. We monitor these issues thoughtfully and work to respond effectively to impacts, risks and/or opportunities relating to issues that may arise.

Stepan's President and CEO provides approval, review and guidance for identified sustainability-focused issues and proposed actions for the Company, including those concerning climate-related issues and opportunities. The Board oversees, and the President and CEO is responsible for, the following matters:

- Strategic planning
- Risk management policies and processes
- General oversight of the business
- Significant corporate actions
- Environmental, Social and Governance (ESG) and climate matters including:
  - Stepan's plans and practices
  - Current trends
  - The development and use of measurement and tracking metrics

Our ESG Subcommittee, a subgroup of Stepan's executive leadership team, was established in 2022 and reports to the executive leadership team. The group is charged with advancing the Company's current and future sustainability-related priorities and enabling the Company to operate with agility and resilience in response to these matters. Through this governance structure, Stepan aims to capture multi-dimensional perspectives and facilitate decision-making on relevant issues with input from cross-functional leaders.

The ESG Subcommittee meets on a bimonthly basis and provides oversight for the corporate ESG Steering Team, monitors progress in implementing Stepan's sustainability strategy and regularly reports to the Board, which ultimately oversees sustainability matters, including climate and weather-related issues. Where ESG gaps are identified or new issues emerge, the Subcommittee provides recommendations and direction for developing necessary processes for management and oversight.

In 2023, the ESG Subcommittee continued to guide the Company's sustainability commitments, including alignment with the Task Force on Climate-Related Financial Disclosures (TCFD), procurement of renewable electricity, development of water management plans, sustainable raw material sourcing, inputs regarding Stepan's sustainable growth strategy, operations management and resource use management. The Subcommittee also provided guidance on emerging regulations, such as the European Union Deforestation Regulation (EUDR), the EU Corporate Sustainability Reporting Directive (CSRD) and the U.S. Securities Exchange Commission (SEC) climate-related reporting requirements.

Functional roles on Stepan's ESG Steering Team continue to diversify as ESG-related responsibilities and opportunities evolve. The team's executive leader is Stepan's Chief Technology and Sustainability Officer (CTSO), who reports to the President and CEO. The Steering Team reports quarterly to the ESG Subcommittee of the executive leadership team. The CTSO oversees the implementation of sustainability materiality assessments for the Company, communicating significant findings to the executive leadership team and the Board. The ESG Steering Team consists of two working groups—the Sustainable Growth Team and the Environment and Resources Team—which provide insights, facilitate management and support our daily sustainability efforts and obligations. Key responsibilities of these two groups include development of a Sustainable Raw Materials (SRM) program, expanded supplier engagement through Stepan's Partner for Sustainable Supply (PaSS) program, development of tools and capabilities to quantify our product impacts (including PCF), ensuring readiness to respond to emerging regulations and building resource efficiency roadmaps for our manufacturing sites.

In early 2023, Stepan initiated two new Regional Supply Chain Sustainability Councils, one for our Latin American region and another for Asia. These councils promote shared learning and streamline our efforts related to environmental performance, resource conservation and safety across Stepan's manufacturing sites. The leaders of each regional council are members of our ESG Steering Team.

We aim to embed a culture of sustainability across all business functions at Stepan. The ESG Steering Team works with our Human Resources business partners and enthusiastic leaders across our sites to guide social and community engagement, prioritizing responsible practices.

Stepan understands that transparency, disclosure and reporting are important tenants of a robust governance program. As such, we currently align our reporting with broadly recognized voluntary ESG frameworks and disclosures including Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and TCFD. We are also working toward readiness for forthcoming mandatory reporting frameworks.

Please visit our Corporate Governance webpage in the Investors section of our website to learn more about our governance structure, procedures and policies.

In 2023, Stepan was recognized for our sustainability progress and commitments as the Most Sustainable Chemical Company by World Finance magazine.

SUSTAINABILITY AT STEPAN

GRI 2-12, 2-13, 2-14, 3-3

Our Approach

Stepan teams look for opportunities to lessen the environmental, health and safety impacts of our business activities while producing top performing products. Our efforts include comprehensive and ongoing reviews of our key suppliers' sustainability performance, continued focus on product and process impact analysis, prioritization of safety, investment in resource use efficiency and commitment to human and labor rights across our value chain. In 2023, we focused on building our sustainable raw materials strategy to produce new product offerings using lower impact raw materials. In support of this priority, Stepan achieved our first International Sustainability and Carbon Certification (ISCC) PLUS certifications at several sites, creating opportunities to deliver products with verifiable sustainability claims. This is one step in a multi-faceted approach that includes near-term and longer-term initiatives to expand our portfolio of lower impact products. We continue to place strong focus on key stakeholder partnerships and collaboration to drive ongoing progress toward a more sustainable future.

IN THIS SECTION

Stakeholder Engagement and Materiality

GRI 2-29, 3-1

Stepan regularly seeks feedback from a diversity of stakeholders, including employees, customers, suppliers, investors and local communities. We interact with our stakeholders to identify the most important sustainability topics to them and our business and use their input to guide our planning and strategy, ensuring we remain true to our Company Values. Our stakeholder engagement strategy utilizes formal and informal techniques to identify and address emerging sustainability and climate-related impacts, risks and opportunities. To encourage open and continuous communication, we engage our stakeholders in several ways:

Employees: Direct engagement, town halls, surveys, site safety committees, email, Company portal, digital signage, social media, webcasts and ethics hotline

Customers: Email, surveys, client panels and meetings, site visits, virtual laboratory collaborations, tradeshows and events, website and live chat, online platforms, social media and digital portals

Investors: Annual stockholders meeting, quarterly earnings calls, U.S. Securities and Exchange Commission (SEC) filings, website, conferences, email, telephone calls and meetings

Suppliers: Annual and periodic meetings with key suppliers at oleochemicals and petrochemicals industry tradeshows, Environmental, Social and Governance (ESG) focused assessments and best practice sharing between sustainability teams

Local communities: Volunteer support, philanthropic giving, science and engineering training, chemistry education days, safety awareness activities and training, including with local first responders.

According to Global Reporting Initiative (GRI) guidance, we conducted an initial materiality assessment in 2021 to identify priority sustainability topics for our business. Our 2023 ESG priorities remained in alignment with those identified in 2021. These topics include:

- Regulatory compliance
- Product stewardship
- Climate change
- Innovation
- Energy
- Greenhouse gas (GHG) emissions
- Diversity, equity and inclusion
- Occupational health and safety

Stepan is currently preparing for an updated materiality assessment to inform our ongoing reporting commitment to GRI as well as the upcoming EU Corporate Sustainability Reporting Directive (CSRD) regulation.

Stepan cultivates opportunities that strengthen our ability to provide sustainable solutions, innovative products and responsible management of our global operations.

2023 Sustainability Recognition

Stepan cultivates opportunities that strengthen our ability to provide sustainable solutions, innovative products and responsible management of our global operations. Our pledge to offer products that enable a safer, cleaner and more energy efficient world remains our guiding principle.

In 2023, Stepan was recognized for our sustainability progress and commitments as the Most Sustainable Chemical Company by World Finance magazine. World Finance recognizes companies that integrate ESG values into their businesses. This notable recognition is only possible because of Stepan's passionate workforce and expanding network of partners who help drive our progress and advance our ability to deliver sustainable growth.

External Accountability Frameworks

Stepan actively partners with prominent corporate advocacy organizations and implements nationally and internationally recognized sustainability and climate accountability frameworks and standards. Our affiliations cover membership commitments, certifications, reporting and external audits. By adhering to these established frameworks and standards, Stepan fulfills growing stakeholder demands for accountability and transparency in corporate disclosures. Our responsibility and accountability partnerships include:

- American Chemistry Council (ACC) Responsible Care®
- American Cleaning Institute (ACI)
- Carbon Disclosure Project (CDP)
- EcoVadis
- European Federation for Cosmetic Ingredients
- Global Reporting Initiative (GRI)
- International Organization for Standardization (ISO) Standards
- International Sustainability and Carbon Certification (ISCC) PLUS
- Roundtable for Sustainable Palm Oil (RSPO)
- Supplier Ethical Data Exchange (SEDEX)
- SEDEX Member Ethical Trade Audit (SMETA) standards
- Sustainability Accounting Board Standards (SASB)
- Task Force for Climate-Related Financial Disclosures (TCFD)
- United Nations Global Compact (UNGC)

Participation in these recognized organizations and frameworks informs our decision-making and guides implementation of best practices. Stepan has participated in several ranking frameworks for many years, including EcoVadis and CDP. In our most recent EcoVadis assessment capturing our 2023 performance, Stepan was ranked in the top 90% of "manufacturers of other chemical goods." Our ranking reflects Stepan's ongoing efforts to identify areas for continuous improvement related to business ethics, human and labor rights, environmental practices and sustainable procurement.

In addition to EcoVadis, our sustainability strategy is consistently informed by the UNGC and CDP. Stepan has been a proud signatory to the UNGC since 2018, actively endorsing the UN's Sustainable Development Goals (SDGs) and Ten Global Principles in the areas of human rights, labor, environment and anti-corruption. Our commitment extends to advancing the UN's overarching goals across our regions of influence. For more than ten years, Stepan has reported annually to the CDP Climate Change assessment, reporting on the Company's greenhouse gas emissions. In 2018, we broadened our CDP reporting to include disclosure of water usage across our global facilities through the Water Security Response, and in 2021, we began responding to the CDP Forest Disclosure.

Progress on Our Sustainability Goals

GRI 3-2

ESG PRIORITY TOPIC	GOAL	TARGET YEAR	2023 PROGRESS
Responsible Practices			
Ethics and Compliance	100% employee participation in Ethics and Compliance trainings	Ongoing	>99.0
Employee Safety	A Total Recordable Incident Rate (TRIR) of less than 0.25 across all Stepan facilities	2025	0.53
Environment, Resources and Climate Impact			
Emissions Reduction	Reduce Scope 1 and 2 GHG emissions (in metric tons) by 10% across all sites	2025	12% reduction
Water Conservation	Conduct water risk assessments for 100% of our sites and use results to develop risk management plans to strategically address key risks across our sites	2023	100% of sites
	Reduce global water usage by 40% across our 2016 baseline facilities	2025	42% across baseline sites
Renewable Energy	Source 20% of global electricity from renewable sources	2025	52% renewable electricity
Advantageous Products			
Sustainably Advantaged Products	Allocate 80% of our Research and Development (R&D) investment toward sustainable processes and products (measured in hours)	2023	86% of R&D team hours directed to innovation work had a sustainability focus

ADVANTAGEOUS PRODUCTS

Stepan delivers solutions with sustainability benefits through effective collaboration with suppliers, customers, our internal teams and outside organizations.

Our Commitment and Approach

GRI 3-3

At Stepan, we take pride in our ability to supply key products and services across a wide range of global markets. Through the work of our talented and dedicated teams, we advance our ambitions and drive progress on our goals, including expanding our portfolio of products with sustainability-related benefits. In 2023, we developed frameworks, allocated resources and established tools and partnerships to transform Stepan's sustainability approach from opportunistic to more systemic within our innovation and product development efforts.

IN THIS SECTION

We continue to recognize food security, health and sanitation, resource conservation and greenhouse gas (GHG) emissions mitigation as pressing global issues for which we endeavor to provide product-based contributions.

Stepan has prioritized strategic investment in manufacturing and fermentation technologies, as well as formulation services. This expands our portfolio of products based on materials generated from biological processes, with further market expansion anticipated in the coming years. The formal launch of our International Sustainability and Carbon Certification (ISCC) PLUS certified sustainable polyols was a key success in 2023, and we are working to build on this momentum. Additionally, we are positioned to increase delivery of polymers used in building insulation through enhanced production capacity at our Wilmington, North Carolina facility. Substantial investments aimed at strengthening our specialty alkoxylates business are anticipated to unlock growth opportunities across agriculture, construction and household end-use markets.

Products and Services for Sustainability Benefit

GRI 3-3, 306-1, 306-2 (a., b.)

Stepan delivers solutions with sustainability benefits through effective collaboration with suppliers, customers, our internal teams and outside organizations. Securing preferred raw material volumes, managing technological challenges, tracking the regulatory landscape and ensuring commercial viability are just some of the considerations that Stepan navigates as we expand our portfolio of sustainably advantaged products and services. Over the last year, Stepan gained valuable insight into emerging technologies and solutions, as well as the potential for cross-industry partnerships. Such engagements with associations and member companies help to drive progress and build key collaborations to address challenging issues.

For the past several years, Stepan advanced our ambitious goal to direct 80% of Research and Development (R&D) investments toward sustainable products and processes by the end of 2023. This effort emphasized Stepan's Polymers and Surfactants innovation programs, with an aim to grow products that positively impact sustainable food production, health and sanitation, energy efficiency and responsible use of resources. To track this work, Stepan also invested in development of new tools to capture detailed project information, resourcing and other metrics, allowing for stronger analysis of our R&D activities going forward.

Focusing on Stepan's innovation projects, in 2023, we directed 86% of our R&D team hours toward products with sustainability benefits. This included significant efforts on new technologies, such as products based on fermentation and our expanding activity with products entering the agricultural market. It also included our surfactant chemistries delivering benefits for human health and wellness, our polymers that enable improved energy efficiency, products with high biodegradability and other areas of positive impact. Looking across our full portfolio of work, approximately 73% of R&D team hours were directed to projects delivering sustainability benefits in areas including product and process innovation, technology development and customer or industry partnerships. Looking ahead, we will continue our focus on building our portfolio of safe and sustainable products. For more information, please visit the Sustainability-Focused Product Design and Impact Assessment section of this report.

Stepan Chemistries

At Stepan, we differentiate ourselves in the market by delivering high-performance products across diverse sectors. Our product portfolio comprises sustainably advantaged chemistries that contribute to the UN Sustainable Development Goals (SDGs). Stepan polymers cater to a range of markets, supporting the requirements for building insulation, fire retardancy, improved safety and product longevity. Our R&D teams develop solutions that address evolving expectations and regulations, such as improving air emissions or reducing waste.

Stepan's R&D and business teams continue to explore possible partnerships and product design options for end-of-life deconstruction and material reuse to promote further circularity in the building insulation market.

We offer products based on pre- and post-industrial recycled material through our high-performing polyisocyanurate insulating foams, Coatings, Adhesives, Sealants and Elastomers (C.A.S.E.) products and one-component foam applications. All STEPANPOL® rigid polyols in North America are UL 2809® certified for having at least 45% post-industrial recycled content, and our European STEPANPOL® and TERATE® products also carry UL certification for the same levels of post-recycled content.

86%

of R&D hours for innovation projects were directed to products with sustainability benefits

ACHIEVING ISCC PLUS CERTIFICATION

Stepan's rigid polyols and sprayfoam insulation play a crucial role in advancing compliance with global regulations to improve energy efficiency. Introducing ISCC PLUS certified products represents a pivotal step toward additional sustainability benefits. In the last year, Stepan obtained ISCC PLUS certification at four facilities and we are now positioned to deliver products with sustainability attributes such as being produced from biobased or biocircular materials. Our first orders for certified STEPANPOL® PS-2352-23 BioC and STEPANPOL® B-195 BioC will be manufactured at our Elwood, Illinois (Millsdale) and Wesseling, Germany sites, for use in the next generation of insulation products for select customers in Europe and North America. These raw materials are derived from non-food grade crops or from agricultural waste streams, and can reduce embodied carbon, offer enhanced insulation properties and provide versatile options with considerations for biobased or recycled content.

In 2023, Stepan's Polymers and Technical Service teams built an innovative processing technology named Smart Laydown™ with a goal of helping our customers optimize their production processes, optimize resource use and minimize waste during manufacturing. By incorporating advanced diagnostic capabilities, our service is designed to enhance customer experience and contribute to our long-term strategy of further integrating digital solutions, remote technical service and automation.

In other areas of Stepan business, we continue our investments in products and services that address sustainability-related interests. Stepan formally launched our Advanced Formulation Services (AFS) in 2022. This group partners closely with customers to develop solutions that take into account market needs, regional requirements and diverse regulations. Leveraging the team's technical capabilities and formulating expertise, we streamline product development for our agriculture customers globally, aiming at increased crop production, reduced environmental impact and responsible use of resources. The AFS team supported the development of leading technologies and biofertilizers that contribute to more sustainable agricultural practices.

Stepan actively invests in research on biological solutions and their integration with chemistry and application technology to promote plant and soil health benefits. While existing challenges must be addressed before this approach can be more broadly adopted, biologicals offer benefits related to reduced environmental impact, mitigating resistance issues and meeting food-related market demand.

Stepan's substantial investments in fermentation technology and manufacturing capabilities represent a key growth priority, with potential to expand our portfolio of products based on low-toxicity, readily biodegradable materials. In addition to growth potential in agricultural markets, we are pursuing opportunities to use these chemistries in the consumer goods space, including fabric care, sanitation, cleaning and personal care.

In addition to expanding manufacturing capacity for biologicals, Stepan is growing our capabilities for alkoxylation, with significant investments at our Pasadena, Texas site. Alkoxylates represent a core surfactant technology, and these investments position us for growth in various end markets. This includes cleaning and disinfection, agricultural products and personal hygiene, with a focus on naturally derived ingredients. Work at the plant is nearing completion and will significantly expand opportunities to efficiently deliver products to these key markets.

Sustainability-Focused Product Design and Impact Assessment

GRI 3-3

Sustainability is a key aspect for consideration in the early phases of Stepan's innovation process and includes evaluation of known or potential impacts.

As our customers increasingly inquire about the carbon footprint of their purchased materials, we continue identifying approaches to reduce the Scope 1, 2 and 3 GHG emissions associated with Stepan products. In 2023, Stepan formalized a focus on sustainable raw materials as a key driver for our product design and innovation strategy. Given that raw materials are the largest contributor to our Scope 3 emissions, finding drop-in alternatives with a lower footprint is key to reducing those emissions. This includes biobased or circular feedstocks, and/or raw materials produced with renewable energy. Stepan's commitment to ISCC PLUS certification enables us to support customers with products that carry externally validated sustainability benefits.

Over the past year, Stepan strengthened our capabilities to calculate product carbon footprints (PCFs) based on the Together for Sustainability PCF Guideline (TfS) for the chemical industry. This work not only supports our customers in their emissions reduction efforts, but also provides insights that inform portfolio development, raw material sourcing and other business decisions. Our ambition is to develop PCF data for a majority of our commercial products, with increased use of primary data. The PCF work complements our internal product assessment tool, which evaluates our products based on broad criteria related to product safety for human health and the environment, as well as other factors.

Our goal is to combine these product profiling tools with other information into a standardized evaluation of sustainability-related characteristics in the product design phase. Safe and Sustainable by Design (SSbD) principles are recognized as a best practice, and in 2023, Stepan worked with a third-party partner to develop a framework and roadmap aimed at enhancing the sustainability of Stepan's product portfolio using this approach. Looking ahead, we will further develop and formalize this approach with our teams.

Please refer to the Sustainable Materials Use and Sourcing section on page 31 or Products and Services for Sustainability Benefit on page 16 for more details.

Regulatory Compliance and Product Stewardship

GRI 3-3

We regularly assess the risks associated with our products to identify opportunities to improve their safety and sustainability and to ensure we remain in compliance with all applicable regulations. This includes evaluating safety considerations that could impact our employees during manufacturing and material handling, transport and delivery safety considerations and finished product safety for our customers. With the benefit of our recently developed *in silico* modeling tools, we can now conduct high-throughput screening for physical and chemical properties, environmental fate, ecotoxicity and human health endpoints for new and existing chemicals. These tools enable Stepan to identify potential risks and focus on developing innovative solutions to address them.

Stepan's Regulatory and Product Safety team collaborates with our R&D team to monitor evolving regulations relevant to our products. Internally, we leverage tools for efficient monitoring of regulations and information exchange. We also work with critical chemical industry stakeholders to promote information sharing, identify opportunities for ongoing improvement and advocate for scientifically robust positions on meaningful issues. In the last few years, Stepan directed considerable effort and implemented new technologies to comply with New York's 1,4-dioxane regulations and is now actively engaged in trade association advocacy efforts to support the U.S. Environmental Protection Agency (EPA) Toxic Substances Control Act's (TSCA) risk evaluation activity for 1,4-dioxane. Additionally, Stepan maintains an active partnership for the EPA Safer Choice program and works with EPA and other groups on initiatives related to promoting safe and sustainable chemistry.

Stepan is driving progress to manage evolving global regulatory requirements. These provisions include the new EU regulations for lower allowable concentrations of 1,4-dioxane, ongoing management of Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) requirements globally and emerging regulations related to sustainability reporting and deforestation-free products. From a risk perspective, regulatory changes are dynamic, requiring time to comprehend and integrate into Stepan's operations. For this reason, emergent regulations remain a risk explicitly identified in the corporate risk matrix, a core tool of Stepan's Enterprise Risk Management (ERM).

Stepan promotes transparency by providing information on our product portfolio's environmental, social, health and safety impacts to all stakeholders. This information is made available on our website, in public records, or as part of the standard safety data we manage. For example, we provide Product Stewardship summaries on our website for chemistries that are identified as high priority, and we work to meet or exceed safety standards through adherence to applicable laws and regulations aimed at protecting the environment and public health. Stepan makes critical safety information readily available to our stakeholders through all stages of material handling and transport using the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals. Our memberships to the American Chemistry Council (ACC), the European Chemical Industry Council (CEFIC) and related bodies help ensure alignment with best practices and recognized standards to promote responsible chemicals management and transparent communications.

REGULATORY TOOL ENHANCEMENT

Stepan is implementing the System Applications and Products in Data Processing (SAP) Environment, Health, and Safety (EHS) Management Module to enhance substance volume tracking, manage the global chemical inventory and handling of dangerous goods and streamline Safety Data Sheet (SDS) and label generation. This multi-year project will facilitate systematic global compliance and allow for greater operational efficiencies.

Biodiversity and Ecosystems

Healthy ecosystems are vital for protecting biodiversity. They also play a key role for securing essential resources and mitigating climate change risks. Stepan promotes responsible and sustainable sourcing of our biobased raw materials through supply chain certifications and our Responsible Sourcing Policy. As an active member of Action for Sustainable Derivatives (ASD), we focus on gaining deeper insights into our palm material supply chain to understand the risks of deforestation and to help drive transformative change.

As Stepan expands into agricultural markets, we seek opportunities to offer market solutions that support soil health and minimize adverse impacts on ecosystems. For example, we offer a biofungicide that is listed by Organic Materials Review Institiute (OMRI) and helps organic crop growers control fungal infection as part of an integrated pest management program.

Teams across our regions of operation engage in habitat related projects at their workplace and in their communities. This includes cleanup of coastal areas, planting trees and clearing non-native species. Our team in the Netherlands has collaborated with a local organization over past years to understand nesting and feeding behaviors of seagulls that visit the site each spring. The birds are protected under a national regulation, and the site has implemented strategies to help ensure their safety during nesting season.

Our ongoing efforts to reduce operational impacts—including water consumption, waste generation, waste treatment, energy usage and emissions—are important in protecting ecosystem health as we shift toward more sustainable manufacturing practices. Stepan manufacturing teams have implemented numerous projects and continue to identify new opportunities. For example, beginning this year, our Stalybridge, U.K. team will conduct small-scale trials for use of reed beds in on-site treatment of water before it is returned to adjacent water bodies. Lastly, our focus on a SSbD framework will shape our portfolio in a manner that promotes minimized environmental impact. For more information on impact reduction initiatives, please refer to the Energy, Water Use, and Waste Reduction sections of this report.

Partnerships and Collaborations

GRI 3-3

Stepan engages with many organizations to foster new ideas, explore solutions to challenging issues, provide thought leadership, pursue new technologies and inform strategies to deliver beneficial impacts. This includes active participation in multiple industry organizations, engagement with academic and government organizations and work with trade associations globally.

Over the past year, Stepan continued our partnership with the Renewable Carbon Initiative (RCI) and ASD. We also continued our partnership with CO_2 Value Europe. For more information, please see the Sustainability-Focused Product Design and Impact Assessment section in this report.

THE NEW ERA OF INERTS: STEPAN CTSO PARTICIPATES AS PANELIST AT CPDA ANNUAL MEETING

Last September, Jason Keiper, our Chief Technology and Sustainability Officer (CTSO), served as a panelist at the Council of Producers and Distributors of Agrotechnology (CPDA) Annual Meeting, focusing on "The New Era of Inerts." Dr. Keiper presented on Stepan's biological and application technology for the agricultural sector. He highlighted work to enhance spray drift reduction, eliminate microplastics and promote the use of biobased products.

Dr. Keiper also discussed opportunities to improve sustainability in crop production from raw material sourcing to post application. Panelists spoke about some of the shared challenges in the industry and how fostering a collaborative space is beneficial as the future of agriculture depends upon innovation as a key driver. Such engagements play a key role in fostering collective dialogue among value chain stakeholders as they work to address agricultural challenges.

Stepan exceeded our Scope 1 and 2 emissions reduction goal by achieving a 12% decrease from 2016 levels.

ENVIRONMENT, RESOURCES AND CLIMATE IMPACT

Our Commitment and Approach

GRI 3-3

Stepan's vision for a cleaner, healthier and more energy efficient world drives our commitment to use resources responsibly and reduce our manufacturing and product footprints. Last year presented significant financial challenges that impacted the chemical industry; however, we found opportunities for emissions reduction, energy efficiency, water conservation and waste reduction.

IN THIS SECTION

A key ongoing priority is strengthening our data management capabilities. Access to reliable data is fundamental for effective management, planning for and driving continuous improvement related to safety, regulatory compliance, operational efficiency and engagement. It is also essential for our sustainability-related reporting, whether voluntary or mandatory.

The Stepan Management System (STEMS) advances our ability to capture and use comprehensive site data on safety and environmental compliance. In 2023, we integrated elements of sustainability reporting into STEMS for close alignment with recognized Environmental, Social and Governance (ESG) reporting frameworks (e.g., Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB)). After finalizing the development of our STEMS Key Performance Indicator (KPI) tool, we now focus our teams on change management, training, deployment, monitoring and timely reporting. In addition to tracking current metrics, Stepan continues to build out tracking processes for additional metrics, manage performance and evaluate improvement opportunities through detailed risk assessments. Outputs from this work will inform Environmental, Health, Safety and Security (EHSS) tactical plans.

The STEMS system is organized to align with mandatory reporting requirements and our teams are prepared to drive further alignment with future international-, national- and state-level requirements. New mandates for sustainability reporting, such as the EU Corporate Sustainability Reporting Directive (CSRD) and the U.S. Securities and Exchange Commission (SEC) requirements for climate reporting will require ongoing monitoring and updates to STEMS.

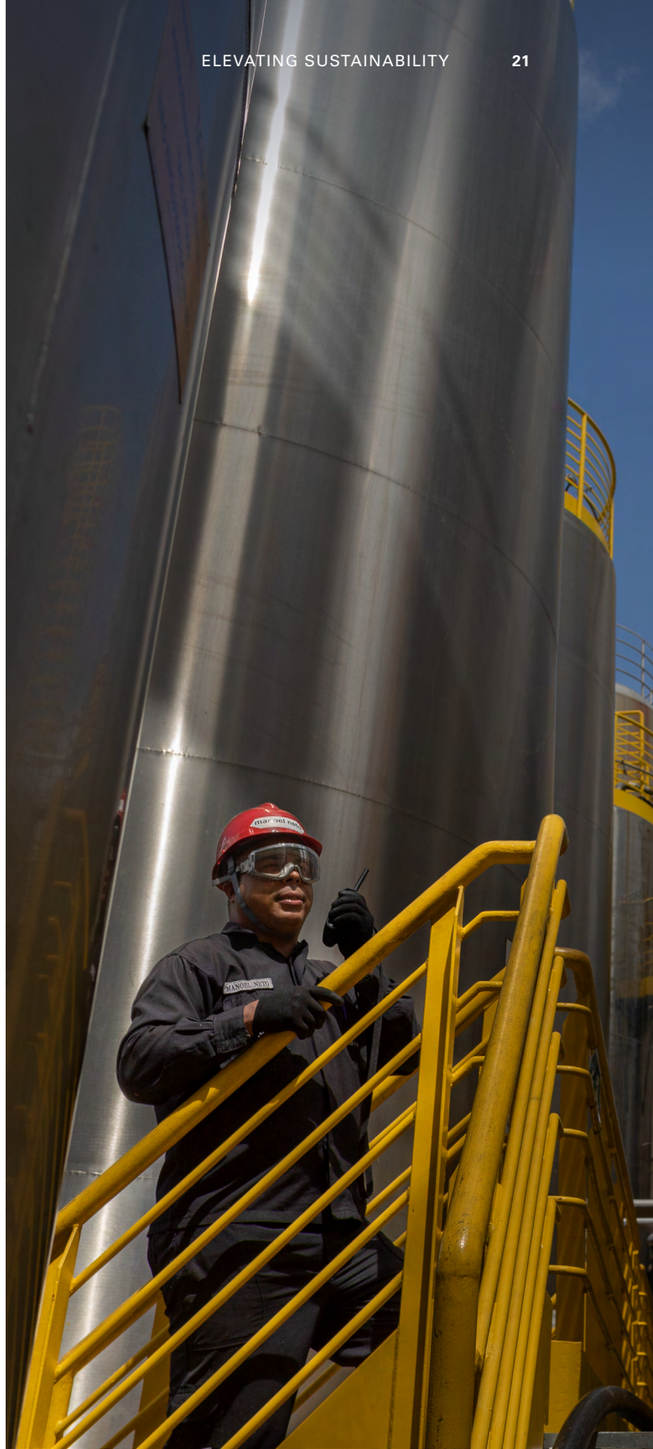
In 2023, Stepan expanded our Regional Supply Chain Sustainability Councils to include operational councils for our Latin America and Asia sites. These councils serve to enhance regional governance of sustainability, overseen at the highest level by executive leadership for strategic decision-making. Under this structure, our teams began defining long-term roadmaps for resource conservation and energy efficiency with a focus on establishing best practices that facilitate ongoing improvement. Results from previously conducted energy and water risk assessments are important inputs for this longer-term planning. Our teams also continue to evaluate opportunities to reduce waste and promote reuse of our manufacturing by-products. In 2024, we will reinforce stakeholder engagement and continue to develop longer-term management plans, guide site investments, inform business strategy and manage stakeholder expectations.

Access to quality data is fundamental for effective management, planning for and driving continuous improvement related to safety, regulatory compliance, operational efficiency and engagement.

The International Organization for Standardization (ISO) 50001 and ISO 14001 certifications define alignment with a rigorous set of criteria for energy and environmental management systems. Achieving ISO certification for energy and/or environmental management at Stepan sites establishes best practices that drive progress toward our longer-term efficiency priorities. Two of our Asia facilities and two European facilities are ISO 14001 certified, and two European facilities are ISO 50001 certified. We are working to have the remaining European sites certified to at least one of these standards over the next few years.

Stepan's U.S. operations conform to the American Chemistry Council (ACC) Responsible Care Management System (RCMS)®, and our facilities outside the U.S. participate in their country-specific Responsible Care® program equivalents. The Responsible Care® program prioritizes safe chemicals management and top EHSS performance. To achieve conformity with RCMS®, companies must demonstrate that they have robust processes and systems in place and continually strive for improvement in these areas.

Integrating sustainability criteria into operational procedures remains a priority and can help inform strategy and planning. This strengthens our ability to reduce our environmental impact and supports longer-term risk management. Our ESG Subcommittee and ESG Steering Team continue to steward us towards fulfilling these endeavors. For more information on Stepan's sustainability teams, please visit the Governance section of this report.



Emissions

GRI 305-5

Reducing greenhouse gas (GHG) and other air emissions is an ongoing priority for Stepan and our stakeholders. We actively investigate and identify opportunities to drive GHG emissions reductions across our value chain. Within our operations, our sites prioritize safety, operational excellence and efficiency. Longer-term Scope 1 emission reductions will depend on executing these priorities and implementing select projects to optimize processes. Stepan builds on our commitment to source renewable electricity, expanding the percentage of our sites covered by Renewable Energy Certificates (RECs), Guarantee of Origin (GO) certificates, Power Purchase Agreements (PPAs) or on-site renewables. This commitment helps to lower our Scope 2 emissions impact. Additionally, Stepan's Logistics team identified alternative transportation solutions that could support more efficient material movement—one lever for reducing our Scope 3 emissions.

In 2023, we worked to maintain our progress on our GHG emissions goals to reduce Scope 1 and Scope 2 emissions by 10% by 2025. While our manufacturing footprint has expanded over the past years, we have reduced these emissions by about 12% over our 2016 baseline. Emissions at some of our sites increased due to new processes installed to meet regulations for 1,4 dioxane, and we will continue our work to offset those increases and drive further emissions improvements. We annually report our Scopes 1 and 2 emissions to the ACC and to the Carbon Disclosure Project (CDP). An independent third party verifies our Scope 1 and 2 emissions data, along with our energy consumption data.

Stepan completed a Scope 3 inventory in 2022 to understand the GHG emissions attributed to our business on a more holistic and comprehensive level. As with other organizations in our industry, we determined that purchased goods and services significantly influence our overall emissions footprint, with raw materials representing the largest impact in that category. To further our understanding and capabilities in this area, Stepan formalized a supplier engagement process in 2023 to identify drop-in alternatives for more sustainable raw material solutions. In line with this effort, our manufacturing sites gained the necessary certifications for handling material with sustainability claims (see Our Approach section for more detail). This work is crucial as we build our strategy for reducing Scope 3 emissions, and it represents an area for growth as we continue to partner with customers to create products with lower environmental impacts.

In addition to GHG emissions, Stepan sites find ways to reduce other air emissions to improve air quality and reduce environmental impacts. This includes investments over the past years to reduce 1,4 dioxane, volatile organic compounds and emissions from wastewater holding areas at our various sites.

Stepan reduced our absolute Scope 1 and Scope 2 emissions by 12% over our 2016 baseline, with a manufacturing footprint that expanded during that time.

Energy

GRI 305-2

Sourcing renewable electricity is a key lever for reducing our operational emissions. About 52% of our global electricity procured in 2023 came from sources verified as renewable. Use of smaller-scale solar power is increasingly common at our sites for non-manufacturing needs, such as lighting for locker rooms and outdoor spaces. Several of our sites purchased RECs or GOs to cover electricity use during this time period, including our Manizales, Colombia; Vespasiano, Brazil; Stalybridge, United Kingdom, Voreppe, France and Elwood, Illinois (Millsdale) facilities. Stepan also invested in renewable energy generation for some facilities, including the Company's first on-site solar project implemented at our Salto, Brazil facility, with installation completed in 2023. We implemented this renewable energy project to mitigate the increased risk of power supply disruptions in the region due to extended drought. With on-site solar power generation, our Salto facility no longer competes for access to regional hydropower and instead contributes to energy diversification in the region.

Given the uncertainties in European energy markets, combined with growing urgency to drive emissions reduction, Stepan continues to expand investment in renewable energy. In early 2023, our Voreppe, France facility signed Stepan's first PPA in the Company's history. The PPA includes hydropower generation that covers approximately 60% of the site's electricity needs, with GOs covering the remainder.

We intend to have all our European facilities secure contracts to source 100% renewable electricity beginning in 2024. These projects and others under investigation in different regions contribute to Stepan's ongoing efforts to secure reliable and sustainable electricity.

In February 2023, Stepan initiated the first phase of its energy usage reduction program across our European manufacturing sites. This rollout included the development of energy teams, utility maps and energy management gap assessments at all sites in the region. Subsequent phases of the program will include the development of KPIs, data assurance and tracking of energy usage reduction. These efforts are overseen by Stepan's European Sustainability Council with broad support from other internal functions and the newly created site energy teams. The energy usage reduction program should help the region achieve their ambition of a 10% reduction in overall energy usage by 2030.

2023 PROGRESS: RENEWABLE ELECTRICITY GOAL

In 2023, Stepan continued to expand our use of renewable electricity, with about 52% of our electricity usage covered by RECs, GOs, PPA or on-site generation. This far exceeds our goal to source 20% of electricity from renewable sources.

Water Use

GRI 3-3, 303-1

Water is an essential resource for our manufacturing activities, and we look for opportunities to improve our processes so that we manage this resource responsibly. Depending on the region, our sites may experience different stressors that can impact access to sufficient quality water. This may include impacts due to regional weather patterns, over-development, over-use or climate change. Safeguarding long-term, sustained access to this resource helps to maintain Stepan's operational capabilities and is equally important for our surrounding communities.

Stepan's production relies on relatively small volumes of freshwater for use in its finished products and significant volumes of water for cooling processes, steam generation, cleaning and other site activities. We use municipal water, groundwater and surface water depending on our areas of operation. Over the past few years, we have implemented various initiatives to decrease our dependence and impact on local bodies of water, encompassing process optimization, capital investments to eliminate water-dependent cooling, rainwater capture and reuse and condensate recovery, among other actions.

We conducted comprehensive water risk assessments by employing the WRI Aqueduct tool and stakeholder surveys across our global operations from 2021 to 2022.

This work evaluated potential impacts to water quality and quantity. The assessments also reviewed possible risks for local communities and water bodies, as well as possible regulatory and reputational risks. In 2023, we completed water management plans for all sites based on the findings of the water risk assessments. In the coming year, the sites will use this information to inform longer-term tactical plans.

As part of our commitment to resource stewardship, we work to reduce water withdrawn for cooling and cleaning and to improve water management. At our site in Vlissingen, the Netherlands, we installed a rainwater separation system that enables water reuse and also reduces wastewater generation. The project included equipment right sizing and improved efficiency, resulting in annual cost savings. Stepan's Jurong Island, Singapore, and Manizales, Colombia facilities have rainwater collection systems that will decrease demand on local water resources by enabling the use of rainwater for cleaning. At our Maywood, New Jersey facility, a shift from cooling with river water to a cold-oil cooling system resulted in a 90% reduction of water withdrawal. Looking ahead, Stepan's Vespasiano, Brazil, team is developing systems for rainwater collection and use that will help reduce water withdrawn from local resources by approximately five percent. And Stepan's Salto, Brazil site will be implementing initiatives to reduce and reuse water for washout processes in the coming year.

42%

reduction in water usage across sites included in our 2016 footprint

REDUCING DEPENDENCE ON LOCAL WATER RESOURCES

The ongoing work of our teams to drive manufacturing efficiency and resource management has led to notable reductions in water usage for some sites. In 2020 Stepan announced our ambition to reduce freshwater usage by 40% across our 2016 manufacturing footprint. Through numerous initiatives, including rainwater harvesting and shifting from river water cooling, we're excited to have recorded a reduction of just over 40% for this group of sites. We also understand that as our manufacturing activities grow and change we will see year-over-year shifts in water usage, so as we look ahead, we will continue our efforts to implement best practices for water management.

PROMOTING CIRCULARITY THROUGH WASTE REDUCTION

Finding a way to keep materials in use drives circularity, reduces waste and conserves resources. Our Manizales, Colombia team identified commercial alternatives for a sulfonation by-product that was initially sent to landfill. They diverted approximately 20% of this material from landfill in 2023 and set a goal to divert 50% in 2024. Our team in Salto, Brazil identified a sales solution for sulfonation byproducts, which will help reduce waste once fully implemented.

We also worked to manage process sludge waste. For example, our Manizales site established a composting process for sludge material being sent to landfill. Beginning in 2023, approximately six metric tons of material was composted rather than landfilled. In 2024, the Manizales site expects to send 100% of the sludge (10 metric tons) to composting facilities. In 2023, our Bauan, Philippines site implemented practices to manage sludge waste generated from wastewater treatment processes more efficiently. Using a pre-treatment drying method, the Bauan site reduced sludge waste shipped for disposal by 15% from 2022 levels. The waste reduction efforts at our sites help reduce costs from landfilling and contribute to our enterprise waste reduction goals.

Waste Reduction

GRI 3-3

Stepan's work to reduce waste delivers multiple benefits, including promoting a circular economy, enabling responsible use of resources and reducing costs for waste management. Our waste management procedure outlines the 4R approach, and sites work to implement the mindset of "Rethink, Reuse, Reduce, Recycle." We monitor waste generation and treatment in the STEMS platform, and our facilities identify opportunities for reduction based on the specific site manufacturing processes, by-products generated, waste management systems in place, industry park partners and other factors.

Stepan's Ecatepec, Mexico team installed a UV wastewater treatment plant as part of an ongoing waste utilization and reduction plan. The site also implemented a waste recovery plan that resulted in the recycling, recovery, reuse or composting of 139 metric tons of materials that would otherwise have been a waste to landfill stream. Other sites initiated or implemented waste reduction projects, including the capture and reuse of condensate and gases; reuse or sale of by-products; capture and use of heat generated in exothermic reactions; and work with nearby partners to exchange heating and cooling. Each of these initiatives keeps material or energy resources in use rather than releasing them as waste streams. When we find ways to reuse steam or a byproduct, Stepan reduces the requirements for new energy inputs or new materials that must be used in manufacturing processes.

Stepan's European facilities have already driven significant waste reductions and aim to further reduce landfilled manufacturing waste over the coming few years.

Stepan consistently recognizes the benefits from projects implemented in prior years to reduce waste and wastewater. Our Fieldsboro, New Jersey facility installed a condensate collection system that resulted in a 90% condensate return rate, significantly reducing wastewater generation and improving cost savings. Stepan's Vespasiano, Brazil, team installed a rainwater separation system that reduces wastewater generation by approximately 10%. Systems established at our Wesseling, Germany facility in 2022 continue to deliver significant waste reduction benefits by avoiding generation of process waste and wastewater annually.

We employ on-site waste treatment capabilities at select facilities and rely on third-party providers for other sites or services. Through our waste facility assessment program, we conduct audits of our waste management partners to ensure proper handling and treatment in accordance with our safety standards and regulatory compliance. In addition, we are rolling out EcoVadis assessment of our waste treatment suppliers through Stepan's Partner for Sustainable Supply (PaSS) program, and through this process we gain visibility into their overall ESG performance. If necessary, we will cease business with vendors that present a potential risk to surrounding communities through non-compliant activities.

STEPAN RESEARCH AND DEVELOPMENT INITIATIVES TO REDUCE WASTE

Stepan's Research and Development (R&D) teams take on the challenge to reduce waste. The Biosolutions R&D group modernized several in-house methods to both accelerate data generation and reduce waste. The team implemented an innovative method that increases data output by 10 times and reduces the use of consumables such as water, plastic and glass by more than 95%. This platform enables delivery of solutions faster and with less waste than previously possible.

Another R&D team, Personal Care Product Development, found an outside partner that repurposes waste fibers, including hair tresses used by Stepan for testing hair care products. These fibers are used to create absorbent mats and brooms for cleaning up oil spills and leaks. It turns out that the mats can absorb up to five times their weight in oil and not only help reduce waste to landfill, but also help improve environmental health.

Climate Impact

Stepan facilities encounter a wide range of weather-related events. Extreme storms, extended high or low temperatures, drought and other weather-related conditions could interfere with our ability to receive materials and resources, operate our facilities or deliver products to our customers. We conduct regular reviews of our operations and our procurement strategy and make data-driven enhancements in anticipation of weather- or climate-related impacts to our operations. In 2023, as part of our operational reliability management and planning, we proactively implemented protective measures against freezing, flooding and hurricanes at sites identified as being at higher risk.

Building on our commitment to align with the Task Force for Climate-Related Financial Disclosure (TCFD), and in preparation for International Financial Reporting Standards (IFRS) disclosure, we are dedicated to integrating climate-risk considerations into our management and planning efforts. In 2022, we successfully completed climate-related physical risk and transition risk assessments. The outputs of this work, combined with Stepan's Enterprise Risk Management (ERM) process, will inform longer-term planning for our sites, factoring in possible climate-related shifts that could affect each site's operations. Our goal with climate risk mitigation and long-term planning is to position Stepan to be resilient in the face of possible change or extreme conditions.

In 2023, we achieved over 99% employee participation and completion on our quarterly Ethics and Compliance trainings.

RESPONSIBLE PRACTICES

Our Commitment and Approach

GRI 3-3

As a charter member of the American Chemistry Council (ACC) Responsible Care® framework, Stepan remains firmly committed to the principles outlined by this program, which serve to guide our focus on safety, product stewardship, responsible management and ethical practices throughout our operations. We emphasize a safety-first mindset, with a goal to achieve safety performance in the top-quartile of our industry. We ultimately strive to be a trusted and valued partner for all our stakeholders.

Our dedication to responsible and ethical practices extends to material sourcing, research and development (R&D), manufacturing processes, risk management, information management, product compliance and sales. We look for ongoing opportunities to strengthen our processes and mitigate potential risks through robust governance structures, evolving policies and practices and regular training and communications on best practices and expectations related to business ethics. Each Stepan employee plays a critical role in upholding and maintaining our established standards.

IN THIS SECTION

Occupational Health and Safety

GRI 403-1, 403-2 (a.), 403-3, 403-4 (b.), 403-5

Stepan prioritizes safety and fosters a strong safety culture through ongoing training and regular local and regional engagement with safety and leadership teams. Training resources are available in local languages to all Stepan workers worldwide. Company leaders consistently communicate about the authority to stop work without fear of reprisal. If any employee identifies an issue of concern or a potential safety hazard, they understand their responsibility to speak up and the importance of taking action. This is reinforced to employees as part of regular training and during monthly meetings for our manufacturing teams.

In recent years, we implemented various programs and procedures to ensure the safety of our employees, contractors and other workforce partners across our operations. We use the SafeStart® and Safe Journey programs to promote safety awareness and hazard recognition. These awareness and behavior-based safety training programs focus on unintentional human error and critical safety habits, with the aim of reducing risk and probability of injury.

Our focus on the seven Life Saving Rules (LSR) program is ongoing, and we conducted additional LSR training for 100% of our manufacturing sites in 2023. The LSR program identifies safety risks, including electrical safety, working at heights, confined space safety procedures and more, to improve Stepan's safety performance. Since implementing the program in 2022, we have seen increased reporting and dialogue on potential hazards, and this heightened awareness is key for driving safety improvements. In 2023, Stepan also assessed 75% of its highest risk tasks related to ergonomics. By using an AI-driven tool, we identified opportunities to reduce risk for our workers by implementing new procedures and equipment to protect employee safety during their work-related activities.

Stepan finished 2023 with a total recordable incident rate (TRIR) of 0.53, a slightly lower level of performance than our prior year. As part of our goal to achieve top-quartile safety performance (TRIR of 0.25 or better), Stepan teams carefully review each incident and communicate the actions taken to eliminate or mitigate the risk. We share our findings and best practices across all sites through monthly meetings, and changes to improve safety are implemented based on the evaluation of these reports. The aim is to create a collaborative atmosphere for sharing best practices and learning that results in elimination of injuries for our workforce.

We regularly seek employee feedback to improve safety and minimize risk. We established Site Safety Committees at each location to promote safety awareness and to facilitate information sharing. For more information on employee feedback, please visit the Employee Engagement section of this report.

Stepan conducts the National Safety Council Safety Barometer survey every three years. Our most recent results showed a ten-point improvement in overall performance compared to the prior assessment, placing Stepan in the top quartile out of more than 1,300 survey participants. Performance related to management commitment, supervisor engagement, safety support and other areas contributed to the overall improvement. Company Environmental, Health, Safety and Security (EHSS) leadership uses the results to guide planning and identify areas for further action.

Stepan's annual President's Safety Award recognizes sites exemplifying our robust safety culture. Noteworthy is our Jurong Island, Singapore plant, which has earned this award for ten consecutive years, underscoring its exceptional commitment to safety excellence.

Stepan recognizes our employees and contractors who perform above and beyond to ensure individual and group safety is upheld daily. Our annual President's Safety Award goes to sites that foster a strong safety culture throughout the year and achieve top performance related to recordable injuries, incidents and additional safety and compliance criteria. In 2023, 12 of our manufacturing and R&D sites received the award. This level of focus on safety is essential for the Company to reach our ambitions for top safety performance.

Our teams also received external recognition for their dedication to safety. A member of our Elwood, Illinois (Millsdale) team was awarded the "Next Generation Stand-Out Award" by Three Rivers Manufacturers' Association (TRMA) for driving excellent site contractor safety performance. He also improved on-site vehicle safety through field auditing, safety bulletins and improved mechanical reliability. Across all our sites, team members work to promote continuous improvement in safety performance and to share best practices.

In 2023, Elwood, Illinois (Millsdale), Stepan's largest manufacturing facility, operated a full calendar year and close to one million working hours without a recordable injury for the first time on record. Our contractors at this site also completed one year without recordable incident. In total, eight of our manufacturing facilities have more than three years without a recordable incident and two have more than 10 years incident free.

For more information on Stepan's approach to employee health, safety and well-being, please visit the Valuing People and Communities section of this report.

Process Safety

GRI 403-7

Stepan's Process Safety team implements stringent measures to identify and mitigate potential incidents. Stepan management systems and procedures govern resource management and safe practices across all areas of our operations. Our Process Safety Management program encompasses hazard assessments, risk management programs, process standardization, training and emergency readiness as well as external assurance. As a member of the Center for Chemical Process Safety (CCPS) of the American Institute of Chemical Engineers, Stepan seeks opportunities to improve our strategies for protecting employees and improving process safety. CCPS's Risk Based Process Safety Management System is the basis for Stepan's process safety management strategy and an example of how Stepan uses industry best practices to go above and beyond regulatory requirements.

Stepan's tactical planning process directs near- and long-term strategic planning and promotes consistency and alignment across the extent of our manufacturing facilities. This approach includes implementing tools and resources, prioritizing projects to address identified needs, rolling out new management systems, developing new technologies, training and sharing best practices across regions. Stepan drives improvements through disciplined and structured practices across our sites. The implementation of the Stepan Management System (STEMS) represents a pivotal step. STEMS is built on Responsible Care® and International Organization for Standardization (ISO) 14000 management system requirements, and enhances data collection for tracking, monitoring and reporting on numerous safety, environmental and other performance metrics. In 2023, Stepan continued to execute capital projects and implement administrative programs to improve our process safety performance.

Stepan's Brzeg Dolny, Poland site achieved recognition as one of the top-performing companies among nearly 1,000 Polish participants in a national safety contest. As of the reporting date, the site proudly sustained three consecutive years without a recordable incident.

REDUCING PROCESS SPILLS

Our focus on process safety is an ongoing effort and we have had some positive outcomes related to reducing Loss of Primary Containment (LOPC) events. In 2023, our Stalybridge, U.K. site achieved their second-longest period without a process spill, and the Wesseling, Germany site continued to operate without a process spill since 2017. Across our sites, LOPCs decreased 15% in 2023 compared to the average from 2020 to 2022. Stepan continues to implement improvement initiatives including capital projects related to LOPC and Process Safety performance.

Cybersecurity and Personal Data Protection

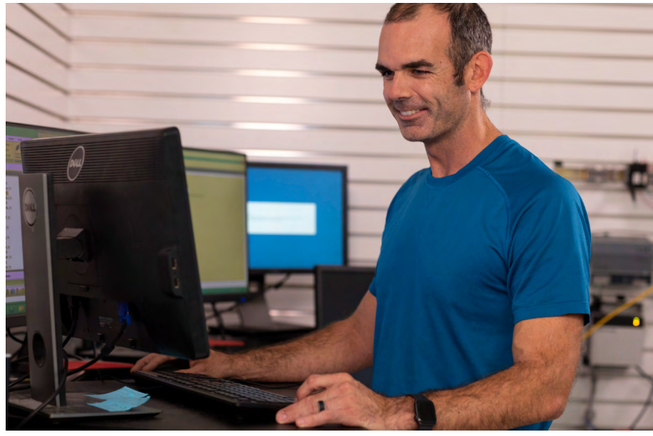
Maintaining a safe and secure data management environment is critical to protect our organization's data, systems and operations and to comply with legal and regulatory requirements. Stepan takes data protection seriously and maintains policies and procedures to ensure the security of its confidentiality, continuous availability, accuracy, consistency and reliability from creation to destruction.

We are committed to staying current with industry changes and implementing an effective strategy to manage cybersecurity risk. At the same time, we continue to advance our cybersecurity program according to the comprehensive and widely recognized set of guidelines developed by the National Institute of Standards and Technology through the Cybersecurity Framework.

Ensuring everyone understands their role in safely using Information Technology (IT) assets is crucial to maintain a secure IT environment. We maintain a "Use of Information Technology Policy" that we communicate to our global workforce, with additional details shared based on identified or potential risks. This knowledge helps prevent accidental or intentional misuse of IT resources, which can compromise the confidentiality, integrity and availability of sensitive data and systems. In 2023, we released a new set of IT Security Standards to further extend controls to our IT assets. These standards deploy multiple layers of security protection such as firewalls, intrusion detection and prevention systems, system hardening, advanced endpoint protection, email filtering, access controls and encryption to provide multiple levels of defense against different threats. By using a defense-in-depth approach, we protect our organization and reduce the likelihood of successful cyberattacks.

Our security awareness training reduces the risk of security breaches by educating employees about cybersecurity risks. It also establishes a culture of security among our workforce, where all individuals understand the importance of cybersecurity and work together to protect assets in our offices and manufacturing facilities. We update our security awareness training program annually, with additional updates whenever changes to the threat landscape are detected. As part of these trainings, we regularly test every employee on cybersecurity awareness to identify areas where they may need additional training and support, thus reinforcing good security habits. For example, by testing employees' ability to detect malicious emails, we take a critical step to protect our company against phishing attacks.

Cybersecurity is an ongoing process, and it requires a combination of technology, policies, standards, procedures and employee training to be effective. By providing regularly scheduled training, evaluating our employees and periodically reviewing and updating our cybersecurity program to adapt to changing threats and technologies, Stepan protects against the constantly evolving cybersecurity threat landscape.



Ethics and Compliance

GRI 3-3

Stepan's business practices are firmly rooted in our rigorous ethics and compliance program. We build enduring business success through an inclusive workplace that respects and values the diversity of our workforce and through a firm commitment to doing the right thing, every day. Stepan's Code of Conduct (the Code) clearly defines standards and expectations for our employees, executive leadership and the Board. The Code and associated procedures and processes aim to help Stepan meet the highest standards for business integrity, and we continue to strengthen our program with ongoing training and robust oversight.

The Code includes details on the laws and regulations that apply to our business and covers information on Stepan policies for anti-harassment, cybersecurity, data privacy, confidential information, anti-bribery and anti-corruption, anti-money laundering, third-party relationships, conflicts of interest, fair competition, antitrust compliance, gifts, entertainment and insider trading, among other topics.

Stepan employees receive regular training to recognize questionable or potentially unethical behavior and are supported with clear guidance and secure channels for communicating concerns. In 2023, we achieved over 99% completion on our quarterly compliance trainings.

In compliance with applicable local, state and federal laws and regulations relating to business ethics, we promote policies and practices for reporting instances of non-compliance and implementing corrective actions designed to prevent recurrence. All Stepan stakeholders are aware of their obligation to speak up if they suspect potential violations of the Code. We provide multiple channels for our stakeholders to express any potential concerns, including communicating issues to a supervisor or through our 24-hour EthicsPoint® helpline. The helpline is available in 39 languages online or by phone. Anonymous reporting is an option wherever the law permits.

In 2022, Stepan launched the Ethics Ambassadors (EA) program to enhance the reach of our Corporate Ethics & Compliance team throughout our organization and to make ethics messaging relevant to all business units. Our EAs play a crucial role in promoting a culture of ethics and integrity within the organization by facilitating communication, providing training and building relationships. Our EAs serve as a voice for their peers and can raise questions or concerns on their behalf. Ambassadors are nominated and selected by senior leaders at the company and work under the direction of Stepan's Chief Compliance and Risk Officer. This role offers EAs an excellent opportunity to enrich their career experience while building institutional awareness and gaining greater organizational visibility.

In response to the overwhelmingly positive feedback from the pilot sites and EAs, in 2023, we expanded the EA program to our Asia and Europe regions, onboarding 13 additional EAs at eight manufacturing sites and four offices. We plan to extend the program to our North American sites in 2024 as we continue to build on our culture of high ethical standards and legal compliance.

Enterprise Risk Management

Stepan's Enterprise Risk Management (ERM) program uses principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework to effectively identify, manage and mitigate significant risks to the organization. Individuals across Stepan's global locations and functions contribute to our understanding of risks annually through surveys, in person interviews and workshops. Employees are polled quarterly throughout the year to spot emerging risks and trends. Critical risks with the potential to substantially disrupt current or future operations are assigned owners to develop or improve mitigation plans, which are shared within the organization.

Core to our risk mitigation strategy is the principle of resilience. Stepan strives for management systems, operational practices, infrastructure and business strategies that promote resilience and agility in the event of disruptive circumstances. This can include risks posed by climate- or weather-related events, supply chain disruptions or other challenges. We work to understand these risks and their potential impacts on our plants and on our customers, and we engage with risk owners and stakeholders to ensure that potential risks are appropriately considered in our strategic and capital planning processes.

As sustainability-related reporting requirements continue to evolve, Stepan will look for opportunities to leverage our ERM program and principles to ensure a comprehensive view of these risks and to support accurate reporting.

Public Policy Approach and Industry Associations

Stepan values collaboration to foster advancements in the chemical sector and actively seeks partnerships across diverse stakeholder groups. Together, we work to uncover solutions that advance our business goals and provide added value. Such partnerships also foster knowledge growth related to new technologies, new regulations and other technical topics. Our team members monitor important topic developments for the chemical industry including 1,4-dioxane, revision of the Occupational Safety and Health Administration (OSHA) HazCom Standard 2012, REACH developments related to microplastics and the EU roadmap on Chemicals Strategy for Sustainability (CSS).

Through our partnership with CO_2 Value Europe and RCI, Stepan teams build technical insights on Carbon Capture and Utilization (CCU). While Stepan technologies cannot support CCU projects independently, we have initiated discussions with third parties to explore potential partnerships for growth in this area.

STEPAN IS A VOLUNTARY MEMBER OF NUMEROUS ORGANIZATIONS INCLUDING:

- American Chemistry Council (ACC)
- Action for Sustainable Derivatives (ASD)
- American Cleaning Institute (ACI)
- Ethics and Compliance Initiative
- European Chemical Industry Council (CEFIC)
- European Committee of Organic Surfactants and their Intermediates
- CO_2 Value Europe
- Polyisocyanurate Insulation Manufacturers Association (PIMA)
- PU Europe
- Renewable Carbon Initiative (RCI)
- Society of Corporate Compliance and Ethics

Third Party Partnerships

GRI 308-2

Our third-party partners are essential to the success of our business. We work to build relationships with partners that hold themselves to the same standards of business excellence and ethics as Stepan. Prior to vendor approval, Stepan's third-party partners undergo a careful screening to identify potential risks to our supply chain. Our Third-Party Code of Conduct communicates the standards that we expect our approved partners to uphold. Our biobased material suppliers should also comply with our Responsible Sourcing Policy, which specifies expectations for avoiding development on peatlands, ending deforestation and upholding labor and human rights.

Our Partner for Sustainable Supply (PaSS) program governs responsible supply chain practices and fosters strong supplier partnerships that enable us to deliver on our business goals related to safe and sustainable products. In 2023, we expanded use of the EcoVadis platform to evaluate more than 80% of our raw material and packaging suppliers and more than 35% of our transportation partners by spend. EcoVadis identifies areas where companies can improve and foster best practices. More than 95% of our responding raw material suppliers by spend ranked above average according to the EcoVadis assessment, with approximately 55% of them ranking as more advanced. In the event that concerns are raised, the platform enables Stepan to conduct a due diligence inquiry to understand potential issues and consider mitigation actions. In 2023, we also launched a supplier engagement campaign for raw material carbon footprint data to support our sustainable materials and emissions reduction ambitions.

Over 95%

of our responding raw material suppliers by spend ranked above average according to the EcoVadis assessment

Sustainable Materials Use and Sourcing

Material impact data is a key decision-making element as we expand our portfolio of more sustainable products. In 2023, Stepan systematized our Product Carbon Footprint (PCF) program. Our PCF and PaSS teams collaborated to engage raw material suppliers to request primary carbon emissions data needed for calculating PCFs. We also conducted global training sessions on PCF principles and initiated discussions with Stepan's information management teams on longer-term planning for data management.

Partnership with organizations focused on responsible supply chains support our priorities for ethical sourcing and enable us to meet stakeholder requirements. Beginning in early 2023, Stepan joined Action for Sustainable Derivatives (ASD), an organization dedicated to partnering with members of the palm oil derivatives supply chain to drive progress for responsible and sustainable palm material production. Our involvement with ASD is instrumental to facilitate comprehensive mapping of our palm derivative supply chain and informs our understanding of the European Union Deforestation Regulation (EUDR). The EUDR will restrict imports and exports of defined products based on specific commodities, including palm oil, to end trade of products associated with deforestation. This regulation will require higher levels of supply chain due diligence and collaboration for compliance.

Stepan maintains Roundtable for Sustainable Palm Oil (RSPO) membership and supply chain certifications for responsible sourcing at our sites that handle palm material. We collaborate with our customers and suppliers on traceability goals and promote ongoing improvements through our policies and practices.

SUSTAINABLE RAW MATERIALS PROGRAM

The Sustainable Raw Materials (SRM) program serves as a strategic framework for informed decision-making regarding sustainable practices in Stepan's value chain. Identifying alternative raw materials that deliver lower impact offers opportunities to drive greenhouse gas (GHG) emissions reductions along with other benefits. Through active engagement with key associations and their members, Stepan gains a comprehensive understanding of emerging technologies and solution maturity. This collaborative approach facilitates the exploration of cross-industry partnerships and drives progress and innovation. Delivering alternative solutions also requires extensive engagement with suppliers and customers to understand market demand for sustainable products, assess the availability of raw materials in terms of timing and scale and evaluate the commercial viability of initiatives.

Stepan nurtures talent by providing training and development opportunities that support overall career growth and progression.

VALUING PEOPLE AND COMMUNITIES

Our Commitment and Approach

GRI 3-3

Our Company's success depends on the dedication and skill of our workforce. Our employees are core to our business and are essential for driving our mission forward. Stepan nurtures talent by providing training and development opportunities that support overall career growth and progression. We offer personalized support to all employees to help them build successful careers and reach their professional goals. Our objective is to create a culture that prioritizes the overall well-being of our workers and equips them with the necessary tools and resources to lead a meaningful career at Stepan.

IN THIS SECTION

We also aim to become a strong community partner in the regions where we operate by providing excellent career opportunities in the science, engineering, human resources, supply chain management and sales fields. We take pride in mentoring young people with an interest in science, technology, engineering and math (STEM) careers. We are committed to giving back to our local communities through philanthropic initiatives, volunteering and partnerships with organizations that address societal needs and promote the expansion of STEM education.

Talent Attraction and Retention

GRI 3-3

Our global workforce is comprised of talented, engaged and passionate people who work collaboratively to make a difference. We aim to attract new employees who are excited to contribute to the Stepan community by providing rewarding professional opportunities and an inclusive workplace.

To attract and retain top talent and ensure a sustainable workforce, we offer comprehensive compensation and benefits packages consistent with local practices, employee preferences and relevant regulations. Stepan's Total Rewards program goes beyond the workplace to support employee well-being.

The executive leadership team provides oversight for talent attraction and retention, with additional guidance from the Board of Directors. The Board, executive team and Human Resources management team work together to ensure the implementation of policies, programs and practices aimed at maintaining a sustainable employee base. Stepan identifies, evaluates and manages risks related to talent attraction and retention through quarterly enterprise risk assessments. For information, please refer to our Enterprise Risk Management section.

In addition to Stepan's Total Rewards program, Stepan provides an annual profit-sharing contribution to more than 78% of its global employees. This program's objective is to ensure that employees are financially rewarded in a manner that aligns with the Company's profitable growth.

Stepan's Total Rewards program includes:

- Learning and development
- Family support
- Recognition program
- Insurance coverage
- Competitive compensation
- Retirement savings
- Tuition assistance

Our tuition assistance program serves as a valuable benefit for our employees, enabling individuals to receive financial support for their undergraduate or graduate education. This initiative fosters employee career development and strengthens our talent pipeline.

EMPLOYEE ENGAGEMENT AT STEPAN

Our 2023 employee engagement survey had an 85% participation rate, a positive improvement from our 74% participation rate in 2022. Notably, there was a 21% increase in participation across our manufacturing sites. Stepan also exceeded the industry benchmark in all areas evaluated. To boost engagement for the 2023 survey, we showcased several global teams that actively responded to the 2022 survey, spotlighting their prioritized areas for action and early outcomes from work over the year.

The survey indicated that 76% of employees feel their contributions are valued, and 86% feel they belong to the Stepan team. Additionally, 80% believe the Company is positioned to experience an outstanding future. The survey results are used to establish actionable goals and inform the development of new initiatives or programs, such as prioritizing change management, leadership training and manager effectiveness.

Employee Engagement

Stepan engages with employees across the organization to monitor and respond to workforce and organizational needs. We use various communication channels such as our intranet, staff meetings, town halls, video communications from our leaders and email to facilitate ongoing dialogue throughout the year. In 2023, we conducted employee satisfaction and pulse surveys, and the feedback helped enhance our development plans and improve our leadership approach. The feedback we receive from these surveys is a valuable tool that helps us enhance our development plans, improve our leadership approach and promote transparent communication.

In 2023, Stepan launched a new project management platform for internal and customer-focused product development projects called Enterprise Project Management Organization (ePMO). This system supports convenient and modern approaches to workflows and collaboration for our employees. We leveraged employee-focused change management tools before and after the launch of the ePMO system, including holding interactive listening sessions and feedback loops to the project team and management sponsors. We remain committed to continuous improvement, and we leverage insights gained through employee engagement to evolve our workplace policies and programs.

Employee Training and Development

GRI 3-3, 404-2

By investing in the professional development of our employees, we aim to enhance their job satisfaction, career success and overall growth. Our Learning Governance Committee oversees the management, development and oversight of a program strategy that caters to the diverse technical, functional and soft-skill development needs of our workplace. The Committee established transparent governance, frameworks and processes to ensure our Learning and Development initiatives align with industry best practices. Our programs empower employees to expand and strengthen their skills to navigate their roles' evolving demands and encourage growth in areas of interest. Through these programs and initiatives, Stepan prioritizes opportunities for personal and professional growth among our employees.

In 2022, we launched the training and performance management programs of our Success Factors platform globally. In 2023, we continued working with our partners to create dashboards to track key metrics for compliance, performance, development and succession planning. Our employees complete annual training to ensure they remain well-informed on important topics, such as: health and safety; diversity, equity and inclusion; anti-harassment; business ethics; and cybersecurity.

We also made various training and development resources available that can be customized to align with the professional ambitions of employees. The platform helps our employees monitor and pursue their goals while enabling leaders to manage talent effectively. Data on employee performance and identification of potential skill gaps are valuable insights gained from the Success Factors platform, which serves as an excellent tool for strategic talent management. The platform is available in the local languages where our employees work and is accessible on demand, allowing us to standardize job-specific training and knowledge across Stepan and ensure ready accessibility to all.

Stepan works to develop the leadership skills we need in our employees today and also in our future leaders. Our programs support development of skills required at different stages of our employees' leadership journey. In 2023, Stepan launched the Environmental, Health, Safety and Security (EHSS) Critical Leader training program for all new plant managers, plant EHSS managers and other critical roles. This training is a comprehensive introduction to Company culture, the EHSS vision and mission and the essential tools that will enable this group of leaders to drive success with their teams from the start of their new responsibilities.

Another such program is "Leading at Stepan," which focuses on cultivating leadership in a variety of roles, as well as providing skills to new leaders joining the Company. The course has been linked to management effectiveness score improvements. In the last year, Stepan partnered to offer the program in local languages to expand access to the program.

Leading at Stepan serves as the foundation for all our other leadership development initiatives and our collection of leadership development opportunities are consistently ranked highly by participants. In response to global social stressors, Stepan piloted an "Empathetic Leadership" program in 2022. The program experienced a 20% increase in the number of participants in 2023. We launched the program to assist leaders in understanding how employees may perceive the world differently and to introduce an empathetic approach toward leadership and employee engagement.

As part of our ongoing efforts to support leadership development, we continue to offer our Mentor Match program to all employees. For four years, this initiative has continued to run successfully by pairing experienced company leaders with newer leaders, helping them develop and enhance the skills to take on increased responsibility. In 2023, we expanded the program to include panel-level mentoring, which allows employees to learn from and establish closer connections with a range of senior leaders.

We believe in empowering our employees to become effective leaders. We encourage all sites to identify and nurture potential candidates for leadership positions. To promote ongoing career development, we offer all employees a wide range of in-person and internet-based courses tailored to their professional and skill-specific needs. Our leadership development programs aim to instill fresh perspectives on leadership that will help us thrive in the future.

20%

increase in number of participants in our Empathetic Leadership program

Employee Well-Being

GRI 403-6

At Stepan we work to prioritize employee well-being, and our goal is to provide necessary resources and support mechanisms to ensure employees remain healthy, safe and ready to engage constructively in their workplace. Stepan offers comprehensive support to help our workforce maintain emotional and mental health, as well as a healthy work-life balance.

We regularly emphasize our dedication to employee health and safety, both within and outside the workplace. We offer various healthy living support programs and resources related to smoking cessation, nutrition, exercise and stress reduction. We strive to create comfortable and respectful workspaces featuring diverse amenities tailored to each site. By prioritizing the health and well-being of our employees, we aim to reduce absenteeism, increase productivity and improve morale throughout the company.

Stepan recognizes the importance of fostering community and connection, especially in a hybrid work environment. Now in its fourth year, we use the Reactions platform to enable expressions of appreciation, gratitude and recognition for positive contributions and accomplishments. Additionally, town hall meetings, lunchtime educational talks, mid-day mixers and other engagement sessions play a crucial role in leadership connections with employees aimed at promoting open dialogue, building relationships and fostering well-being. Throughout 2023, Stepan saw more organized gatherings to recognize significant events for the Company and our employees. These gatherings serve as an opportunity to celebrate the essence of being part of the Stepan community, reinforcing the Company Value of belonging and well-being.

Diversity, Equity and Inclusion

Stepan is proud of its diverse and global workforce and strives to promote a culture that is inclusive, equitable and welcoming to all. We value the unique perspectives and talents of each employee, understanding that diversity is a core component of our overall success. Our commitment to these principles is evident not only in our Company culture but also in our Values, policies and Code of Conduct.

Stepan's Inclusion and Diversity Policy affirms our commitments to workplace diversity. We focus on recruiting diverse talent, ensuring fair hiring and promoting a harassment-free work environment. We strive to provide equitable pay and treatment for all employees, regardless of characteristics such as race, ethnicity, color, nationality, gender, gender identity, sexual orientation, age, language, religion, creed, social status, disability or any other legally protected class. These standards also apply to our suppliers and business partners.

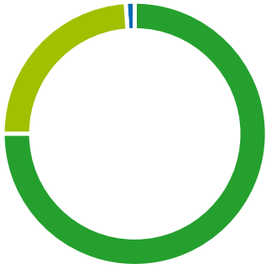
We endeavor to create opportunities for open dialogue, raise awareness on critical issues and build a strong sense of community through shared experiences. In 2022, we established the Women's Network, an Employee Resource Group (ERG) focused on attracting and developing talented women to drive business outcomes and strengthen Company culture. The Women's Network held monthly chats throughout the year discussing key topics in the workplace, and they hosted a panel discussion with two of our female Board of Directors members. Externally, they promoted science education and created opportunities for women in the chemical industry.

In 2023, we launched a black employees network, EMBRACE (Empowering Black Resources and Cultural Ethnicity), reinforcing our commitment to an inclusive and welcoming workplace that values diversity and ensures equal opportunities for all employees. EMBRACE sponsored an event to educate and build awareness around Juneteenth and a back-to-school drive. They also delivered funds to scholarship recipients in the American Chemistry Council (ACC) led FOSSI (Future of STEM Scholars) program with additional funds to help with school expenses. Moving forward, Stepan will continue to support ERGs that contribute to an inclusive, respectful workplace.

Stepan's commitment to creating a diverse and inclusive workplace is also reflected in our annual employee engagement survey results. The 2023 survey showed that 88% of respondents affirmed feeling treated with dignity and respect, and 86% reported feeling comfortable being their authentic selves at work. We recognize that there are always opportunities for improvement, and we remain committed to ensuring that every Stepan employee feels valued and included in our workplace community.

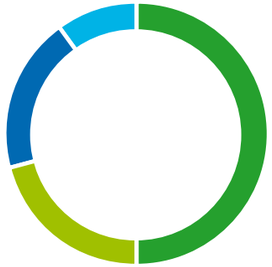
Employee Diversity

GRI 2-8, 3-3, 405-1



EMPLOYEES BY GENDER

- Male **75%**
- Female **24%**
- Other/Undeclared **<1%**



EMPLOYEES BY REGION

- U.S. and Canada **50%**
- Latin America **21%**
- EMEA **19%**
- APAC **10%**

EMPLOYEES BY CONTRACT TYPE

- Full Time **99%**
- Part Time **1%**

- Permanent **97%**
- Temporary **3%**

Community Connections

GRI 3-3

We are dedicated to cultivating strong relationships throughout our workforce and to being a valued community partner. Across our sites, teams organize events aimed at having fun together while making a difference. Employees share their interests and find ways to connect during lunch and learns, they join bike to work or other fitness challenges, they participate in gardening groups and more.

Stepan also gives back to communities through philanthropy, volunteerism and partnerships with organizations that support social causes. Our employees actively participate in charitable and community initiatives, organizing donations of food, clothing, school supplies and other resources. Our Millsdale team donated twenty-five totes of food to a local food pantry, part of an ongoing commitment to give back to their community.

Employees look for opportunities to participate in clean-up and restoration efforts to protect and preserve the environment. In 2023, Stepan's Voreppe, France site hosted an environmental cleanup as part of Earth Week activities, and Stepan's Philippines team participates annually in International Coastal Cleanup Day. Stepan is a supporter of the Talking Farm based in Illinois, where our headquarters are located. Talking Farm is a local urban farm dedicated to cultivating food for local shelters and schools and providing education about food production and healthy eating. In 2023, Stepan became a corporate sponsor of the Talking Farm and continues the partnership with volunteer work supporting their mission.

At the core of our commitment to local communities is the need to operate safely and with environmental responsibility. We raise safety awareness with community-focused events, and our teams partner closely with local first responders as part of ongoing safety training and risk mitigation work. As a key provider of products promoting health and sanitation, our teams also raise awareness about health and hygiene among school children.

Stepan promotes awareness of science and engineering careers and hopes to develop interest in future work at Stepan among local students. Our Stalybridge, U.K. team continued support of the Workplace Safari program, introducing local students to career opportunities with site visits, interviews with plant personnel and discussions about the variety of skills needed across functions.

Stepan is a long-time sponsor and contributor to events organized by the Chemical Industry Council of Illinois (CICI) and the Illinois Chemical Education Foundation (ICEF). This includes support for the annual ICEF scholarship program that awards eighteen high school students $2,000 scholarships each for their academic excellence in science-related fields. ICEF promotes chemistry education and introduction to chemical industry careers through various outreach activities, including an annual career conference and the Illinois "You Be the Chemist Challenge." We also support FOSSI, which enables talented U.S. students pursuing STEM degrees at historically black colleges and universities to access scholarships and other opportunities. In 2023 a crossfunctional Stepan team served as mentors for the Spring Theory mentoring program. The team met regularly with a group of talented future leaders from the University of Pittsburgh on their sustainability-focused capstone project.

Across all our regions, Stepan employees make a difference through their workplace commitments and their readiness to give back to young people and communities.

STEPAN COLLABORATION WITH TEACH FOR AMERICA

Stepan's role as a Teach for America program collaborator continued in 2023. Our R&D team members welcomed 19 high school students to its Global Technology Center, marking the first in-person interaction at the site since the COVID-19 pandemic. During the tour, participants explored various departments and demonstrations that showcased the diverse applications of STEM training. Through these experiences, Stepan aims to inspire students and to illustrate their potential to make a difference through science and engineering.

APPENDIX

Global Reporting Initiative (GRI) Index

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
General Disclosures					
GRI 2: General Disclosures 2021	2-1 Organizational details	Stepan 2023 Form 10-K, p.1 Stepan Company Stepan Website: Locations About Stepan			
	2-2 Entities included in the organization's sustainability reporting	Stepan 2023 Form 10-K, p. 22 Stepan's sustainability report includes reporting on the same entities as covered in the Company financial reporting statements.			
	2-3 Reporting period, frequency, and contact point	Stepan 2023 Form 10-K, p. 22 About This Report			
	2-4 Restatements of information	Percent of energy from grid electricity: restated in 2020 to align with GRI reporting guidance. Percent of purchased palm derived material certified under RSPO: restated for 2019 and 2020 for consistency in calculation methodology.			
	2-5 External Assurance	Assurance Report Stepan undergoes external assurance for our annual energy usage and associated Scope 1 and 2 emissions. We engage ERM CVS for limited assurance, in accordance with the International Standard on Assurance Engagements ISAE 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Standards Board. The process includes review and evaluation of the accuracy, completeness and representativeness of Stepan's energy use and emissions disclosures through review of our data management systems, interviews of relevant staff, and site visits.			
	2-6 Activities, value chain, and other business relationships	Stepan Responsible Sourcing Policy About Stepan			
	2-7 Employees	Analyst Download			
	2-8 Workers who are not employees	Diversity, Equity and Inclusion Stepan is not able to report on this topic at this time but will evaluate possible tracking in the future. Contractors may hold responsibilities for office-related work, laboratory roles, or work at our manufacturing facilities, and they support a range of technical and soft-skill duties.			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 2: General Disclosures 2021	2-9 Governance structure and composition	Stepan Corporate Governance Guidelines Governance			
	2-10 Nomination and selection of the highest governance body	Stepan Corporate Website: Nominating and Corporate Governance Committee Charter Stepan Corporate Governance Guidelines			
	2-11 Chair of the highest governance body	Stepan Board of Directors			
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability Governance; Enterprise Risk Management; Regulatory Compliance and Product Stewardship; Talent Attraction and Retention Stepan Corporate Governance Guidelines			
	2-13 Delegation of Responsibility for managing impacts	Sustainability at Stepan			
	2-14 Role of the highest governance body in sustainability reporting	Sustainability at Stepan			
	2-15 Conflicts of interest	Stepan Corporate Governance Guidelines			
	2-16 Communication of critical concerns	Stepan Code of Conduct			
	2-17 Collective knowledge of the highest governance body	Sustainability at Stepan			
	2-18 Evaluation of the performance of the highest governance body	Stepan Corporate Governance Guidelines			
	2-19 Remuneration policies	Stepan Proxy Statement 2023, p. 20			
	2-20 Process to determine remuneration	Stepan Proxy Statement 2023, p. 20			
	2-21 Annual total compensation ratio	Stepan Proxy Statement 2023, p. 48			
	2-22 Statement on sustainable development strategy	Products and Services for Sustainability Benefit			
	2-23 Policy Commitments	Stepan Website: About Us Stepan Code of Conduct Stepan Human Rights Policy			
	2-24 Embedding policy commitments	Stepan Code of Conduct			
	2-25 Processes to remediate negative impacts	Stepan Corporate Guidelines Enterprise Risk Management Ethics and Compliance			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 2: General Disclosures 2021	2-26 Mechanisms for seeking advice and raising concerns	Stepan Ethics Point Hotline			
	2-27 Compliance with laws and regulations	Stepan 2023 Form 10-K, p. 33			
	2-28 Membership associations	Responsible Practices Stepan is a voluntary member of numerous organizations including American Chemistry Council Responsible Care; American Cleaning Institute; Ethics and Compliance Initiative; Society of Corporate Compliance and Ethics; Polyisocyanurate Insulation Manufacturers Association			
	2-29 Approach to stakeholder engagement	Sustainability at Stepan			
	2-30 Collective bargaining agreements	Analyst Download Stepan leadership upholds our People First value. Our Code of Conduct, Diversity and Inclusion policy, Human Rights policy, Anti-Harassment policy, and numerous safety policies and programs are some of tools that we utilize to define the principals by which we operate and hold ourselves accountable. About 38% of our employees are covered by collective bargaining agreements and all of our employees should expect to be treated in a manner consistent with our public policies and commitments. All employees have access to our public ethics hotline and are trained on their right and responsibility to raise issues of concern.			
Material Topics					
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Sustainability at Stepan In 2021 Stepan engaged an outside partner to conduct a materiality assessment. The process involved surveys and interviews of internal stakeholders and a smaller group of external stakeholders. These groups were asked to provide inputs and perspectives on a set of about 30 issues common to the chemical industry. To gain an outside perspective, our partner utilized Datamaran, an AI tool that provides extensive review of information and condenses to key issues and topics for the defined industry. Following analysis of results and review of the outputs, Stepan shared results in our 2021 Sustainability Report, outlining the key priority topics that were identified in that process. We have continued to report on these categories and are undertaking a Double Materiality analysis in 2024 as part of our CSRD readiness work.			
	3-2 List of material topics	Sustainability at Stepan			
Delivering Superior Customer Experience					
Climate Change, Energy and GHG Emissions					
GRI 3: Material Topics 2021	3-3 Management of material topics	Analyst Download Energy Stepan sites utilize diverse energy sources to operate our manufacturing and business activities. This includes natural gas, diesel, propane, gasoline, electricity, steam, as well as renewable sources of energy. Based on broad scientific consensus, use of fossil fuels contributes to climate change impacts. Stepan is working to increase the percentage of our activities using renewable electricity, however some activities will depend upon fossil fuels for the foreseeable future. In addition to increasing percentage of renewable electricity that we use, we look for opportunities to drive efficiency in our manufacturing activities, including capture and reuse of steam and heat, equipment upgrades, operational efficiency improvements and more.			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Analyst Download Stepan Company monitors energy use and greenhouse gas (GHG) emissions data in support of sustainability goals and reporting and has collected this data for numerous years across our sites. This information is used to communicate to external stakeholders on our environmental footprint and to identify opportunities for improvement to our global operations. We work to align with broadly recognized frameworks and report annually to the CDP (formerly the Carbon Disclosure Project) on our energy usage and emissions. CDP works to drive further alignment with widely adopted frameworks including the GHG Protocol Corporate Accounting and Reporting Standard. Stepan strives to align with the GHG Protocol for emissions calculations, and we work to drive continuous improvement in our GHG data collection and management process.			
	302-2 Energy consumption outside of the organization	Stepan conducted a Scope 3 inventory based on the GHG Protocol methodology in 2022 for 2021 activity. Scope 3 emissions were estimated using a combination of activity-based, hybrid, and spend-based analysis with emissions factors IPCC AR5 report and from the EcoInvent database. Purchased Goods and Services represents the largest source of our Scope 3 emissions, contributing to about 90% of our Scope 3 impact. The second largest category, Energy and Fuel-Related Activities, accounted for 2.3% of total Scope 3 emissions. Capital Goods and Upstream Transport and Distribution each accounted for about 1.7% of total Scope 3 emissions. Stepan's combined Scope 3 emissions were estimated to be approximately 2.5 million mt CO_2e.			
	302-3 Energy intensity	Analyst Download			
	302-4 Reduction of energy consumption	Basis of Reporting Document Energy; Emissions; Assurance Report Absolute energy usage increased by 2.6% over the prior year from 3,800 to 3,900 TJ. 27% of our total energy usage is related to electricity and steam and over 50% of that energy was covered by renewable energy sources. Stepan has implemented efficiency projects at different sites, including equipment upgrades, installation of solar power supply, and process optimization. However, we have also increased our manufacturing footprint and implemented other projects to comply with regulations that have resulted in increased energy use at some sites.			
	302-5 Reductions in energy requirements of products and services	Basis of Reporting Document Energy; Emissions; Products and Services for Sustainability Benefit		Information Unavailable	Stepan does not track reductions in energy requirements of sold products and services.
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Basis of Reporting Document Analyst Download			
	305-2 Energy indirect (Scope 2) GHG emissions	Basis of Reporting Document Analyst Download			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 305: Emissions 2016	305-3 Other indirect (Scope 3) GHG emissions	Basis of Reporting Document Analyst Download Stepan conducted a Scope 3 inventory based on the GHG Protocol methodology in 2022 for 2021 activity. Scope 3 emissions were estimated using a combination of activity-based, hybrid, and spend-based analysis with emissions factors IPCC AR5 report and from the EcoInvent database. Purchased Goods and Services represents the largest source of our Scope 3 emissions, contributing to about 90% of our Scope 3 impact. The second largest category, Energy and Fuel-Related Activities, accounted for 2.3% of total Scope 3 emissions. Capital Goods and Upstream Transport and Distribution each accounted for about 1.7% of total Scope 3 emissions. Stepan's combined Scope 3 emissions were estimated to be approximately 2.5 million mt CO_2e.			
	305-4 GHG emissions intensity	Analyst Download			
	305-5 Reduction of GHG emissions	Energy Analyst Download			
	305-6 Emissions of ozone-depleting substances (ODS)	Basis of Reporting Document Analyst Download Stepan Company monitors energy use and greenhouse gas (GHG) emissions data in support of sustainability goals and reporting and has collected this data for numerous years across our sites. This information is used to communicate to external stakeholders on our environmental footprint and to identify opportunities for improvement to our global operations. We work to align with broadly recognized frameworks and report annually to the CDP (formerly the Carbon Disclosure Project) on our energy usage and emissions. CDP works to drive further alignment with widely adopted frameworks including the GHG Protocol Corporate Accounting and Reporting Standard. Stepan strives to align with the GHG Protocol for emissions calculations, and we work to drive continuous improvement in our GHG data collection and management process.			
	305-7 Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	Basis of Reporting Document Analyst Download			
Waste Reduction and Water Use					
GRI 3: Material Topics 2021	3-3 Management of material topics	Water Use			
GRI 303 Water and Effluents 2018	303-1 Interactions with water as a shared resource	Water Use Stepan conducted detailed water risk assessments in 2021 and 2022. External risks for Stepan's facilities were assessed using the World Resources Institute's (WRI) Aqueduct™ Water Risk Atlas, an open-source online tool that provides global information about water-related risks. The Aqueduct (version 3.0) water risk framework creates indexed (categorical) scores for 13 water risk indicators, which are grouped and weighted to produce composite scores for three different water risk categories: water quantity, water quality, and reputational risk. The three groups are then combined into one score for Overall Water Risk. The approach enables users to conduct a portfolio-level comparison of water risks over a wide geographical range. Local addresses provided by Stepan for each of its facilities were converted to latitude and longitude coordinates and imported into the "Analyze" feature of the Water Risk Atlas online platform. The sites were analyzed using both the "Baseline" and "Future" Risk scenarios. The output from the Aqueduct Water Risk Atlas was evaluated to identify the highest potential risks for Stepan's facilities and to rank the facilities based on their scores for Overall Water Risk.			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 303 Water and Effluents 2018	303-2 Management of water discharge-related impacts	Stepan manages water discharge and wastewater in accordance with local, state and national laws and as required to maintain our permits to operate. This includes regulations outlined by the U.S. Clean Water Act.			
	303-3 Water withdrawal	Analyst Download			
	303-4 Water discharge	Analyst Download			
	303-5 Water consumption	Analyst Download			
GRI 306: Waste 2020	306-1 Waste generation and significant waste related impacts	Waste Reduction; Promoting Circularity Through Waste Reduction			
	306-2 Management of significant waste-related impacts	Waste Reduction; Promoting Circularity Through Waste Reduction Stepan collects waste-related data in our STEMS platform with reporting categories and enable sustainability-related reporting as well as mandatory reporting to regulatory bodies.			
	306-3 Waste generated	Analyst Download			
	306-4 Waste diverted from disposal	Analyst Download Waste Reduction			
	306-5 Waste directed to disposal	Analyst Download			
Talent Attraction, Engagement, and Retention					
Employee Learning and Development					
GRI 3: Material Topics 2021	3-3 Management of material topics	Employee Training and Development			
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Analyst Download			
	404-2 Programs for upgrading employee skills and transition assistance programs	Employee Training and Development			
	404-3 Percentage of employees receiving regular performance and career development reviews	Analyst Download			
Diversity, Equity, and Inclusion					
GRI 3: Material Topics 2021	3-3 Management of material topics	Diversity, Equity and Inclusion Stepan works to uphold the principles outlined in our Code of Conduct, Human Rights Policy and numerous other such frameworks. Our Third-Party Code of Conduct outlines comparable expectation for our suppliers. We separately outline expectations for our palm supply chain partners in our Responsible Sourcing Policy, with a focus on ending deforestation and human and labor rights issues that, in some instances, have been identified at the plantation level of the palm supply chain. In 2023, Stepan joined ASD to help strengthen our understanding of potential supply chain issues and to increase our visibility into our palm supply chain.			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Diversity, Equity and Inclusion Analyst Download			
	405-2 Ratio of basic salary and remuneration of women to men	Every 2 years Stepan conducts an analysis of pay equity across gender and other diversity metrics for our U.S. sites. This is part of our work to ensure that we uphold our commitments and are accountable to the principles outlined in our Code of Conduct, Anti-Harassment Policy and other policies that apply to our global workforce.	405-2	Confidentiality Constraints	Stepan does not currently disclose this information publicly, but is reviewing our approach to remuneration reporting to consider future disclosure.
Occupational Health, Safety and Wellbeing					
GRI 3: Material Topics 2021	3-3 Management of material topics	Occupational Health & Safety; Process Safety			
GRI 403: Occupational Health and Safety (2018)	403-1 Occupational health and safety management system	Occupational Health & Safety			
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health & Safety; Process Safety			
	403-3 Occupational health services	Occupational Health & Safety; Process Safety			
	403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational Health & Safety; Process Safety			
	403-5 Worker training on occupational health and safety	Occupational Health & Safety			
	403-6 Promotion of worker health	Employee Well-Being			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational Health & Safety			
	403-8 Workers covered by an occupational health and safety management system	Stepan's bespoke EMS uses ACC Responsible Care®'s framework as a foundation for management of occupational health and safety throughout our operations.	403-8 a.i, ii; b., c.	Information unavailable	Stepan does not currently collect information related to contract worker demographics and EMS.
GRI 403: Occupational Health and Safety (2018)	403-9 Work-related injuries	Analyst Download Occupational Health & Safety; Process Safety Stepan has ongoing work to identify, manage, and mitigate risks including standard processes for pre-start-up safety review and hazard analysis, process hazard analysis checklists, monthly EHSS team meetings to review incidents, learnings, and best practices, and more. Behavior based training programs are implemented at our global sites and tools to identify workplace ergonomic hazards are also utilized.			
	403-10 Work-related ill health	Analyst Download Occupational Health & Safety; Process Safety			

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
Customer Experience					
GRI 3: Material Topics 2021	3-3 Management of material topics	Occupational Health and Safety			
Community Connection					
GRI 3: Material Topics 2021	3-3 Management of material topics	Community Connections			
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Community Connections			
	413-2 Operations with significant actual and potential negative impacts on local communities	Community Connections			
Regulatory Compliance					
GRI 3: Material Topics 2021	3-3 Management of material topics	Products and Services for Sustainability Benefit; Regulatory Compliance and Product Stewardship			
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Analyst Download			
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Regulatory Compliance and Product Stewardship			
Innovation					
GRI 3: Material Topics 2021	3-3 Management of material topics	Advantageous Products			
Product Stewardship					
GRI 3: Material Topics 2021	3-3 Management of material topics	Advantageous Products			
Corporate Governance					
GRI 3: Material Topics 2021	3-3 Management of material topics	Governance			
	3-3 Management of material topics	Stepan Code of Conduct			
GRI 205: Anti-Corruption 2016	205-1 Operations assessed for risks related to corruption	Analyst Download			
	205-2 Communication and training about anti-corruption policies and procedures	Stepan Third Party Code of Conduct; Stepan Code of Conduct Analyst Download Ethics and Compliance			
	205-3 Confirmed incidents of corruption and actions taken	Stakeholder Engagement and Materiality All Stepan stakeholders have access to the ethics hotline reporting system, EthicsPoint. Calls placed through this system remain anonymous and are independently reviewed to determine necessary actions. Stepan currently manages any such incidents according to our stated grievance management process. We will review reporting practices to determine any changes in disclosure.	205-3	Confidentiality Constraints	Stepan does not publicly disclose information on incidents of corruption.

GRI STANDARD/OTHER SOURCE	DISCLOSURE	LOCATION/RESPONSE	OMISSION		
			Requirement(s) Omitted	Reason	Explanation
Promoting a Circular Economy					
GRI 3: Material Topics 2021	3-3 Management of material topics	Products and Services for Sustainability Benefit Stepan Third Party Code of Conduct Responsible Sourcing Policy			
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Analyst Download			
	308-2 Negative environmental impacts in the supply chain and actions taken	Sustainable Materials Use and Sourcing Analyst Download Stepan evaluates our suppliers through a combination of pre-qualification risk assessments and comprehensive annual ESG assessment. We have not formalized a process for utilizing this information to drive supply chain improvements or as part of a preferred supplier program.			
Partnerships and Collaborations					
GRI 3: Material Topics 2021	3-3 Management of material topics	Third Party Partnerships			
Non-Discrimination					
GRI 3: Material Topics 2021	3-3 Management of material topics	Inclusion and Diversity Policy; Stepan Code of Conduct Stepan conducts annual Enterprise Risk as well as Compliance Risk Assessments. Results are compiled and analyzed by Stepan's Ethics and Compliance team, with oversight from Stepan's Chief Compliance and Risk Officer. The results of the Enterprise Risk Assessment are shared and confirmed by the Operating Committee and the Audit Committee of the Board, which is responsible for overseeing the Company's risk management practices generally. The results of the Enterprise Risk Assessment are shared and confirmed by the CEO and Compliance Committee of the Board, which is responsible for overseeing the Company's Ethics & Compliance Programs.			
GRI 406: Non-Discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Stepan Code of Conduct Stepan publicly communicates clear policies related to anti-discrimination and harassment, with training required of all employees on an annual basis. Stepan also maintains an ethics hotline for reporting concerns or incidents. Reported incidents are managed according to the process outlined in Stepan's Code of Conduct.	406-1	Confidentiality Constraints	Stepan does not publicly disclose information on incidents of discrimination.

Sustainability Accounting Standards Board (SASB) Index

TOPIC	ACCOUNTING METRIC	CODE	LOCATION OR DIRECT ANSWER
GHG Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulation (Metric tons (t) CO_2e, Percentage (%))	RT-CH-110a.1	Analyst Download
	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	Progress on Our Sustainability Goals Environment, Resources and Climate Impact; Emissions Stepan conforms to the ACC Responsible Care Management System, and additionally continues to implement a Stepan Management System, which incorporates criteria from ISO 14001 (environmental management) and ISO 50001 (energy management). We track energy and emissions data against our baseline across our global facilities. We defined energy use and emissions reduction targets and implemented projects across our sites that enable energy efficiency.
Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs) (metric tons)	RT-CH-120a.1	Analyst Download
Energy Management	Percentage of energy that is grid electricity, renewable, and self-generated (GJ and %)	RT-CH-130a.1	Analyst Download
Water Management	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress (Thousand cubic meters (m^3), Percentage (%))	RT-CH-140a.1	Analyst Download
	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	RT-CH-140a.2	Analyst Download
	Description of water management risks and discussion of strategies and practices to mitigate those risks	RT-CH-140a.3	Environment, Resources and Climate Impact; Our Commitment and Approach; Water Use
Hazardous Waste Management	Amount of hazardous waste generated, percentage recycled	RT-CH-150a.1	Analyst Download
Community Relations	Discussion of engagement processes to manage risks and opportunities associated with community interests	RT-CH-210a.1	Valuing People and Communities; Community Connections Environment, Resources and Climate Impact; Our Commitment and Approach; Water Use
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	Analyst Download
	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	RT-CH-320a.2	Responsible Practices; Our Commitment and Approach; Occupational Health and Safety All sites have a hazard communication program and personal protective equipment programs. In addition, we have done a qualitative industrial hygiene risk assessment at our global sites using a 3rd party to identify potential exposures, identify applicable occupational exposure limits and risk rank the activities. Using this evaluation, sites then perform employee exposure monitoring as required. Depending upon results of monitoring, controls are evaluated and implemented.
Product Design for Use-Phase Efficiency	Revenue from products designed for use phase resource efficiency	RT-CH-410a.1	Omission: Stepan does not currently track this metric but will review for possible future disclosure.

TOPIC	ACCOUNTING METRIC	CODE	LOCATION OR DIRECT ANSWER
Safety and Environmental Stewardship of Chemicals	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	RT-CH-410b.1	Analyst Download Responsible Practices; Advantageous Products; Regulatory Compliance and Product Stewardship
	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	RT-CH-410b.2	Responsible Practices Advantageous Products; Regulatory Compliance and Product Stewardship; Products and Services for Sustainability Benefit As a member of American Chemistry Council (ACC), Stepan is actively engaged with the Global Product Strategy (GPS) initiative. GPS, which is designed to meet the United Nation's Strategic Approach to Chemicals Management, aims to improve product stewardship within the chemical industry and with suppliers and customers throughout the chain of commerce. Additionally, Stepan implemented the Product Safety Code which contains 11 management practices to focus on the knowledge, management, and communication of the health and environmental impacts of chemical products. Stepan prioritizes the chemicals we manufacture and is using a tiered approach to create our product stewardship summaries. We completed product stewardship summaries for those chemicals identified as high priority according to national and/or international regulation.
Genetically Modified Organisms	Percentage of products by revenue that contain genetically modified organisms (GMOs)	RT-CH-410c.1	Omission: This disclosure topic does not apply to Stepan business model, metrics are omitted based on the lack of applicability.
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	Environment, Resources and Climate Impact; Advantageous Products Stepan 2023 Form 10-K, Item 1A
Operational Safety, Emergency Preparedness and Response	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	RT-CH-540a.1	Analyst Download
	Number of transport incidents	RT-CH-540a.2	Analyst Download
Activity Metric	Production by reportable segment	RT-CH-000.A	Analyst Download

Task Force On Climate-Related Financial Disclosures (TCFD) Index

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
Governance		
a) Describe the board's oversight of climate-related risks and opportunities.	What are the processes and frequency by which the board and/or board committees (e.g., audit, risk, or other committees) are informed about climate-related issues?	2023 CDP Report, C1.1b; C1.2 A full Board review of the Company's strategic plan, which includes sustainability objectives, targets, progress and process, is completed on an annual basis with supplemental reviews happening as progress is completed. The Company publicly committed to the Task Force for Climate-Related Financial Disclosures in 2022 and is supporting climate risk scenario analyses for physical and transition risks to Stepan business. This information will guide further planning and strategy in the area of climate mitigation. Progress on ESG topics including water risk, energy sourcing, emissions targets, climate impacts, enterprise risks, etc. are regularly communicated to the Board.
	Do the board and/or board committees consider climate-related issues when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures?	2023 CDP Report, C1.1a; C1.1b Sustainability Governance The Board reviews needs and initiatives related to operational efficiency, compliance, product development, and other Company efforts with the potential to deliver climate-related benefits. The President and CEO works with Board members to oversee Stepan's risk management policies and processes; participate in and monitor Stepan's strategic planning; provide general oversight of the business and review and approve significant corporate actions, and oversee environmental, social and governance ("ESG") and climate matters, including (i) reviewing and evaluating Stepan's plans and practices; (ii) reviewing current trends and discussing such matters with management; and (iii) overseeing the development and use of measurement and tracking metrics. The ESG Subcommittee of the executive leadership team meets on a bimonthly basis and provides oversight for the corporate ESG Steering Team, monitors progress in implementing Stepan's ESG strategy and regularly reports to the Board, which also oversees sustainability matters, including climate and weather-related factors.
	How does the board monitor and oversee progress against goals and targets for addressing climate-related issues?	2023 CDP Report, C1.1b, C1.2 Sustainability Governance A full Board review of the Company's strategic plan, which includes sustainability objectives, targets, progress and process, is completed on an annual basis with supplemental reviews happening as progress is completed. Frequency: Quarterly reports on select ESG topics from the Chief Technology & Sustainability Officer (CTSO).
b) Describe management's role in assessing and managing climate related risks and opportunities.	Does the organization have assigned climate-related responsibilities to management-level positions or committees; and, if so, whether such management positions or committees report to the board or a committee of the board and whether those responsibilities include assessing and/or managing climate-related issues?	2023 CDP Report, C1.1a; C1.2 Sustainability Governance Stepan's Chief Technology & Sustainability Officer reports on quarterly basis to the Board on select ESG topics that may include assessment and management of sustainability topics including climate-related risks and opportunities. Beginning in 2021 the President and CEO introduced a new governance structure to allow for more direct reporting on ESG and sustainability topics to Stepan's executive leadership team. New Subcommittee responsibilities are defined with quarterly reporting from Stepan's ESG Steering Team. Stepan's ESG Steering Team has also been reorganized to support defined deliverables and accountability in the areas of Environment and Resources Management, Product Carbon Footprint and Life Cycle Impact, Sustainable Raw Material Sourcing, and Sustainable Growth.
	Does it include a description of the associated organizational structure(s)?	2023 CDP Report, C1.2 Sustainability Governance The CTSO reports to the President and CEO and directs the ESG Steering Team, which reports quarterly to the ESG Subcommittee of the executive leadership team.
	What are the processes by which management is informed about climate-related issues?	2023 CDP Report, C1.2 Sustainability Governance In 2021, the CTSO oversaw implementation of a full ESG materiality assessment for the Company, communicating key findings to the executive leadership team and the Board. The executive leadership team includes an ESG Subcommittee which receives quarterly updates from the ESG Steering Team and reports up to the Board on these topics. Awareness of regulatory shifts, including CSRD, has been raised from the ESG Steering Team to the ESG Subcommittee and then to the Board. Issues that impact our plants that are climate or weather related are communicated to the Board from various teams based on the impact. This might come from the Supply Chain team, Logistics, etc. as will be typical of any manufacturing organization.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
b) Describe management's role in assessing and managing climate related risks and opportunities.	How does management (through specific positions and/or management committees) monitor climate-related issues?	2023 CDP Report, C1.1a, C1.2 Sustainability Governance The ESG Subcommittee provides oversight and guidance on topics and key deliverables including climate-related risk understanding and management, with 2022 and 2023 work focused on Scenario Analysis for physical and transition risk, water management plan development, sustainable raw material sourcing, sustainable growth strategy, and operations and resource use management. The CTSO holds primary responsibility for guiding Stepan's ESG initiatives and provides leadership to the ESG Steering Team. The President and CEO has overall responsibility for-and serves to provide approval, guidance and/or review of-identified needs and proposed actions required for the Company, including those concerning climate-related issues and opportunities. He works with Board members to oversee Stepan's risk management policies and processes; participate in and monitor Stepan's strategic planning; provide general oversight of the business and review and approve significant corporate actions, and oversee environmental, social and governance ("ESG") and climate matters, including (i) reviewing and evaluating Stepan's plans and practices; (ii) reviewing current trends and discussing such matters with management; and (iii) overseeing the development and use of measurement and tracking metrics.
Strategy		
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Does the organization have a description of what they consider to be the relevant short-, medium-, and long-term time horizons, taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms?	2023 CDP Report, C2.1a Short-term: 0-3 years Mid-term: 3-10 years Long-term: 10+ years Aligned with Stepan's annual strategic planning process and with Stepan's financial reporting process and informed by work to align with TCFD.
	Does the organization have a description of the specific climate-related issues potentially arising in each time horizon (short, medium, and long term) that could have a material financial impact on the organization?	2023 CDP Report, C2.2, C2.2a, 2.3a In 2022 Stepan undertook a climate risk scenario analysis for physical and transition risks. Physical risks were evaluated for present day, 2030, and 2050 timeframes based on the RCP4.5 and RCP8.5 scenarios. These two scenarios represent future states with moderate to more extreme climate impact based on continued rising temperatures. The approach presents physical risks assuming more extreme conditions than those that would be experience in a 1.5-degree scenario. Transition risks were evaluated using a 1.5-degree scenario for near term and out to 2030. This approach represents the most extreme circumstances expected for transition risks, with the assumption that the greatest challenges associated with Transition Risks to organizations will be faced if markets and governments adopt the most stringent 1.5-degree pathway and implement changes to achieve it. The scenario analysis work identified potential risks based on best available data at the time of the scenario analysis. The identified risks are the same for Stepan as those that are likely to be faced by others in our industry and within the same regions of operation. Stepan works to make our organization resilient in the face of possible challenges as part of our standard business and management practices. Stepan's existing management processes take into account possible unplanned disruptions due to diverse factors including natural disasters, weather, disease, strikes, transportation interruption, government regulation, political unrest or terrorism, or internal reasons, such as fire, explosions, mechanical failure, labor-related work stoppages or slowdowns, maintenance, discharges, contamination, environmental remediation or other manufacturing problems. We work to have in place policies and practices that enable agile and effective response to such events. Stepan also implements strategies aimed at mitigating such events to the extent possible. Stepan monitors regulations and works for compliance readiness across topics including environmental, social and business ethics. **Identified Potential Physical Risks Based on Scenario Analysis Work:** Water Stress (availability): 18% of our manufacturing sites were identified as being in areas of water stress today or in the near term, with half of these predicted to experience a 20% increase in water stress by 2050. Maximum Daily Temperature: One of our sites was identified as more likely to face risks from a 5% increase in maximum daily temperature by 2050 compared to today. Heatwave Duration: 14% of our sites are at increased risk of extended heatwaves, with a modeled increase of 30-50% in the duration of heatwaves for those sites. And 18% of our sites are at higher risk of an approximate 3-fold increase in the number of days above 35 degree C by 2050 compared to present day. Heatwave Frequency: One of our sites is modeled to have an 8-fold increase in the frequency of heatwaves by 2050 compared to present day. One Stepan facility was identified as being at greatest risk of extreme cold temperatures, with a modeled shift of about 20% for the minimum daily temperature by 2050 over present day. Models indicate a decrease in the duration and frequency of cold waves by 10% for this same site for the same timeframe.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Does the organization have a description of the specific climate-related issues potentially arising in each time horizon (short, medium, and long term) that could have a material financial impact on the organization?	**Identified Potential Physical Risks Based on Scenario Analysis Work:** 18% of Stepan manufacturing facilities are predicted to see an increase in maximum 1-day snowfall of 4-9% by 2050 over present day. The number of days with at least 10 cm snowfall is modeled to decrease over this same timeframe. 9% of our facilities are at greatest risk from wind speeds above 40 mph, with a modeled increase of about 20% more days by 2050 compared to present day. 14% of our manufacturing sites are at higher risk for maximum 1-day precipitation, with a modeled increase of 4-15% mm of rainfall by 2050 over present day. 23% of our sites are at higher risk for maximum 5-day precipitation, with a modeled increase of 10-23% mm of rainfall by 2050 over present day. One of our sites is modeled to experience a 5% increase in tropical cyclone-related loss by 2050 compared to present day and another of our sites is likely to experience a 32% decrease in tropical cyclone-related losses. One of our facilities was identified as facing a 5% increase in losses related to inland flooding by 2050 over present day, and another of our facilities is identified as seeing a slight decrease in losses related to inland flooding during this timeframe. **Identified Potential Transition Risks Based on Scenario Analysis Work:** Overall risk exposure is low in the short term (rising to moderately high in the medium term. This is driven by the cost to transition to lower emission technologies (2a) and substituting existing technologies with lower emission options (2b). Exposure is heightened by the likelihood that Stepan anticipates increased mandates and regulations on its products (1a) requiring increased investment. • Additionally, there is higher reputational and credibility risk associated with enhanced reporting obligations (1b) if Stepan does not adequately adhere to these expectations. Likewise, availability and cost of raw materials (2c) presents moderate risk as passing on costs to customers may prove to be more difficult. • By 2030, shift in customer/consumer values (is also likely to emerge as a high risk, given predictions that Stepan's customers will become more concerned with the sustainability of its products, and the possibility that its entire supply chain will be scrutinized. Stepan also perceives there to be opportunity related to innovating product offerings to meet their customers' needs, though this will require a capital commitment. • Stepan's reputation risks remain relatively low out to 2030.
	What are the process(es) used to determine which risks and opportunities could have a material financial impact on the organization?	2023 CDP Report, C2.2 Sustainability Governance Stepan's leadership uses Enterprise Risk Management (ERM) principles to aid in the identification and avoidance or mitigation of important risk factors. Stepan's Enterprise Risk Management (ERM) program uses principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework to effectively identify, manage and mitigate significant risks to the organization. Individuals across Stepan's global locations and functions contribute to our understanding of risks annually through surveys, in person interviews and workshops. Members are polled quarterly throughout the years to spot emerging risks and trends. Critical risks with the potential to substantially disrupt current or future operations are assigned owners to develop or improve mitigation plans, which are shared within the organization. Results from this work are communicated to the executive leadership team and to Stepan's Board. Stepan's Board of Directors and the Audit Committee of the Board of Directors have responsibilities for identification of risk with potential for substantive financial impact. This includes identification of the most significant factors that may materially and adversely affect the Company's business, financial condition, results of operations and cash flows. Stepan's EHSS team has conducted water risk assessments for our global operations and is using the outcomes of this assessment to develop water risk management plans to support management and mitigation of identified issues. Stepan's EHSS and Regulatory Compliance teams monitor global shifts in chemical regulations that have the potential to impact Stepan business, including current and emerging regulations related to climate risk mitigation. Stepan's R&D team works closely with customers and in partnership with Stepan's Regulatory Compliance team to understand transitional risks and opportunities related to emerging societal goals and product/process regulations, including those related to climate change, on an ongoing basis. Stepan's Procurement team works to understand and anticipate potential risks and opportunities for Stepan's supply chain so as to enable reliable, sustainable procurement solutions. Stepan's executive leadership team and Board evaluate possible climate-related risk across the Company's functions. Information is communicated from the functional team level up through leadership to the Board.
	Organizations should consider providing a description of their risks and opportunities by sector and/or geography, as appropriate.	2023 CDP Report, C2.3a Core to our risk mitigation strategies is the principle of resilience. Stepan strives for management systems, operational practices, infrastructure and business strategies that promote resilience and agility in the event of disruptive circumstances. This can include risks posed by climate- or weather-related events, supply chain disruptions or other challenges. We work to understand these risks and their potential impacts on our plants and on our customers, and we engage with risk owners and stakeholders to ensure that potential risks are appropriately considered in our strategic and capital planning processes. Inputs include results from site-specific water risk assessments, monitoring of the regional and local regulatory landscape, results from climate scenario analysis work (see above disclosure for details), and other sources of information.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	How have identified climate-related issues affected businesses, strategy, and financial planning in relation to: Products and services, Supply chain and/or value chain, Adaptation and mitigation activities, Investment in research and development, Operations (including types of operations and location of facilities), Acquisitions or divestments, Access to capital)?	2023 CDP Report Advantageous Products Responsible Practices Transition risks include potential for lost business if a product or raw material is regulated in a way that requires our customers to seek alternatives and/or potential costs to identify and develop capabilities for alternative chemistries or implement upgrades to process technologies to meet regulatory requirements. During the annual planning and budgeting process, these considerations guide investment decisions for the R&D team. Investments in R&D include a focus on process improvements or innovation in the product development phase in an effort to reduce environmental impact, and also a focus on innovating to ensure compliance with shifting regulations. Stepan's CTSO is also guiding the Company toward R&D investments in new technologies that will diversify our product portfolio to support more biobased products. The R&D team aims to support reduced product carbon footprints through shifts in our raw materials. Weather and climate-related impacts have the potential to disrupt raw material production, access to required volumes, pricing, and/or transport. Stepan aims to maintain partnerships and manufacturing capabilities that support responsiveness and adaptability as part of the Company's contingency planning. Additional potential climate risks include regulations with impacts to energy cost, energy sourcing, material imports or exports, or material production, among other considerations. Stepan's strategic planning process involves leadership across Company functions and across all regions of operations, capturing short, medium, and longer-term strategic planning considerations. This includes evaluation of potential risks and opportunities related to the Company's strategic priorities of market diversification, customer intimacy, operational excellence, innovation, and M&A as well as priorities related to sustainability/ESG.
	Organizations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used, and how these risks and opportunities are prioritized. Organizations' disclosures should reflect a holistic picture of the interdependencies among the factors that affect their ability to create value over time.	2023 CDP Report, C3.4 We see growing interest across our business segments for products having a lower carbon footprint or ability to support reduced emissions and are working to deliver products with lower climate impact through raw material decisions, manufacturing footprint, the product in its use-phase and at product end of life. Weather and climate impacts can affect raw material availability or cost, manufacturing costs, resource use efficiency/ reduction efforts, or impact our costs to meet tighter environmental regulations, including carbon taxing strategies. Extreme or severe weather or chronic conditions can impact water supply, our ability to continue manufacturing, or our ability to receive raw materials and deliver goods. Disruptions to energy supply can result in higher energy costs and severe climate events can result in tighter supply and higher costs for bio renewable raw materials. For some of our facilities' operating costs may be affected by direct impacts of weather and climate events that result in the need for increased capital investment. Stepan Company continues to look at opportunities to expand our production capacity. Environmental factors that influence our consideration of potential acquisitions include regional or national regulations, availability of secure and reliable water source, chronic climate conditions such as drought or fire, likelihood of extreme climate events such as hurricane. Stepan also looks for opportunities to expand into adjacent chemistries, with one area of focus being expansion of sustainability-related capabilities.
	Organizations should describe the impact of climate-related issues on their financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities). If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described.	2023 CDP Report, C2.3a Stepan conducted physical and transition risk scenario analyses in 2022 according to the following climate scenarios: IEA NZ 2050: Under this scenario while the physical risks associated with the scenario will be relatively limited, the risks and opportunities relating to policy and legal; reputation; market and technology risks will be more pronounced. RCP 4.5: The climate scenarios and time periods have been selected to capture a wide range of uncertainty in future physical climate-related impacts and to provide a range of temporal snapshots of physical risk when the effect of climate change is likely to be substantially different. See above (Strategy a) for details on scenario analyses conducted.
	Organizations that have made GHG emissions reduction commitments, operate in jurisdictions that have made such commitments, or have agreed to meet investor expectations regarding GHG emissions reductions should describe their plans for transitioning to a low-carbon economy, which could include GHG emissions targets and specific activities intended to reduce GHG emissions in their operations and value chain or to otherwise support the transition.	2023 CDP Report, C3.1 Progress on Our Sustainability Goals Stepan will take a multi-faceted approach to drive efficiencies in resource usage and lower our emissions. This includes a strong commitment to use of renewable electricity to reduce our Scope 2 emissions and projects to improve efficiency of our operations for reduction of Scope 1 emissions. Stepan is working to increase the number of our manufacturing sites that are ISO 14001 and ISO 50001 certified (for environmental management and energy management), and we have invested in on-site renewable energy, Power Purchase Agreements, and renewable energy certificates across our regions. We anticipate continuing to increase our commitments to renewable electricity. Stepan has already invested in R&D, supplier partnerships, supply chain certifications for sustainable raw materials, development of new product impact assessment tools, and new partnerships to explore emerging technologies. Each of these efforts is part of a broader effort to deliver products and processes with lower environmental footprint and to lower our greenhouse gas emissions. Current goals for emissions reduction and use of renewable electricity include: • Scope 1 and 2 GHG intensity targets: 10% reduction from base year by 2025 • 20% renewable electricity usage by 2025

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	Organizations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a low-carbon economy consistent with a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks.	2023 CDP Report, 3.2b Stepan conducted climate scenario analyses in 2022. See above (Strategy a) for details and summarized results on scenario analyses conducted.
	Is there disclosure on where will the organizations strategies may be affected by climate-related risks and opportunities?	2023 CDP Report, C3.3, C3.4 We see growing interest in products with reduced product carbon footprint, greater transparency about product impact, and products promoting circularity. Stepan offers numerous products that support these goals, and we are strategically pursuing growth opportunities in this area. This is part of a strategic decision to diversify into new technologies that will enable Stepan to support markets focused on reduced environmental impact, including products based on biobased and renewable raw materials, as well as local to regional raw material sourcing. Stepan initiated work in 2023 aligned with safe and sustainable by design principles as early efforts to shift our product portfolio. Stepan works to strategically promote adaptability and flexibility with our network of supply chain partners, including raw material suppliers, energy suppliers, and transport providers. Stepan also evaluates options to move our materials via transport modes with a lower carbon footprint. Stepan examines environmental risks in evaluation of potential acquisitions and has worked to more formally integrate criteria related to these risks in our M&A process. This includes risk associated with chronic issues such as drought, extreme or acute risks such as hurricanes or flooding, regulatory shifts, etc. Stepan also utilizes a supplier ESG assessment tool for evaluation of our direct suppliers. Stepan strives for continuous improvement across our operations, including improvements related to resource use efficiency and adaptability in the face of climate-related risks and opportunities. This includes increased use of renewable electricity, with investments in on-site solar power generation in regions experiences power supply disruptions due to extended drought (e.g. for a grid supplied by hydropower).
	How will the organizations strategies change to address such potential risks and opportunities?	2023 CDP Report, C3.3, C3.4 Sustainability is a key aspect for consideration in the early phases of Stepan's innovation process and includes evaluation of areas of actual or potential impact. As our customers increasingly inquire about the carbon footprint of their purchased materials, we continue identifying approaches to reduce the Scope 1, 2 and 3 GHG emissions associated with Stepan products. In 2023, Stepan formalized a focus on sustainable raw materials as a key driver for our product design and innovation strategy. Given that raw materials are the largest contributor to our Scope 3 emissions, finding drop-in alternatives with a lower footprint is key to reducing those emissions. This includes biobased or circular feedstocks, and/or raw materials produced with renewable energy. Stepan's commitment to ISCC PLUS certifications enables us to support customers with products that carry externally validated sustainability benefits. Over the past year, Stepan strengthened our capabilities to calculate PCF based on the Together for Sustainability PCF Guideline for the chemical industry. This work not only supports our customers in their emissions reduction efforts, but also provides insights that inform portfolio development, raw material procurement and other business decisions. Looking ahead, our goal is to develop PCF data for a majority of our commercial products, with increased use of primary data. The PCF work complements our internal product assessment tool, which evaluates our products based on broad criteria related to product safety for human health and the environment, as well as other factors. Our goal is to combine these product profiling tools with other information into a standardized evaluation of sustainability-related characteristics in the product design phase. Safe and Sustainable by Design (SSbD) principles are recognized as a best practice, and in 2023, Stepan worked with a third-party partner to develop a framework and roadmap aimed at enhancing the sustainability of Stepan's product portfolio using this approach. Looking ahead, we will formalize this approach with our teams.
	Does the organization take into consideration the potential impact of climate-related issues on financial performance (e.g., revenues, costs) and financial position (e.g., assets, liabilities)?	2023 CDP Report, C3.4 We see growing interest across our business segments for products having a lower carbon footprint or ability to support reduced emissions and our continued success in the market depends on Stepan's ability to deliver products with lower climate impact through raw material decisions, manufacturing footprint, the product in its use-phase and at product end of life. Weather and climate impacts can affect raw material availability or cost, manufacturing costs, resource use efficiency/ reduction efforts, or impact our costs to meet tighter environmental regulations, including carbon taxing strategies. Extreme or severe weather or chronic conditions can impact water supply, our ability to continue manufacturing, or our ability to receive raw materials and deliver goods. Disruptions to energy supply can result in higher energy costs and severe climate events can result in tighter supply and higher costs for biorenewable raw materials. For some of our facilities, operating costs may be affected by direct impacts of weather and climate events that result in the need for increased capital investment. Stepan Company continues to look at opportunities to expand our production capacity. Environmental factors that influence our consideration of potential acquisitions include regional or national regulations, availability of secure and reliable water source, chronic climate conditions such as drought or fire, likelihood of extreme climate events such as hurricane. Stepan also looks for opportunities to expand into adjacent chemistries, with one area of focus being expansion of sustainability-related capabilities.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
c) Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario.	Are the climate-related scenarios and associated time horizon(s) considered?	2023 CDP Report See above (Strategy a) for details and summarized results on scenario analyses conducted.
Risk Management		
a) Describe the organization's processes for identifying and assessing climate related risks.	Organizations should describe their risk management processes for identifying and assessing climate-related risks. An important aspect of this description is how organizations determine the relative significance of climate-related risks in relation to other risks.	2023 CDP Report, C2.2 Sustainability Governance Stepan's leadership uses Enterprise Risk Management (ERM) principles to aid in the identification and avoidance or mitigation of important risk factors. Stepan's Enterprise Risk Management (ERM) program uses principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework to effectively identify, manage and mitigate significant risks to the organization. Individuals across Stepan's global locations and functions contribute to our understanding of risks annually through surveys, in person interviews and workshops. Members are polled quarterly throughout the years to spot emerging risks and trends. Critical risks with the potential to substantially disrupt current or future operations are assigned owners to develop or improve mitigation plans, which are shared within the organization. Results from this work are communicated to the executive leadership team and to Stepan's Board. Stepan's Board of Directors and the Audit Committee of the Board of Directors have responsibilities for identification of risk with potential for substantive financial impact. This includes identification of the most significant factors that may materially and adversely affect the Company's business, financial condition, results of operations and cash flows. In addition, the Board of Directors provides oversight of Stepan's risk assessment and risk management processes and policies, as well as steps taken to control such exposures. Stepan's Operating Committee and Board evaluate possible climate related risk across the Company's functions. Information is communicated from the functional team level up through leadership to the Board. Stepan's strategic planning process involves leadership across Company functions and across all regions of operations, capturing short, medium, and longer-term strategic planning considerations. This includes evaluation of potential risks and opportunities related to the Company's strategic priorities of market diversification, customer intimacy, operational excellence, innovation, and M&A as well as priorities related to sustainability/ESG.
	Organizations should describe whether they consider existing and emerging regulatory requirements related to climate change (e.g., limits on emissions) as well as other relevant factors considered.	2023 CDP Report, C2.2a Stepan's ESG Steering Team works to provide insights and facilitate action to manage and support sustainability efforts and obligations. One of the key responsibilities of the team is to monitor and promote understanding related to emerging regulations and to engage relevant stakeholders as needs. In 2023, the ESG Subcommittee continued to guide the Company's sustainability commitments, including alignment with the Task Force on Climate Related Financial Disclosures (TCFD). The Subcommittee also provided guidance on emerging regulations, such as the European Union Deforestation Regulation (EUDR), the EU Corporate Sustainability Reporting Directive (CSDR) and the U.S. Securities Exchange Commission (SEC) climate-related reporting requirements.
	What is the organization's process for assessing the potential size and scope of identified climate-related risks?	2023 CDP Report, C2.2 Sustainability Governance Stepan's Board of Directors and the Audit Committee of the Board of Directors have responsibilities for identification of risk with potential for substantive financial impact. This includes identification of the most significant factors that may materially and adversely affect the Company's business, financial condition, results of operations and cash flows. Stepan's leadership has publicly committed to TCFD alignment. In 2022 the Company completed work to conduct physical and transition climate risk scenario analyses. The outputs of this work will serve as key inputs to functions across the company for near and longer-term planning and strategy development. We have previously evaluated such risks as part of Stepan's Enterprise Risk Management process.
	What definitions of risk terminology used or references to existing risk classification frameworks are used?	2023 CDP Report C2.1b Stepan defines financial impact, including impacts related to climate risk, as a change in the Company's financial condition or results. Strategic impact to the Company is defined as factors that advance our strategic priorities (including indicators reflecting market diversification, customer intimacy, operational excellence, innovation, and M&A). Conversely, strategic risks are those that interfere with these same strategic priorities.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
b) Describe the organization's processes for managing climate related risks.	Organizations should describe their processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks. In addition, organizations should describe their processes for prioritizing climate-related risks, including how materiality determinations are made within their organizations.	2023 CDP Report, C2.2, C3.2b Sustainability Governance Stepan's leadership uses Enterprise Risk Management (ERM) principles to aid in the identification and avoidance or mitigation of important risk factors. Stepan's Enterprise Risk Management (ERM) program uses principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework to effectively identify, manage and mitigate significant risks to the organization. Individuals across Stepan's global locations and functions contribute to our understanding of risks annually through surveys, in person interviews and workshops. Members are polled quarterly throughout the years to spot emerging risks and trends. Critical risks with the potential to substantially disrupt current or future operations are assigned owners to develop or improve mitigation plans, which are shared within the organization. Results from this work are communicated to the executive leadership team and to Stepan's Board. The scenario analysis for transition risks considers residual risk as an annual impact using Stepan's Enterprise Risk Management scales. The assessment considers risks across future time horizons: short term (2025) and medium term (2030). For each risk, it is intended that the following elements and focal questions are addressed: • Likelihood of risk impacting Stepan • The potential financial impact the risk could have • Any risk mitigation actions or associated opportunities of the risk For some risks there will be both downside threat and upside opportunities, the assessment will focus on both. For physical risks, we will consider the approach adopted by the IPCC to describe the level of confidence in the climate model projections for hazard variables. These are included in the transmission channel diagrams, using the labels 'high', 'medium', or 'low'. A 'low confidence' rating has also been applied to transmission channels related to changes in wider market (demand / supply balance) due to extreme events & climate change, and risks of legal action. Risks and focal questions considered include: • Increasing temperatures • Rising sea levels • Changing rainfall patterns (e.g. water stress) • Changes in extreme (acute) events, e.g., Tropical Windstorms, floods
c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organization's overall risk management.	How are the processes for identifying, assessing, and managing climate-related risks integrated into overall risk management?	2023 CDP Report, C0.1 We have previously evaluated such risks as part of Stepan's Enterprise Risk Management process.
Metrics and Targets		
a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	Does the organization provide the key metrics used to measure and manage climate related risks and opportunities? See tables in methodology.	2023 CDP Report, C2.2a Current/emerging regulation, technology, legal, market, reputation, acute physical, chronic physical.
	Where climate-related issues are material, organizations should consider describing whether and how related performance metrics are incorporated into remuneration policies.	2023 CDP Report, C1.3 Stepan's Chief Technology and Sustainability Officer (CTSO) has performance incentives tied to implementation of Stepan's Sustainability vision and mission. Over recent years this has included achieving the Company's emissions reduction targets, development of the next round of emissions reduction targets, overseeing the development and scale-up of biobased product technology, and expansion of a sustainable raw material strategy. Certain employees have performance incentives tied to development of sustainable raw materials sourcing strategy, development of phase two emissions goals, and product life cycle impact management.

DISCLOSURES	CRITERIA	STEPAN DISCLOSURE
a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	Organizations should provide their internal carbon prices as well as climate-related opportunity metrics such as revenue from products and services designed for a low-carbon economy.	Stepan does not currently use an internal carbon price within the organization.
	Metrics should be provided for historical periods to allow for trend analysis. Where appropriate, organizations should consider providing forward-looking metrics for the cross-industry.	2023 CDP Report C5.2 Scope 1 and 2 emissions are reported in Stepan's Analyst Download for historical periods.
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Organizations should provide their Scope 1 and Scope 2 GHG emissions independent of a materiality assessment, and, if appropriate, Scope 3 GHG emissions and the related risks.31 All organizations should consider disclosing Scope 3 GHG emissions.	2023 CDP Report C6.1, C6.3, C6.5 Yes—Scope 1, 2 and 3.
	GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions.	2023 CDP Report C5.1c Stepan calculates our Scope 1, 2 and 3 emissions according to the GHG Protocol.
	GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate the metrics.	2023 CDP Report C5.2 Scope 1 and 2 emissions are reported in Stepan's Analyst Download for historical periods.
c) Describe the targets used by the organization to manage climate related risks and opportunities and performance against targets.	Organizations should describe their key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc., in line with the cross-industry, climate related metric categories in Table A2.1 (p. 79), where relevant, and in line with anticipated regulatory requirements or market constraints or other goals.	2023 CDP Report C4.1b Progress on Our Sustainability Goals Scope 1 and 2 emissions intensity reduced by 10% by 2025 from 2016 baseline. 20% renewable energy usage by 2025 (achieved). 40% reduction in water usage across facilities covered in our 2016 footprint.
	Organizations disclosing medium-term or long-term targets should also disclose associated interim targets in aggregate or by business line, where available.	2023 CDP Report C4. Targets and Performance
	Where not apparent, organizations should provide a description of the methodologies used to calculate targets and measures.	2023 CDP Report C4.1b

ASSURANCE REPORT

Independent Limited Assurance Report to Stepan Company

ERM Certification & Verification Services Incorporated ("ERM CVS") was engaged by Stepan Company ("Stepan") to provide limited assurance in relation to the selected information set out below and presented in the Stepan 2023 Sustainability Report & ESG Analyst Download (the "Reports").

Engagement summary	
Scope of our assurance engagement	Whether the 2020, 2021 and 2023 data for the following selected disclosures are fairly presented in the Reports, in all material respects, in accordance with the reporting criteria. **Selected Disclosures** / **Unit** / **Year** Total Scope 1 GHG emissions / Kilotons CO_2e / 2023 Total Scope 2 GHG emissions (location-based) / Kilotons CO_2e / 2023 Total Scope 2 GHG emissions (market-based) / Kilotons CO_2e / 2023 Total energy consumed / 1,000 Terajoules / 2023 Total restated Scope 1 GHG emissions* / Kilotons CO_2e / 2020, 2021 *Due to an update to the process emissions methodology Our assurance engagement does not extend to information in respect of earlier periods or to any other information included in the Reports.
Reporting period	1 January 2020 – 31 December 2020 1 January 2021 – 31 December 2021 1 January 2023 – 31 December 2023
Reporting criteria	• Stepan's Basis of Reporting • WBCSD/WRI GHG Protocol (2004, as updated January 2015) as relevant for the Scope 1 and 2 GHG emissions
Assurance standard and level of assurance	We performed a limited assurance engagement, in accordance with the International Standard on Assurance Engagements ISAE 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board. 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 consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.
Respective responsibilities	Stepan is responsible for preparing the Reports and for the collection and presentation of the information within it, and for the designing, implementing and maintaining of internal controls relevant to the preparation and presentation of the Reports. ERM CVS' responsibility is to provide a conclusion to Stepan on the agreed scope based on our engagement terms with Stepan, the assurance activities performed and exercising our professional judgement.

Our conclusion

Based on our activities, as described below, nothing has come to our attention to indicate that the 2020, 2021, or 2023 data and information for the disclosures listed under 'Scope' above are not fairly presented in the Reports, in all material respects, in accordance with the reporting criteria.

Our assurance activities

Considering the level of assurance and our assessment of the risk of material misstatement of the Reports a multi-disciplinary team of sustainability and assurance specialists performed a range of procedures that included, but was not restricted to, the following:

- Evaluating the appropriateness of the reporting criteria for the Reports;
- Interviewing management representatives responsible for managing the selected issues;
- Interviewing relevant staff to understand and evaluate the management systems and processes (including internal review and control processes) used for collecting and reporting the selected disclosures, including both 2023 emissions & energy data and restated 2020 & 2021 Scope 1 data;
- Reviewing of a sample of qualitative and quantitative evidence supporting the reported information at a corporate level. This included a detailed review of the restated 2020 and 2021 process emissions calculations and supporting evidence for the Millsdale site and the resulting restated total Scope 1 emissions;
- Performing an analytical review of the year-end data submitted by all locations included in the consolidated 2023 group data for the selected disclosures which included testing the completeness and mathematical accuracy of conversions and calculations, and consolidation in line with the stated reporting boundary. An analytical review of this nature was also carried out for the restated 2020 and 2021 process emission data from the Millsdale site.
- Conducting one virtual visit to a Stepan facility in Bauan, Philippines, and one in-person site visit to a Stepan facility in Winder, Georgia, USA, to review source data and local reporting systems and controls;
- Evaluating the conversion and emission factors and assumptions used; and
- Reviewing the presentation of information relevant to the scope of our work in the Reports to ensure consistency with our findings.

The limitations of our engagement

The reliability of the assured information is subject to inherent uncertainties, given the available methods for determining, calculating or estimating the underlying information. It is important to understand our assurance conclusions in this context.

Our independence, integrity and quality control

ERM CVS is an independent certification and verification body accredited by UKAS to ISO 17021:2015. Accordingly we maintain a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. Our quality management system is at least as demanding as the relevant sections of ISQM-1 and ISQM-2 (2022).

ERM CVS applies a Code of Conduct and related policies to ensure that its employees maintain integrity, objectivity, professional competence and high ethical standards in their work. Our processes are designed and implemented to ensure that the work we undertake is objective, impartial and free from bias and conflict of interest. Our certified management system covers independence and ethical requirements that are at least as demanding as the relevant sections of the IESBA Code relating to assurance engagements.

ERM CVS has extensive experience in conducting assurance on environmental, social, ethical and health and safety information, systems and processes, and provides no consultancy related services to Stepan in any respect.

Andrea Duque
Partner, Corporate Assurance
Malvern, PA

June 17, 2024

On behalf of:

ERM Certification & Verification Services Incorporated
www.ermcvs.com | post@ermcvs.com

ERMCVS


Stepan