



We create chemistry

# BASF in Greater China Report 2021





**Cover photo:**

BASF's economic success is closely linked to the health and well-being of employees, neighbors, customers and consumers worldwide. In the photo, employees are seen jogging in the forest park nearby BASF Shanghai Pudong Innovation Park during a community event in April 2021.

**On this page:**

BASF researchers developed a new chemical process to recycle the lithium contained in the battery in high purity. This will also help to avoid waste and reduce the CO<sub>2</sub> footprint.

# Index

About this Report	3
BASF Group 2021 at a glance	4
Welcome	5
The BASF Group	6
BASF in Asia Pacific	14
BASF in Greater China	18
Business Development	20
Supplier Management	25
Environmental Protection, Health and Safety	26
Employees and Society	33
Further Information	39

## About this Report

The “BASF in Greater China” Report is published annually as a concise document about the performance of our activities across the three dimensions of sustainability – economy, environment and society – in Greater China. The reporting period for this publication is the financial year 2021. This report also carries an overview of BASF Group along with its financial performance, prepared in accordance with the requirements of the International Financial Reporting Standards (IFRS), and, where applicable, the German Commercial Code as well as the German Accounting Standards (GAS). The emissions, waste, energy and water use of consolidated joint operations are included pro rata, based on our stake. The employee numbers refer to employees within the BASF Group scope of consolidation as of December 31, 2021.



To meet the growing demand for more sustainable products and solutions in the Asia Pacific market, BASF has been continuously investing in its local production and R&D in Greater China to drive future growth.

# 2021 | BASF Group

## At a glance

### Sales

**€78.6 billion**  
(2020: €59.1 billion)

### EBIT before special items

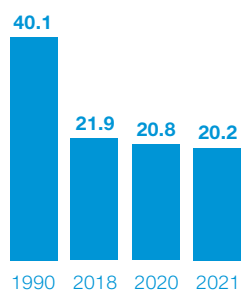
**€7.8 billion**  
(2020: €3.6 billion)

### ROCE

**13.5%**  
(2020: 1.7%)

### Greenhouse gas emissions

(million metric tons of CO<sub>2</sub> equivalents)



### Accelerator sales

**€24.1 billion**  
(2020: €16.7 billion)

### Employees at year-end

**111,047**  
(2020: 110,302)

### Research and development expenses

**€2.2 billion**  
(2020: €2.1 billion)

### Personnel expenses

**€11.1 billion**  
(2020: €10.6 billion)

## Segment data



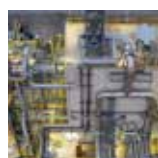
### Chemicals

	Million €	
Sales	2021	13,579
	2020	8,071
EBIT before special items	2021	2,974
	2020	445



### Surface Technologies

	Million €	
Sales	2021	22,659
	2020	16,659
EBIT before special items	2021	800
	2020	484



### Materials

	Million €	
Sales	2021	15,214
	2020	10,736
EBIT before special items	2021	2,418
	2020	835



### Nutrition & Care

	Million €	
Sales	2021	6,442
	2020	6,019
EBIT before special items	2021	497
	2020	773



### Industrial Solutions

	Million €	
Sales	2021	8,876
	2020	7,644
EBIT before special items	2021	1,006
	2020	822



### Agricultural Solutions

	Million €	
Sales	2021	8,162
	2020	7,660
EBIT before special items	2021	715
	2020	970

# Welcome

## Letter from the President

*Dear stakeholders,*

Let me start by saying, BASF Greater China enjoyed an incredible year in 2021.

We managed to deliver excellent results by posting the highest-ever sales of approximately €12 billion in Greater China (2020: €8.5 billion). We achieved a dual increase in sales volume and price. The Monomers, Intermediates, Catalysts and Performance Materials divisions made outstanding contributions, thanks to strong upstream and downstream customer demand and higher prices. BASF's acquisition of Shanshan Battery Materials further contributed to the strong conclusion of the 2021 business year.

Building on the already outstanding performance in 2020, BASF has once again demonstrated its resilience thanks to our continuous investments into local manufacturing capacities, innovation capabilities and owing to the excellent contributions by our employees.

The construction of the Zhanjiang Verbund site is expected to further accelerate BASF's profitable growth in the Asia Pacific region. We started construction of the Zhanjiang Verbund site in 2020 and the first plants are scheduled for startup in 2022.

By 2023, we want to expand our Verbund site in Nanjing, which we jointly operate with Sinopec, to address the growing demand for specialized chemicals in the Chinese market. New manufacturing plants for selected products in the Petrochemicals and Intermediates divisions are part of this investment.

With the establishment of BASF Shanshan Battery Materials Co., Ltd., we have attained yet another key milestone by creating a strong presence of battery materials in the largest market. With more production capacities and R&D facilities, we are well-positioned to serve cell manufacturers and OEM customers in the relevant markets with customized and sustainable solutions.

China continues to be the engine of global chemical output growth. It is critical for us to continue to implement BASF's corporate strategy in Greater China in order to stay ahead of the competition. In our industry, sustainability and innovation are inextricably linked and they are the key differentiators in the marketplace.

We are committed to delivering more sustainable solutions and creative products across our entire portfolio while growing our business. By breaking ground on the third phase of its Innovation



Campus Shanghai, which is expected to be ready by early 2023, BASF will strengthen its innovation capabilities in Asia.

On its journey to climate neutrality, BASF has set itself the goals to achieve net zero emissions by 2050 and reduce its greenhouse gas emissions worldwide by 25% by 2030 compared with 2018.

In Greater China, we continued to reduce carbon footprints in our operations by 4.5% in 2021 through digitalization, new technologies and the use of renewable energy, despite a double-digit increase in production volume. In 2021, BASF secured 100% renewable electricity for its plants at BASF's new Verbund site in Zhanjiang. BASF also joined the Renewable Direct Power Purchase (R-DPP) pilot trade in China, with the participation of six BASF sites in Shanghai, and those in Jiangsu and Guangdong provinces.

I am particularly pleased to report that BASF has been named the Top Employer in Greater China for the 12<sup>th</sup> consecutive year. I want to take this occasion to express my gratitude to all our employees for their dedication and contributions to the company's success.

The future is full of uncertainties and challenges posted by the evolving epidemic and volatile geopolitical situation. I am fully confident in our teams in Greater China that we will stand the test of the crises. I look forward to working with all of our stakeholders to continue the growth momentum of BASF Greater China!

Dr. Jeffrey Lou  
President and Chairman Greater China, BASF



# The BASF Group

**At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Over 111,000 employees contribute worldwide to the success of our around 90,000 customers in nearly all sectors. Our customer portfolio ranges from major global customers and small and medium-sized enterprises to end consumers.**

## At a glance

**111,047**

Employees around the world

**~240**

Production sites worldwide

- Six segments with eleven operating divisions
- Verbund structure ensures efficient and reliable production
- High-performance organization for greater customer proximity, increased competitiveness and profitable growth
- Around 90,000 customers are at the core of our strategy
- More than 70,000 Tier 1 suppliers

## Sites and Verbund

As the world's largest chemical company and industry leader, BASF has companies in 90 countries. We operate around 240 production sites worldwide – including Ludwigshafen, the world's largest integrated chemical complex owned by a single company. It was there, in 1865, that the foundation stone was laid for the Verbund concept, which remains a key strength of BASF today: Intelligently linking and steering our plants in a Verbund structure creates efficient value chains – from basic chemicals to highly refined products such as coatings or crop protection. In the Verbund, we can manage our production in a resource-efficient, CO<sub>2</sub>-optimized and reliable way. For example, by using by-products from one factory as feedstocks elsewhere. This enables us to save raw materials and energy, avoid emissions, reduce logistics costs and exploit synergies.

In addition to Ludwigshafen, Germany, BASF operates Verbund sites in Antwerp, Belgium; Freeport, Texas; Geismar, Louisiana; Kuantan, Malaysia; and Nanjing, China. Another is currently being built in Zhanjiang in the southern Chinese province of Guangdong.

## Organization of the BASF Group

We steer our six segments along our value chains to address the needs of our customers with differentiated solutions and business strategies.

- **Chemicals:** The segment supplies BASF's other segments and third-party customers with basic chemicals and intermediates.
- **Materials:** The segment offers advanced materials and their precursors for the plastics and plastics processing industries.
- **Industrial Solutions:** The segment develops and markets ingredients and additives for industrial applications.
- **Surface Technologies:** The segment offers chemical solutions for surfaces such as battery materials and automotive coatings.
- **Nutrition & Care:** The segment produces ingredients and solutions for consumer applications, for example, nutrition and personal care.
- **Agricultural Solutions:** The segment is an integrated provider of seeds, crop protection and digital technologies and solutions.

We take a differentiated approach to steer our businesses according to market-specific requirements and the competitive environment. We provide a high level of transparency around the results of our segments and show the importance of the Verbund and value chains to our business success. BASF aims to differentiate its businesses from their competitors and establish a high-performance organization to enable BASF to be successful in an increasingly competitive market environment.

The operating divisions, the service units, the regions and the corporate center form the cornerstones of the BASF organization, in line with the corporate strategy. As part of the implementation of our strategy, we streamlined our administration, sharpened the roles of services and regions, and simplified procedures and processes. The organizational realignment created the conditions for greater customer proximity, increased competitiveness and profitable growth.

Our eleven operating divisions bear strategic and operational responsibility and manage the 50 global and regional business units and develop strategies for 75 strategic business units.

The regional and country units represent BASF locally and support the growth of business units with local proximity to customers. For financial reporting purposes, we organize the regional divisions into four regions: Europe, North America, Asia Pacific, and South America, Africa and Middle East.

Our research is currently divided into three global divisions: Process Research & Chemical Engineering, Advanced Materials & Systems Research and Bioscience Research. To strengthen our innovation capabilities, we will reorganize our global research activities in 2022 and align them even more closely with the needs of our customers. To this end, we will integrate downstream research into the divisions and bundle activities with broad relevance in a research unit. This unit will continue to be globally positioned with research centers in Europe, North America and Asia Pacific.

Five service units provide competitive services for the operating divisions and sites: Global Engineering Services, Global Digital Services, Global Procurement, European Site & Verbund Management,

Global Business Services (finance, human resources, environmental protection, health and safety, intellectual property, communications, procurement, supply chain and inhouse consulting services).

Following the bundling of services and resources and the implementation of a wide-ranging digitalization strategy, the number of employees in the Global Business Services unit worldwide will decline by up to 2,000 by the end of 2022 compared with baseline 2019. From 2023 onward, the division expects to achieve annual cost savings of over €200 million.

The Corporate Center supports the Board of Executive Directors in steering the company as a whole. These include central tasks from the following areas: strategy, finance and controlling, compliance and law, tax, environmental protection, health and safety, human resources, communications, investor relations and internal audit.

Our Excellence Program aimed to contribute €2 billion to EBITDA annually until the end of 2021 onward compared with baseline 2018. We met this target in 2021. As planned, this was partly due to the reduction of more than 6,000 positions worldwide until the end of 2021. This decrease resulted from the organizational simplification and from efficiency gains in administration, the service units and the operating divisions.

## Procurement and Sales Markets

BASF supplies products and services to around 90,000 customers<sup>1</sup> from various sectors in almost every country in the world. Our customer portfolio ranges from major global customers and small and medium-sized enterprises to end consumers.

We work with over 70,000 Tier 1 suppliers<sup>2</sup> worldwide. They supply us with important raw materials, chemicals, investment goods and consumables, and perform a range of services. Important raw materials (based on volume) include naphtha, liquid gas, natural gas, benzene and caustic soda.

### BASF sales by industry 2021

Direct customers

>20%	Chemicals and plastics   Transportation (respectively)
10%–20%	Agriculture   Consumer goods (respectively)
<10%	Construction   Electronics   Energy and resources   Health and nutrition (respectively)

## Business and Competitive Environment

BASF's global presence means that it operates in the context of local, regional and global developments and a wide range of conditions. These include:

- Global economic environment
- Legal and political requirements (e.g. E.U. regulations)
- International trade agreements
- Industry standards
- Environmental agreements (e.g. E.U. Emissions Trading System)
- Social aspects (e.g. U.N. Universal Declaration of Human Rights)

BASF holds one of the top three market positions in around 80% of the business areas in which it is active. Our most important global competitors include Arkema, Bayer, Clariant, Corteva, Covestro, Dow, Dupont, DSM, Evonik, Huntsman, Lanxess, SABIC, Sinopec, Solvay, Sumitomo Chemical, Syngenta, Wanhua and many hundreds of local and regional competitors. We expect competitors from Asia and the Middle East in particular to continue to grow in significance in the years ahead.

## Corporate Legal Structure

As the publicly listed parent company of the BASF Group, BASF SE takes a central position: Directly or indirectly, it holds the shares in the companies belonging to the BASF Group, and is also one of the largest operating companies. The majority of Group companies cover a broad spectrum of our business. In the BASF Group Consolidated Financial Statements, 258 companies including BASF SE are fully consolidated. We consolidate nine joint operations on a proportional basis and account for 27 companies using the equity method.

 For more information on the companies belonging to the BASF Group, see [basf.com/en/corporategovernance](https://basf.com/en/corporategovernance)

<sup>1</sup> The number of customers refers to all external companies (sold-to parties) that had contracts with the BASF Group in the business year concerned under which sales were generated.

<sup>2</sup> BASF considers all direct suppliers of the BASF Group in the business year concerned as Tier 1 suppliers. These are suppliers that provide us with raw materials, investment goods, consumables and services. Suppliers can be natural persons, companies or legal persons under public law.

# Our Strategy

**Chemistry is our passion. As an industry leader, we want to be the most attractive partner for challenges that can be solved with chemistry. That is why our customers are at the center of everything we do. We want to grow profitably and at the same time, create value for society and the environment. We help to change the world for the better with our expertise, our innovative and entrepreneurial spirit, and the power of our Verbund integration.**

The world is changing at a rapid pace – more and more urgently than ever, solutions are needed for a sustainable future. Chemistry plays a key role here. In almost all areas of life, it can help overcome pressing global challenges with innovative products and technologies – from climate change and using resources more sparingly to feeding the world’s population. This belief is expressed in our corporate purpose and is what motivates us day in and day out: We create chemistry for a sustainable future.

Our mission and motivation is to grow profitably and make a positive contribution to society and the environment. For example, BASF’s solutions contribute to climate protection and help to prevent or recycle waste, produce healthy and affordable food, and enable climate-smart mobility.

At the same time, as an energy and resource-intensive company, we are facing what is probably the biggest transformation in our over 150-year history: The shift toward a carbon-neutral and circular economy and the associated landmarks such as the European Green Deal demand from us new concepts and approaches – for the way we produce, for our raw material base and for our energy supply.

## Our corporate purpose

**We create chemistry for a sustainable future**

We also see these disruptive changes as an opportunity. As the world’s largest chemical company, we want to lead the way and actively and responsibly shape the change. That is why we are gradually switching our energy and raw material supplies to renewable sources. We are strengthening our Verbund structure as the basis for resource-efficient, safe and reliable production. We are developing pioneering low-carbon production processes for our products. We are accelerating our innovation processes and deepening cooperation with partners to develop high-performance products that also require fewer resources and have a lower carbon footprint. We are harnessing the many opportunities of digitalization. We are systematically aligning our portfolio with growth areas and future technologies, and are integrating sustainability into our value chains even more strongly. We create a working environment in which our employees can thrive and contribute to BASF’s long-term success. This is how we live our corporate purpose.

## Our Strategic Action Areas

Our customers are our number one priority and are at the heart of our strategy. We want to be their most attractive partner for challenges that can be solved with chemistry. BASF supplies products and services to around 90,000 customers from almost all sectors and countries around the world. Our customer portfolio ranges from major global customers and small and medium-sized enterprises to end consumers. Our comprehensive product portfolio means that we are active in many value chains and value creation networks. We use various business strategies, which we adapt to the needs of industries and markets. These range from cost leadership in basic chemicals to tailored system solutions for specific customer applications.

We continue to drive forward our customer focus. We have refined our organizational structure to enable our operating divisions to flexibly address specific market requirements and differentiate themselves from the competition.

We are also improving our customer relationships with a range of measures. For example, since 2019 we have been using the Net Promoter System® worldwide to systematically record and optimize our problem-solving skills, product quality and delivery reliability based on direct customer feedback. We have been using a new IT-based customer relationship management system, Salesforce,

## Good to know



## Net Zero Accelerator

The new Net Zero Accelerator unit started work on January 1, 2022. It bundles the extensive cross-company activities with which we want to achieve our ambitious climate protection targets. The unit will initially have around 80 employees and report directly to the Chairman of the Board of Executive Directors. It will focus on accelerating and implementing projects relating to low-CO<sub>2</sub> production technologies, circular economy and renewable energies – driving forward BASF’s transformation to a climate-neutral company. In parallel, our operating divisions will continue to work on divisional-specific carbon reduction projects.

[For more information on climate neutrality, see basf.com](https://www.basf.com)



since 2020. The application helps our sales employees to provide customer support and simplifies their work. Above and beyond this, we have intensified cooperation with our customers to leverage innovation and growth potential together with them. For instance, we established interdisciplinary teams in our business units to even better and more quickly address the needs of our most important customers.

BASF's strategic orientation is founded on a comprehensive analysis of our markets and competitors. We continuously monitor global trends and anticipate the resulting growth opportunities and risks. The following six strategic focus areas enable us to focus on our customers while strengthening our leading position in an increasingly volatile and competitive environment.

### Our six strategic action areas

#### Innovation, sustainability, production, digitalization, portfolio and employees

**Innovation** is the bedrock of our success. BASF is a leader in the chemical industry with around 10,000 employees in research and development and R&D spending of around €2.2 billion. We are expanding this position by strengthening our research activities, bringing research and development even closer together, and fostering cooperation.

We pledged our commitment to **sustainability** in 1994 and since then, have systematically aligned our activities with the principles of sustainability. We see sustainability as an integral part of our strategy as well as our targets, steering processes and business models. Our approach covers the entire value chain – from responsible procurement and safety and resource efficiency in production to sustainable solutions for our customers.

Our core business is the **production** and processing of chemicals. Our strength here lies – both now and in the future – in the Verbund and its integrated value chains. The Verbund offers us many technological, market, production-related and digital advantages. That is why we will continue to invest in the creation and optimization of Verbund structures and drive forward the consolidation of production at highly efficient sites.

We want to leverage the diverse growth potential of **digitalization** and seize the associated opportunities to the benefit of our customers. To achieve this, we promote digital skills among our employees, cooperate with partners and make digital technologies and ways of working an integral part of our business.

Investments, acquisitions and divestitures play a key role in strengthening our **portfolio**. We are focusing on innovation-driven growth areas and sustainable technologies. To further strengthen our position in the dynamic growth market of Asia, we are building a new Verbund site in the southern Chinese province of Guangdong.

Our **employees** are key to BASF's success. That is why we believe that it is important to have an inspiring working environment that fosters and develops employees' individual talents and enables them and their teams to perform at their best. We are pursuing three action areas to make our high-performance organization even more so: empowerment, differentiation and simplification.

### Our Values and Global Standards

How we act is critical to the successful implementation of our strategy and how our stakeholders perceive us. This is what our four corporate values represent. They are binding for all employees worldwide. Together with our Code of Conduct and our global standards and guidelines, they provide the framework for responsible conduct.

**Creative:** We make great products and solutions for our customers. This is why we embrace bold ideas and give them space to grow. We act with optimism and inspire one another.

**Open:** We value diversity, in people, opinions and experience. This is why we foster feedback based on honesty, respect and mutual trust. We learn from setbacks.

**Responsible:** We value the health and safety of people above all else. We make sustainability part of every decision. We are committed to strict compliance and environmental standards.

**Entrepreneurial:** We focus on our customers, as individuals and as a company. We seize opportunities and think ahead. We take ownership and embrace personal accountability.

We stipulate binding rules for our employees with standards that apply throughout the Group. We set ourselves ambitious goals with voluntary commitments and regularly monitor our performance in environmental protection, health and safety with our Responsible Care Management System. We mainly approach our adherence to international labor and social standards using three elements: the Compliance Program including our Code of Conduct and compliance hotlines, close dialog with our stakeholders, and the global management process to respect international labor norms. Our business partners are expected to comply with prevailing laws and regulations and to align their actions with internationally recognized principles. We have established appropriate monitoring systems to ensure this.

## Our Targets and Target Achievement 2021

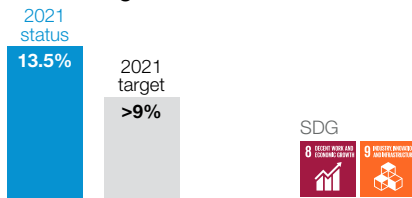
Business success tomorrow means creating value for the environment, society and business. That is why we have set ourselves ambitious targets along our entire value chain. We report transparently on our target achievement so that our stakeholders can track our progress. In order to grow profitably, we want to grow sales volumes faster than global chemical production, further increase our profitability, achieve a return on capital employed (ROCE) considerably above the cost of capital percentage and increase the dividend per share every year based on a strong free cash flow.

We also pursue broad sustainability targets. In this context, we significantly raised our CO<sub>2</sub> reduction target in 2021.<sup>2</sup> We want to strengthen the sustainability focus of our product portfolio and will

update our portfolio steering targets in 2022.<sup>3</sup> We also strive to strengthen the sustainability of our supply chains and use resources responsibly. We want to further improve safety in production. In addition, we aim to promote diversity within the company and create a working environment in which our employees feel that they can thrive and perform at their best.

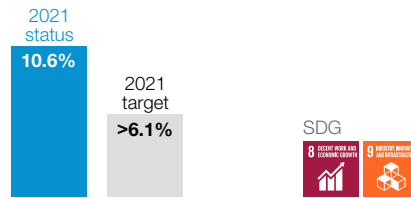
The objective of these targets is to steer our business into a sustainable future, and at the same time, contribute to the implementation of the United Nations' Sustainable Development Goals (SDGs). We are focusing on issues where we as a company can make a significant contribution, such as climate protection, sustainable consumption and production, and fighting hunger.

### Profitable growth

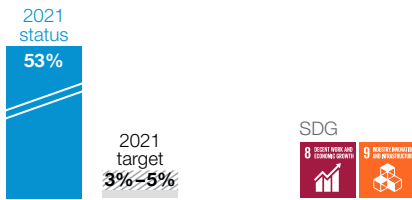


Most important key performance indicator

Achieve a **return on capital employed (ROCE)** considerably above the cost of capital percentage every year



Grow **sales volumes** faster than global chemical production every year

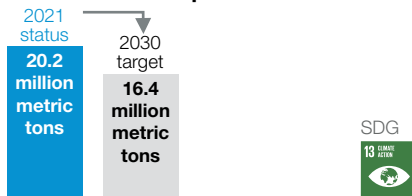


Increase **EBITDA before special items** by 3%–5% per year



Increase the **dividend per share** every year based on a strong free cash flow

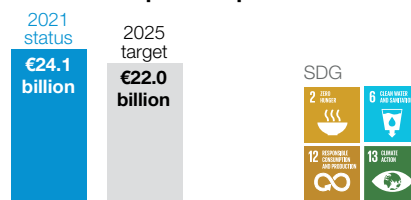
### Effective climate protection



Most important key performance indicator

Reduce our absolute **CO<sub>2</sub> emissions<sup>2</sup>** by 25% by 2030

### Sustainable product portfolio



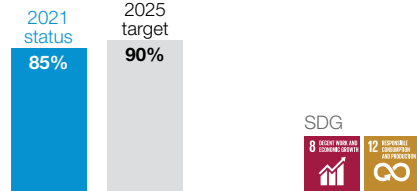
Most important key performance indicator

Achieve €22 billion in **Accelerator sales** by 2025<sup>3</sup>

↘ Reduction target

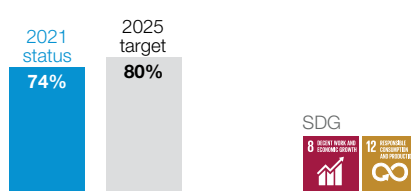
- 1 Dividend confirmed at the Annual Shareholders' Meeting.
- 2 Includes Scope 1 and Scope 2 emissions. In March 2021, we replaced our previous target of CO<sub>2</sub>-neutral growth until 2030 (baseline 2018: 21.9 million metric tons of CO<sub>2</sub>e) with a new, more ambitious climate protection target to reduce absolute CO<sub>2</sub> emissions by 25% compared with 2018.
- 3 We already reached our 2025 sales target for Accelerator products in 2021. Consequently, we will update our product portfolio steering target over the course of 2022.

### Responsible procurement



Limited assurance

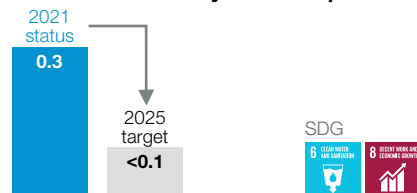
Cover 90% of our relevant spend with **sustainability evaluations** by 2025



Limited assurance

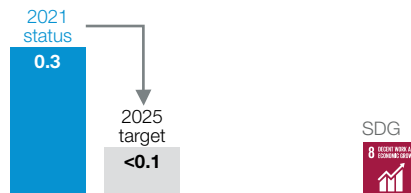
Have 80% of our suppliers improve their **sustainability performance** upon re-evaluation

### Resource efficiency and safe production



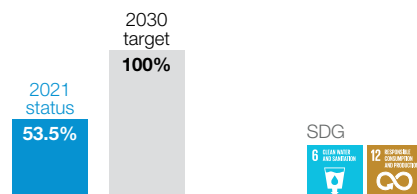
Limited assurance

Reduce worldwide **process safety incidents** per 200,000 working hours to  $\leq 0.1$  by 2025



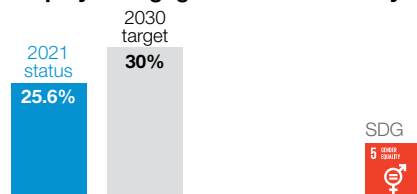
Limited assurance

Reduce the worldwide **lost-time injury rate** per 200,000 working hours to  $\leq 0.1$  by 2025



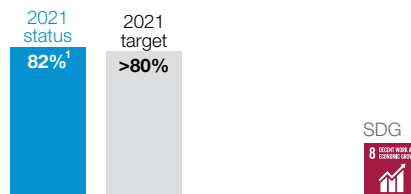
Introduce **sustainable water management** at our production sites in water stress areas and at our Verbund sites by 2030

### Employee engagement and diversity



Limited assurance

Increase the proportion of **women in leadership positions** with disciplinary responsibility to 30% by 2030



Limited assurance

More than 80% of our **employees** feel that at BASF, they can thrive and perform at their best

↓ Reduction target

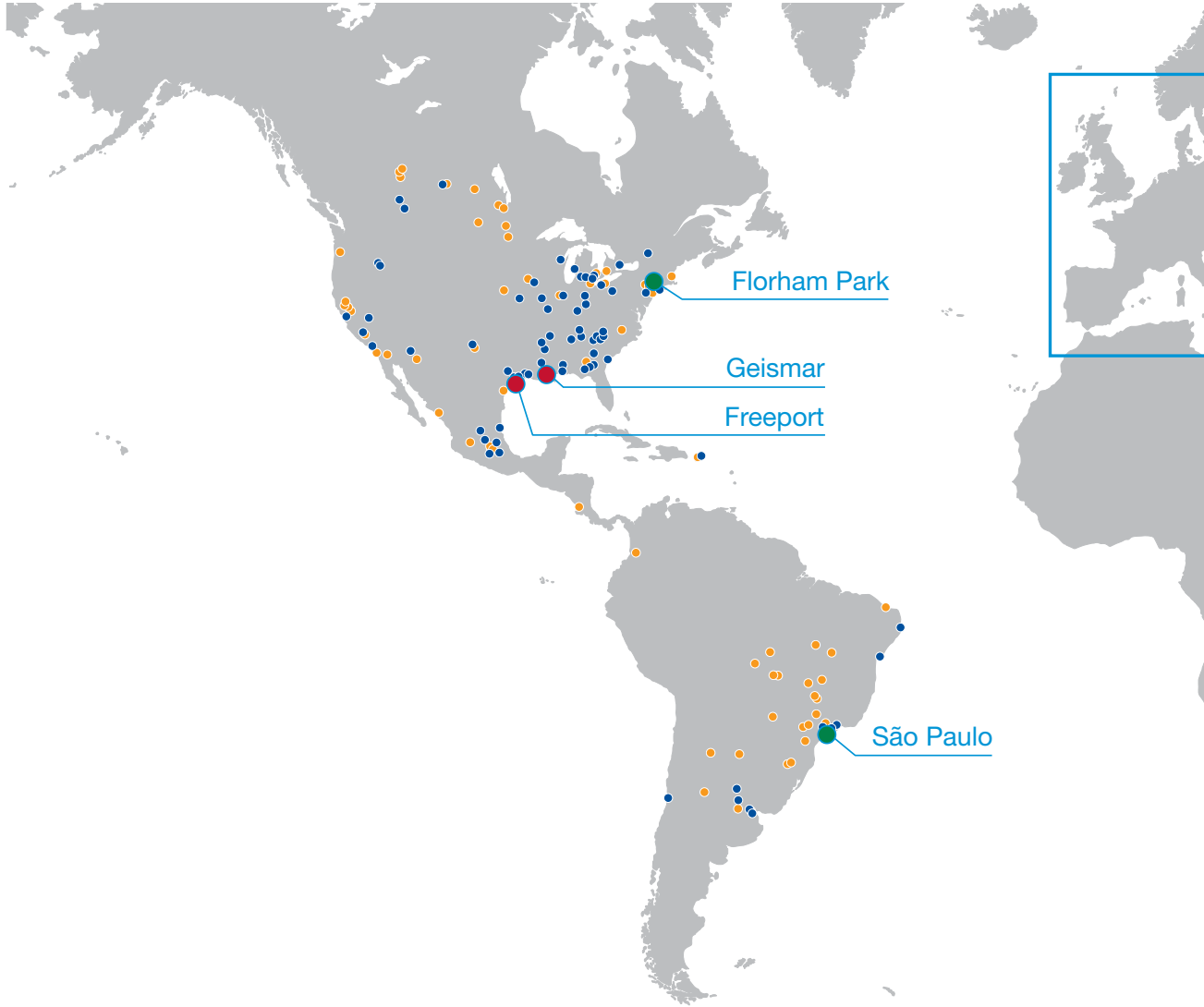
<sup>1</sup> We regularly calculate the employee engagement level. The most recent survey was conducted in 2020. The next survey is planned for 2022.



# BASF in the Regions

BASF Group sales 2021: €78,598 million

BASF Group employees 2021: 111,047



**North America**



**21,935**  
Sales<sup>1</sup> (in million €)

**16,753**  
Employees<sup>2</sup>

**South America, Africa, Middle East**



**4,437**  
Sales<sup>1</sup> (in million €)

**6,786**  
Employees<sup>2</sup>

**Europe**



**31,594**  
Sales<sup>1</sup> (in million €)

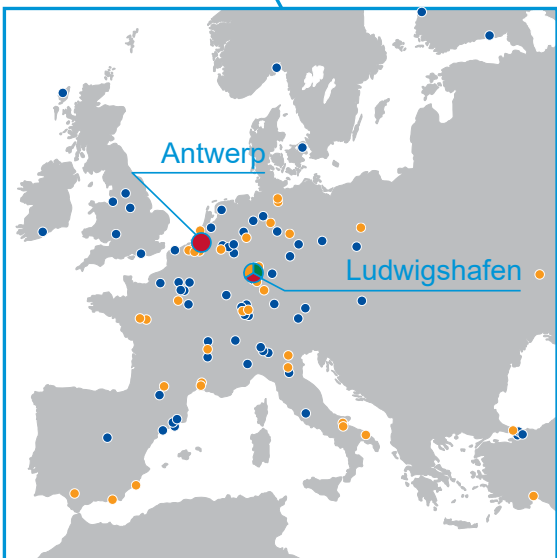
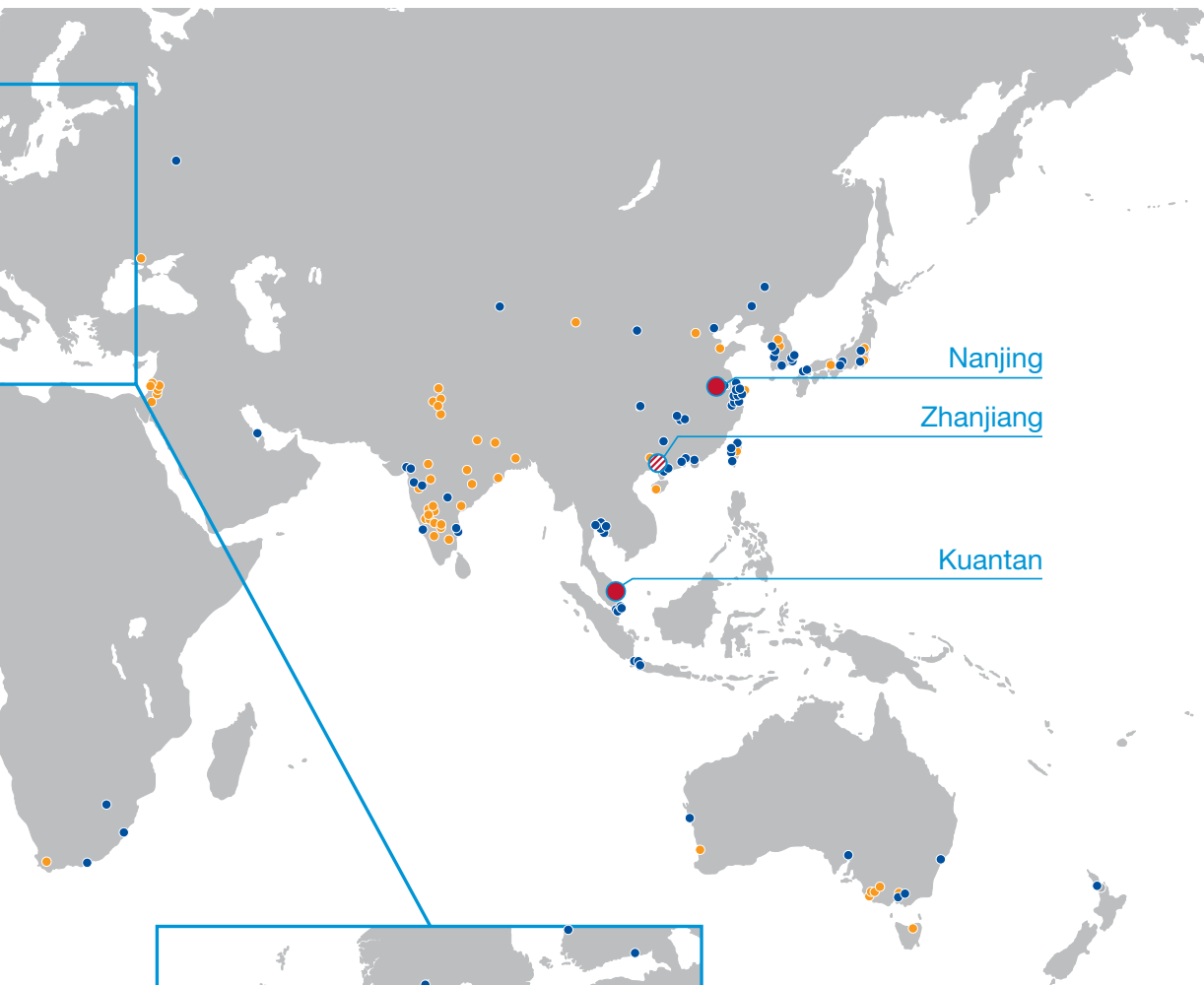
**67,532**  
Employees<sup>2</sup>

**Asia Pacific**



**20,632**  
Sales<sup>1</sup> (in million €)

**19,976**  
Employees<sup>2</sup>



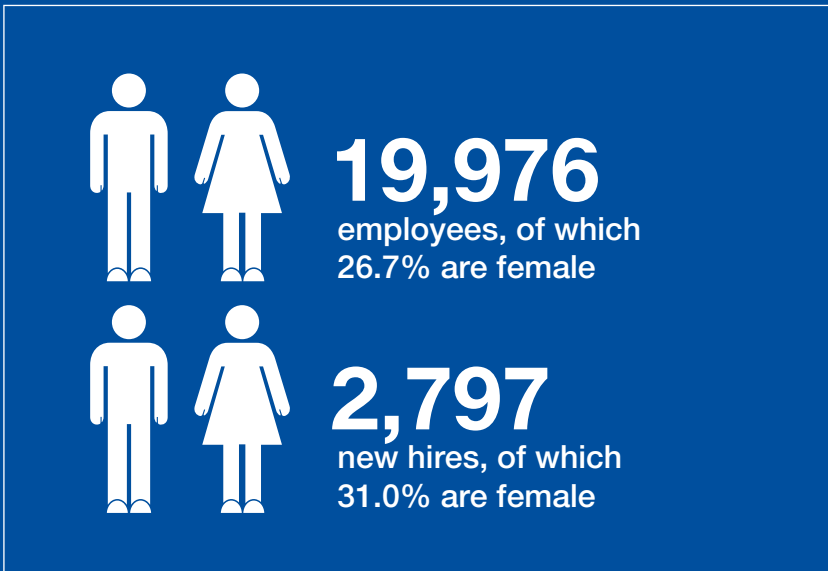
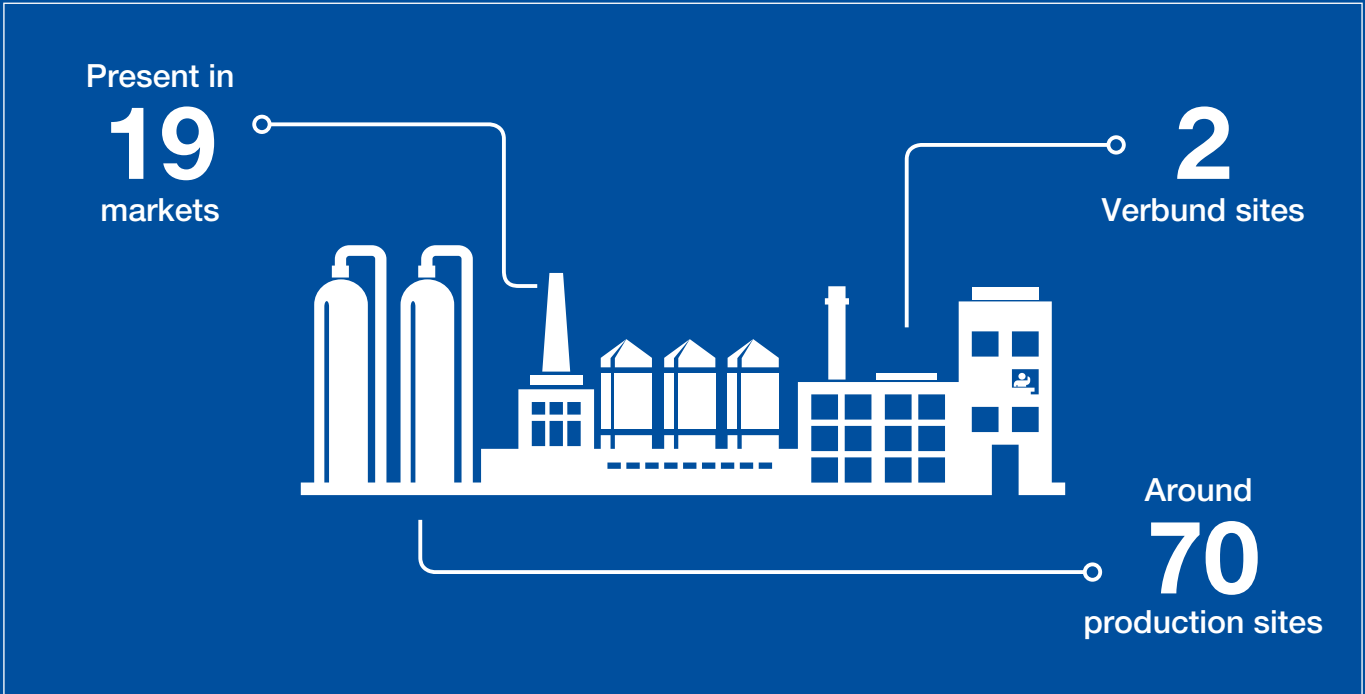
The map shows the production sites and research and development sites of the BASF Group according to the scope of consolidation for the BASF Report 2021. Sites not shown on the map include office and warehouse locations as well as sites of companies not in the scope of consolidation.

- ▨ Verbund sites / planned Verbund site
- Research and development sites
- Production sites
- Regional centers

1 In 2021, by location of company  
 2 At year-end 2021

# BASF in Asia Pacific

At a glance







BASF Innovation Campus Shanghai is the largest R&D hub of BASF in the region. Combining the technical development capabilities of the operating divisions with industrial design expertise, the Innovation Campus Shanghai serves the innovation demand of almost all major industries.

## Innovation

Innovation is the bedrock of BASF's success as a leading chemical company and is the key driver for its profitable growth. Asia is now the largest chemical market and there is a growing demand for more sustainable products and solutions. We focus on developing sustainable solutions for our customers by helping them to reduce their carbon footprint, use resources more efficiently and manufacture products in a more environmental friendly way. This is how we safeguard our competitiveness in the long term and make our contribution to society.

### Growing R&D capabilities in Asia Pacific

- **BASF broke ground for the third phase of Innovation Campus Shanghai**
- **Growing innovation capabilities will further accelerate innovations for BASF's customers**

BASF has been continuously expanding its research and development footprint in Asia Pacific to drive innovation by integrating customer and market needs at an early stage. BASF operates two Innovation Campuses respectively in Shanghai, China, and Mumbai, India.

The Innovation Campus allows BASF to bring together all the stakeholders in the innovation chain including research and development (R&D), business and production units in an integrated site. Each Innovation Campus is an integral part of BASF's global Know-How Verbund and runs global, regional and local R&D projects.

The Innovation Campus Shanghai, located at the BASF Shanghai Pudong Innovation Park, was inaugurated in 2012, and expanded in 2015 and 2019. Combining technical development capabilities of the operating divisions with industrial design expertise, the Innovation Campus Shanghai serves the innovation demand of almost all major industries.

In April 2021, BASF broke ground for the third phase of its Innovation Campus Shanghai. The expansion includes an additional R&D



BASF is strengthening its innovation capabilities in Asia by breaking ground for the third phase of its Innovation Campus Shanghai.

building and an R&D workshop building. Upon its completion in early 2023, the total investment of BASF into its Innovation Campus Shanghai will sum up to around €280 million.

The Innovation Campus Mumbai, with complementary research focusing on crop protection and specialty chemicals, is an important pillar of BASF's growing R&D network in Asia Pacific. It includes state-of-the-art laboratories for chemical synthesis, application and process development, as well as analytics. The Innovation Campus Mumbai brings all new and existing R&D activities in India under one roof. It is located next to the office building and production plant of BASF's Thane site in Navi Mumbai. In 2021, BASF inaugurated a new facility in analytics for reverse phase purification of molecules at Innovation Campus Mumbai and further strengthened its research pipeline, particularly in crop protection.

### Driving open innovation with academia and industry

- **BASF and Chinese Academy of Sciences launched a joint lab on sustainable materials**
- **The Network for Asian Open Research (NAO) promotes collaboration between BASF and researchers in Asia**

## BASF in Asia Pacific: major R&D sites

### Innovation Campus Shanghai

Focus: R&D for chemicals and catalysis, materials, specialty chemicals, analytics, digitalization for R&D, Creation Center

### Innovation Campus Mumbai

Focus: Crop protection, process development, specialty chemicals, analytics, Creation Center





BASF celebrates the 20<sup>th</sup> anniversary of CCS-BASF Youth Innovation Prize.

BASF places great value on open innovation through close collaboration with academic and industry partners around the world. It maintains a global network of around 280 partners from universities, institutes, and companies, forming a key pillar of BASF's global Know-How Verbund. In Asia Pacific, the Network for Asian Open Research (NAO) has been a joint platform steered by BASF as well as leading universities and institutes in the region since 2014.

In 2021, BASF and Chinese Academy of Sciences (CAS) opened a joint lab on sustainable materials in Changchun, China. Drawing on Changchun Institute of Applied Chemistry's (CIAC) research capabilities and leveraging BASF's deep expertise to explore next-generation sustainable technologies, the joint lab will integrate the R&D strengths of the two parties to accelerate the speed-to-market.

BASF and CAS established an advisory committee made up of BASF experts and renowned scientists in the field of sustainable materials in China. The advisory committee will review R&D project proposals initiated from the joint lab and provide strategic guidance to explore research frontier as well as to drive sustainable technologies.

Since the establishment of NAO, BASF and its partners have completed more than 100 joint research projects. Currently, NAO projects cover a wide range of research areas including new monomers, polymers and its applications, surfaces and interfaces, coatings, catalysis, battery materials, chemical and process engineering, bioscience, as well as digitalization and smart manufacturing in R&D. For example, BASF is partnering with Sichuan University to explore improved solutions addressing important market needs such as high chemical resistance of polyamide blends.

### Nurturing research talents in Asia

- **BASF fosters rising stars in China's academia through project funding and CCS-BASF prize**
- **40 outstanding young Chinese scientists have been recognized since 2001**

Innovation in chemistry is driven by talents, especially dedicated, high-calibre scientists. BASF presented the 10<sup>th</sup> CCS-BASF Youth Innovation Prize to four Chinese scientists at the 32<sup>nd</sup> Chinese Chemical Society (CCS) Annual Congress in Zhuhai, acknowledging their outstanding achievements through discoveries in chemistry. Since the establishment of CCS-BASF Youth Innovation Prize in 2001, BASF has been committed to fostering rising stars in China's chemistry academia through funding support. 2021 also marked the 20-year milestone of the award.

Since the award's inception in 2001, BASF aims to encourage and fund outstanding Chinese young scientists in their innovative research areas, including petrochemicals, polymer materials, fine chemicals, surface and colloid chemistry, and bio-engineering. Over the past 20 years, more than 300 scientists have applied, and 40 outstanding young Chinese scientists have been awarded. Among them, seven have become academicians.

BASF is supporting talents at all levels. BASF nurtures students across Asia via the NAO platform. In addition, our Industrial Post-Doc Station in Greater China was officially approved by the Chinese government and welcomed its first industrial Post-Doc in 2021. BASF has also set up a vocational training center in Shanghai to develop a tailor-made program for lab assistants.



BASF and Chinese Academy of Sciences launched a joint lab on sustainable materials.



# BASF in Greater China

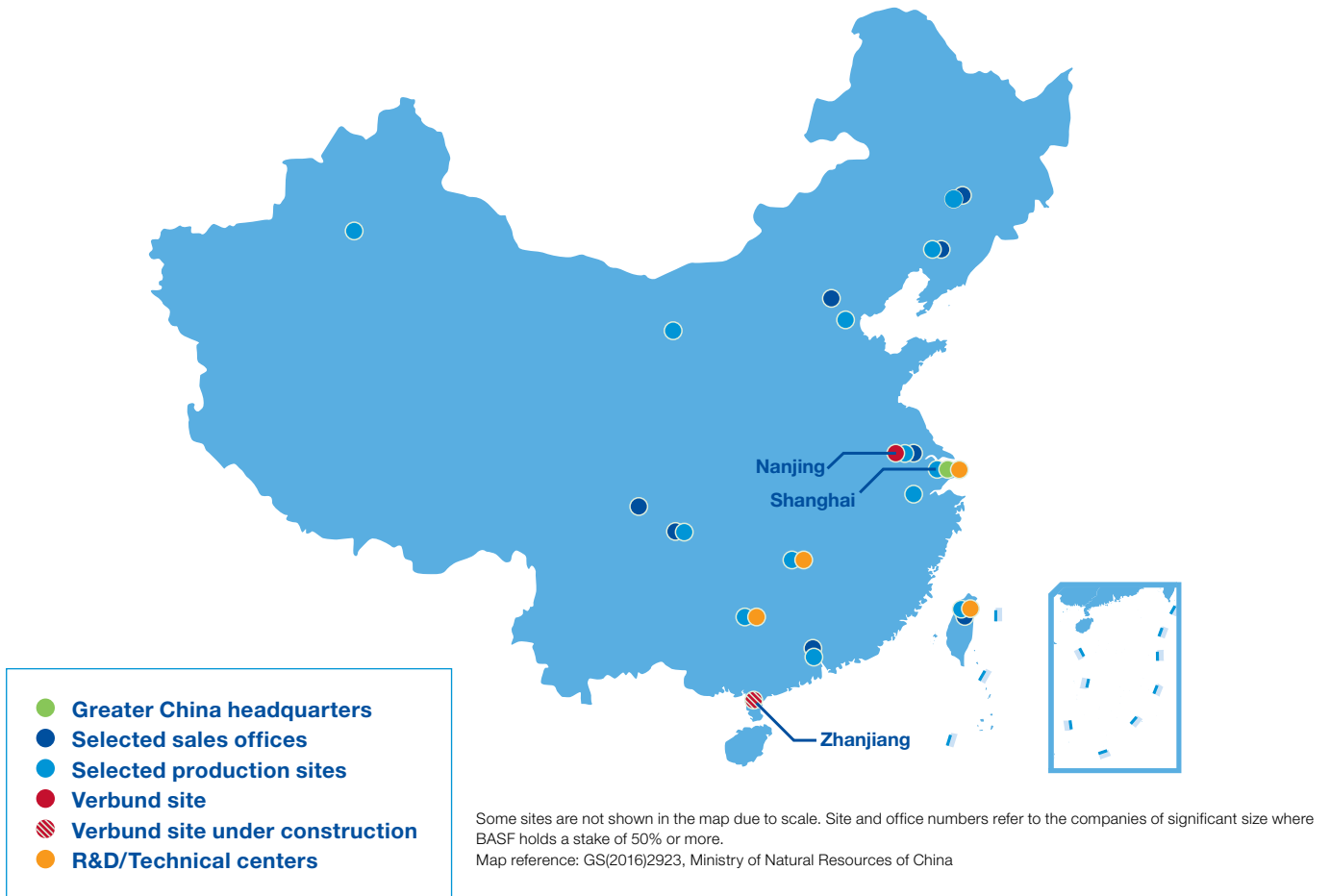
## At a glance

**BASF has been a committed partner to Greater China since 1885. With larger production sites in Shanghai, Nanjing and Chongqing, BASF is a major foreign investor in the country's chemical industry, and operates the Innovation Campus Shanghai, a global and regional research and development hub. BASF posted sales of approximately €12 billion<sup>1</sup> in 2021 to customers in Greater China and employed 11,070 people as of the end of the year. Greater China is currently BASF's second largest market after the United States.**

BASF currently operates 26 major wholly-owned subsidiaries, 10 major joint ventures, and maintains 25 sales offices in Greater China. BASF's business in Greater China includes Petrochemicals, Intermediates, Performance Materials, Monomers, Dispersions & Resins, Performance Chemicals, Catalysts, Coatings, Care Chemicals, Nutrition & Health and Agricultural Solutions.

These solutions are used in almost all areas of daily life such as in houses, cars, food, agriculture, pharmaceuticals, textile, household goods, electronic equipment, and packaging. Over the past 20 years, BASF has invested more than €8 billion in Greater China (more than €11 billion with partners) to build a locally competitive production, marketing, sales, technical service and innovation network.

### Our sites



## BASF in Greater China

Sales in 2021 (by location of customer)  
approximately

**€12 billion**

Employees (as of December 31, 2021)

**11,070**

<sup>1</sup> Sales of BASF Group companies in the scope of consolidation. Sales of joint ventures and associated companies with BASF's investment of between 20% and 50% in general which are consolidated at equity (e.g. BASF-YPC Company Limited) are not included.

## BASF Major Sites in Greater China

### Shanghai Pudong Innovation Park

**An integrated site with global, regional and local activities for research and development, production, sales and marketing, and functional units**

- Location: Gaoqiao, Pudong, Shanghai
- Key milestones:
  - Established in 1994
  - Became a wholly-owned BASF entity in 2000
  - Home to the BASF Greater China headquarters (legal entity since 2004; operations since 2012)
  - Innovation Campus Shanghai established in 2012
  - Operating nine production plants and a wastewater treatment plant by end of 2021
- Products: Advanced materials including Ultramid® (polyamide, PA), Ultradur® (polybutylene terephthalate, PBT), polyurethane systems, Elastollan® thermoplastics polyurethane elastomers (TPU) and Cellasto® (microcellular polyurethane), acrylic dispersions & copolymers colorants, detergent, metal complex dyes, leather auxiliaries, polyvinylpyrrolidone (PVP), 3D printing materials and mobile emissions catalysts

### Shanghai Caojing site

**A major production site with one wholly-owned company and three joint ventures**

- Location: Shanghai Chemical Industry Park in Caojing, Shanghai
- Key milestones:
  - Established in 2002
  - First PolyTHF® production in 2005
  - Operating 16 production plants as of the end of 2021
- Major companies:
  - BASF Chemicals Co. Ltd. (wholly-owned)
  - BASF Shanghai Coatings Co. Ltd. (joint venture with Shanghai Huayi Fine Chemical Co., Ltd)
  - Shanghai Lianheng Isocyanate Co. Ltd. and Shanghai BASF Polyurethane Company Limited (two joint ventures with several partners)
- Products: Polytetrahydrofuran (PolyTHF®), TDI (toluene diisocyanate), MDI (methylene diphenyl diisocyanate), polyisocyanate (Basonat®), precious metals-based salts and solutions, automotive coatings, resins and electrocoat, polyamide polymerization and process catalysts and antioxidants

### Chongqing site

**BASF wholly-owned production site for MDI**

- Location: Changshou Economic & Technological Development Area, Chongqing
- Key milestones:
  - First MDI production in 2015
  - Completion of new steam methane reformer in 2018
- Product: MDI with annual capacity of 400,000 metric tons

### Nanjing Verbund site

**An integrated Verbund site jointly run by BASF and Sinopec (shareholding ratio: 50-50)**

- Location: Nanjing Jiangbei New Materials High-tech Park
- Key milestones:
  - Established in 2000
  - Commercial production since 2005
  - Inauguration of its second phase in 2012
  - Operating 33 production plants by end of 2021
- Products: low density polyethylene, ethylene-vinyl acetate, ethylene glycol, polystyrene, acrylic acid and acrylic esters, non-ionic surfactants, superabsorbent polymers, n-butanol, iso-butanol, 2-propyl-heptanol, butadiene, polyisobutene, etc.
- 2021 key facts and figures:
  - Total investment of \$5.5 billion
  - Over 2,000 employees
  - Sales in 2021: Around €3.6 billion

### Nanjing site

**A BASF wholly-owned production site for multiple products, including water-treatment monomers, amine products and coating additives**

- Location: Nanjing Jiangbei New Materials High-tech Park
- Key milestones:
  - Became BASF's wholly-owned company in 2009, and renamed as BASF Specialty Chemicals (Nanjing) Co. Ltd. in 2011
  - Operating nine plants as of the end of 2021
- Products: ACM, AGEFLEX® FA1Q80MC, Anionic Flocculant, Cationic Flocculant, t-BA (tert-Butylamine), DMAPA (3-(dimethylamino) Propylamine), PEA (Polyetheramine), N-Octylamine A/P, 1,2-Propylenediamine, additives for painting, ink, coating and adhesive

### Zhanjiang Verbund site (under construction)

**Built and operated under the sole responsibility of BASF, upon completion, the site will be BASF's largest investment and ultimately BASF's third-largest site worldwide (following Ludwigshafen, Germany, and Antwerp, Belgium)**

- Location: Zhanjiang, Guangdong province
- Key milestones:
  - MoU signed in Berlin on July 9, 2018
  - Commencement of the Verbund site project in Zhanjiang, Guangdong on November 23, 2019
  - Started piling of the first plants on May 30, 2020, scheduled to be operational respectively by 2022 and by 2023
  - The whole Verbund site is planned to be completed by 2030
- Investment: Around €8 - €10 billion upon completion
- Plants and products
  - The BASF Zhanjiang Verbund site will be built in phases. The first plant will be producing Engineering Plastics, followed by a TPU (Thermoplastic Polyurethane) plant, both of which are currently under construction.
  - The next phase, consisting of 1 million ton of ethylene cracker and other downstream products along the value chain, including intermediate chemicals, care chemicals, nutrition and health.

# Business Development

**BASF posted sales of approximately €12 billion in 2021 to customers in Greater China. We continue to invest in advanced production and R&D facilities supporting the regional growth. Our investments enable us to deliver high quality products and solutions with customer proximity. We work closely with our suppliers, partners and customers to achieve joint success.**

## Sales (by location of customer)

Million €

2021	12,036
2020	8,463

## Strategic investments in Greater China

- Expanded cooperation with Sinopec
- Formed joint venture with Shanshan serving the electric vehicles battery materials market

Greater China drives growth in the global chemical industry. In the last two decades, BASF has invested more than €8 billion in Greater China (more than €11 billion with partners) to build a locally competitive production, marketing, sales, technical

service, and innovation network that contributes to the profitable growth of the BASF Group.

The BASF Zhanjiang Verbund site will be built in phases. The first plants will produce engineering plastics and the thermoplastic polyurethane (TPU), the first plant is scheduled to be operational by 2022 to serve the increasing needs of various growth industries in Southern China and throughout Asia. The whole verbund site is slated for completion by 2030, and will be BASF’s third largest site in the world.

BASF-YPC Company Limited (BYC), a 50-50 joint venture between BASF and Sinopec, is set to further expand its Verbund site in Nanjing, China. It will expand the capacity of several downstream chemical plants and add a new tert-butyl acrylate plant to support the growing Chinese market. The new plant will be the first outside of Germany to use the BASF technology to meet the growing demand for specialty chemicals in China. The expanded and new plants are planned for 2023.

Addressing a growing electric market segment in the battery materials market, BASF partnered with Shanshan to create a new company, BASF Shanshan Battery Materials (BSBM). Shanshan is a leading lithium-ion battery materials supplier serving both the e-mobility and the consumer electronics market. The newly formed company has four sites in Hunan and Ningxia, with more than 1,600 employees. BSBM strengthens BASF’s position in Asia as it builds an integrated supply chain for customers across the globe. It increases annual global capacity to 160 kilotons by 2022 with further expansions underway.



BASF Shanshan Battery Materials has built up the advanced R&D center at Da Changsha Site in Hunan.



BASF and China Resources Power made the first deal under the new renewable energy trading rules in Guangdong province.

### Increasing the share of renewables in our energy supply for greater sustainability

#### ■ Joined the Renewable Direct Power Purchase pilot trade in China

Reinforcing its commitment to climate neutrality, BASF implemented a series of strategic initiatives to increase its use of renewable electricity. BASF joined the Renewable Direct Power Purchase (R-DPP) pilot trade in China, committing six BASF sites across Shanghai, Jiangsu and Guangdong province. Being the largest buyer in the Yangtze River Delta region, and the second-largest buyer in the Pearl River Delta region, this will secure 440,000 MWh of renewable electricity from various power producers through 2025.

BASF secured 100% renewable electricity for its first plants at the Zhanjiang Verbund site. As the first and largest buyer of green power in the pilot trade of Jiangsu, the Nanjing Verbund site secured 107,000 MWh of the province's renewable solar electricity to last through the end of 2022.

### Growing capabilities in local production and R&D

- Opened a new Center of Excellence laboratory for its Catamold® business in Shanghai
- BASF-YPC as first chemical company with an Advanced AEO Certification in Nanjing
- Several sites celebrated milestones and anniversaries

At BASF, we continue to invest in advanced production and R&D facilities to support the future growth.

To meet the high demand for solutions and products in the metal injection molding (MIM) market, BASF opened a new Center of Excellence laboratory for its Catamold® business in Shanghai. Catamold® are ready-to-use pellets for powder injection molding. The new facility will serve as the hub of expertise for solutions and products for the MIM market in Asia.

BASF-YPC became the first chemical enterprise in Nanjing to obtain the Advanced Authorized Economic Operator (AEO) in



BASF opened new Catamold® Center of Excellence lab in Shanghai.

October. Advanced AEO Certification is the highest level of customs credit rating in international trade. With this, BASF-YPC is qualified to help partners and suppliers upgrade their supply chains to international standards.

2021 marked an important year for several BASF sites in China. BASF Specialty Chemicals in Nanjing (BSNJ), and BASF Polyurethanes in Chongqing (BPCC) celebrated their 10<sup>th</sup> anniversary with family and customer events. BSNJ is a wholly-owned BASF company that assumes a strategic and important role in BASF's flocculent for wastewater treatment and paper, specialty amines, and coating additives production network. BPCC was established in 2011 to supply high-quality MDI, tapping into a growing market in China amid increasing customer needs for high-quality, environmental friendly chemicals and polymers.

In Guangdong, BASF Coatings (BCG) celebrated its 5<sup>th</sup> anniversary. It is the first automotive refinish coatings production site for BASF in Asia. The expansion of the BCG site reached a major EHS milestone of 500,000 safe construction hours in December since it started piling in June 2020. The new facility for automotive refinish coatings will start production in the first half of 2022.

### Partnering for sustainability across industries

- Launched "Sustainability Covalence" in China to promote sustainable growth
- Strengthened technological innovation with Shanghai Jahwa in personal care sector
- Established strategic cooperation with Shanghai COMIY in the livestock industry

At BASF, sustainable solutions are often born through cross-industry strategic partnerships.

BASF initiated and launched the "Sustainability Covalence" with 13 value chain partners to promote sustainable growth. Founding members take joint actions for low-carbon development, circular economy, and societal engagement across key industries in China. The founding members are leading local companies





BASF launched “Sustainability Covalence” with customers and partners in China to jointly promote sustainable growth.

along the chemical value chain. Each partner will co-create with BASF on a carbon reduction project ranging from energy-efficient housing, safe and durable plastic applications, to low-carbon transportation and sustainable packaging solutions for food and beverages.

In 2021, BASF collaborated on battery and plastic recycling, better building materials, and influenced sustainable progress across industries.

BASF and Shanghai Jahwa United Co., Ltd. signed the “Technological Innovation Cooperation Framework Agreement”. The partnership will accelerate relevant product development and innovation, while contributing to sustainable progress in China’s beauty and personal care industry.



BASF and Shanghai Jahwa signed the “Technological Innovation Cooperation Framework Agreement” .

BASF signed a strategic cooperation agreement with Shanghai COMIY BioTechnology Ltd. It allows BASF to penetrate the livestock industry and provide increasing solutions and business opportunities.

**Collaborating towards sustainable mobility**

- **Formed strategic partnership with CATL and SVOLT on battery materials solution and battery recycling**
- **Partnered with Fuyao Group and SAIC Motor Passenger Vehicle on innovations of sustainable applications for automotive industry**
- **Collaborated with customers and industry partners for sustainable refinish coating solutions**

As the leading chemical partner for all major automakers, BASF supports China’s new energy vehicle industry with advanced battery materials, automotive coatings, engineering plastics and polyurethanes. These innovative solutions enable the rapid development of e-mobility in China.

BASF established a strategic partnership with Contemporary Amperex Technology Co., Limited (CATL) on battery materials solutions, including cathode active materials (CAM) and battery recycling. The collaboration aims to develop a sustainable battery value chain while achieving carbon neutrality goals across Europe and Asia.

Additionally, BASF collaborated with SVOLT to further develop CAM, the supply of raw materials, and battery recycling for SVOLT’s battery cells. It will enhance the research and development capabilities of both companies in sustainable battery materials and strengthen both parties’ core competitiveness in both China and global markets.

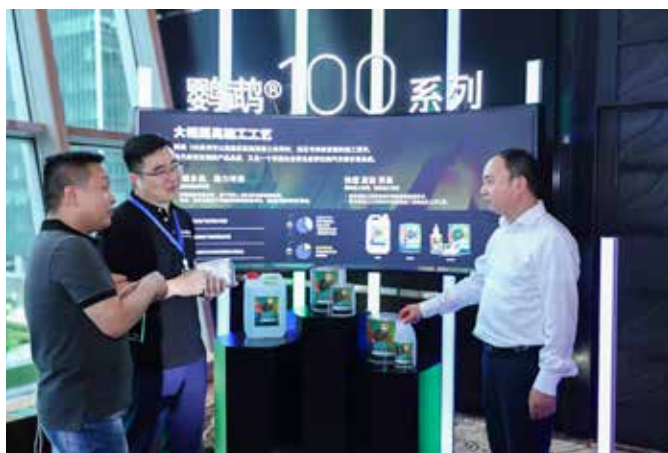
BASF extended its long-term partnership with Fuyao Group to co-create innovative and sustainable automotive glass and functional exterior applications. BASF and SAIC Motor Passenger Vehicle Co. signed a strategic cooperation agreement to build a co-innovation laboratory to further bilateral cooperation in user-centric innovation for the automotive industry. The new co-innovation laboratory will explore automotive coating and interior solutions with ingenious features including light weight, safety and comfort, and design flexibility.

As a leading player in the automotive refinish coating market, BASF has taken proactive efforts to collaborate with industry partners to explore sustainable refinish coating solutions that respond to new emission standards. In 2021, BASF renewed the automotive refinish coating purchase agreement with BMW in China. Building on a long-standing and close collaboration, BASF continues to provide a complete one-stop solution for digital color tools, technical training courses, and value-added services that improve the painting process and site operational efficiency for BMW-authorized automotive body shops.

BASF's refinish coatings brands Glasurit® and R-M® both won the bid of FAW Group's aftermarket refinish coatings in 2021. This covers the full range of car brands such as Volkswagen, Audi, and Hongqi. BASF also invited all its partners along the value chain to work together to achieve the new volatile organic compounds (VOC) emission target, at the occasion of its Annual Dealers Conference in China held in Shanghai.

## E-commerce and digital business models

- Launched a new website for Performance and Formulation Additives
- Extended strategic cooperation agreement on e-Commerce with Xilong
- BASF brings faster online order experience to customers



BASF collaborates with industry partners to explore sustainable refinish coating solutions.



BASF and SAIC Motor Passenger Vehicle signed a strategic cooperation agreement.

To serve customers in quick, ever-changing markets, BASF continues to digitize its businesses and enhance its e-commerce platforms.

BASF launched a new website for 'Performance and Formulation Additives' in April 2021. It is designed to provide faster and easier access to new additives. This fulfills increasing market needs for performance and sustainability and complies with stricter regulatory requirements.

BASF and strategic partner Xilong Scientific Co. Ltd. (Xilong) extended their long-term partnership to leverage digitalization and develop new sales channels. Xilong will provide BASF access to its digitalized integrated service platform for the chemical industry 'Youliao Web', enabling BASF to launch a strong sales channel on the e-commerce platform.

To further strengthen its leading position in China's commercial digitalization, BASF established its first real-time processing system. Based on Alibaba's online order and payment system, the new system will replace its previous multi-step communication order-to-cash (OTC) process with an automatic data flow. This brings a faster online order experience to customers.

## BASF Venture Capital

- Invested in biotechnology start-up Bota Bio

BASF Venture Capital announced its investment in Bota Biosciences, Ltd. (Bota Bio), an industrial synthetic biotech company based in Hangzhou, China. Bota Bio, founded in 2019, is developing a proprietary next-generation biotechnology platform that enables sustainable and economical production of high-value products for a broad array of industrial applications. By investing in this promising young company, BASF strengthens its potential for innovation in the dynamic Asian markets.





Castor beans play an important role in the chemical industry where castor oil and derivatives are used as raw material in the production of, for example, plastics, coatings and paints, pharmaceuticals as well as cosmetics and personal care products.

# Supplier Management

**BASF aims to optimize its supply chain in a sustainable manner through its industry collaborations and digitalization approaches.**

## BASF Corporate Commitment

We source responsibly

### Sustainable procurement

- **Launched Supplier CO<sub>2</sub> Management Program**
- **Introduced group-wide Supply Chain Policy for Conflict Minerals**

BASF is committed to improving sustainability in the overall supply chain of the chemical industry by getting our suppliers to adhere to the internationally recognized environmental, social and governance (ESG) standards and regulations. In 2021, BASF launched the Supplier CO<sub>2</sub> Management Program and invited suppliers, including those from China to join the program. By sharing our knowledge of Product Carbon Footprint valuation methodologies and tools with our suppliers, we hope to achieve greater transparency on the product-related CO<sub>2</sub> emissions of our acquired raw materials. This makes it possible for our suppliers to identify medium-term measures for optimization.

The responsible sourcing of mineral raw materials is important to BASF. We introduced a group-wide Supply Chain Policy for Conflict Minerals in 2021. It contains expectations for our suppliers from conflict-affected and high-risk areas and outlines voluntary



The implementation of the AGV tractor became fully operational at the Shanghai Pudong Innovation Park in mid-2021.

commitment. Up to 5,900 new suppliers globally committed to our Supplier Code of Conduct in 2021, of which 3,200 are from the Asia Pacific region, including 115 logistic service providers of Greater China.

Under the Together for Sustainability (TfS) initiative, BASF continues to conduct supplier assessments and trainings based on the established high standards of the sustainability framework. At the end of 2021, a total of 284 audits and 5,817 online assessments were performed by TfS members. BASF received sustainability evaluations for 701 suppliers. A total of 86 raw material supplier sites were audited on sustainability standards on our behalf in 2021. In Greater China, BASF conducted 215 sustainability assessments and 64 on-site audits of local suppliers.

We continued to work with East China University of Science and Technology to conduct the annual sustainability training on procurement and operations for our local suppliers to achieve better performances. In 2021, we trained a total of 60 participants from 31 Chinese suppliers.

### Progress in smart supply chains

- **Digitalization in site logistics operations**
- **Implementation of Automated Guided Vehicles**

Digitalization enables us to better support our customers with improved efficiency in manufacturing and logistics operations.

Digital technology with Artificial Intelligence (AI) solutions helps BASF to steer logistics operations at sites with improved efficiency, safety, and security. A hybrid solution was implemented to resolve the issues of traffic congestion and loading capacity in the warehouse at the Shanghai Pudong Innovation Park. These included streamlining the operation procedure, covering the assets management, truck safety inspection, depot traffic safety, and emergency response. Additionally, the Yard Management System was also rolled out to ease the logistics pressures at the site by enabling truck pre-registration, an automated gate system, automated weighing, e-truck safety inspection, time slot management, smart filling, and several other features.

Instead of diesel vehicles, the Automated Guided Vehicle (AGV) tractor is used for onsite transportation. The AGV tractor was fully operational at the Shanghai Pudong Innovation Park in June 2021. It allows for an automated transportation system on designated routes at the location. Apart from the improved efficiency in operations, the implementation of AGV has resulted in cost savings and a reduction in carbon emissions.



# Environmental Protection, Health and Safety

## Health and Safety

**Protecting people and the environment is our top priority. Our core business – the development, production, processing, and transportation of chemicals – demands a responsible approach. We address environmental, health, and safety risks with a comprehensive Responsible Care Management System®. We expect our employees and partners to know the risks of working with our products, substances, and plants and how to handle them responsibly.**

### BASF Corporate Commitment

**We produce safely for people and the environment**

#### Product stewardship

- **Ensuring high standards of product stewardship worldwide**
- **Utilizing a global database for maintenance and evaluation of EHS data on all products**
- **Promoting trusted, science-based product stewardship practices**

Product safety is an important pillar of our commitment to Responsible Care. We are constantly working to guarantee that

when our products are used correctly, they pose no risk to people or the environment. We aim to comply with all relevant national and international laws and regulations. BASF's global requirements define the processes and procedures to ensure high product stewardship standards worldwide. Our specialists share expertise and best practices on product safety and stewardship, including internal guidelines and legal requirements on a regular basis.

BASF maintains and evaluates environmental, health, and safety data on all of its compounds and products in a global database, which serves as a foundation for product properties and hazard communication materials. These documents are made available to our employees, customers, and logistics partners so that they are well informed about the proper handling and use of potentially hazardous products. We use the Globally Harmonized System (GHS) to classify and label our products worldwide, by taking into consideration the legal requirements in each country.

We promote trusted, science-based product stewardship practices in Greater China by setting industry regulations and offering recommendations on guidelines for chemical safety. Our collaboration with local authorities through associations allows us to share our expertise on regulation and compliance management through various projects and events. In 2021, we proactively shared our experience and insights on hazardous chemicals and new chemical management with our upstream and downstream industry partners in China. These efforts include providing compliance and safety guidance to our suppliers in the management of regulatory change, exchanging hazardous chemical identification practices with our customers and service providers. This is done to prepare for the upcoming regulatory challenges and to achieve the goal of compliance throughout the value chain.



An operator is conducting routine inspection at the Caojing site.



Colleagues in Shanghai Engine Lab are measuring sensors and doing analytics verification before Selective Catalytic Reduction (SCR) testing.

**Process safety**

- Process safety experts regularly review safety plans
- Continued low safety incident rate

Process safety is a critical part of ensuring safe, effective and sustainable production. We adhere to stringent safety standards throughout the planning, construction and operation of our plants worldwide. These comply with and, in some cases, exceed applicable local legal requirements. Our global guidelines provide the framework for the safe construction and operation of our plants, as well as the protection of people and the environment. Our experts have established a safety concept for each plant that takes into account the important issues of safety, health and environmental protection – from plant design to the end of the production phase – and specifies safety measures. Regular implementation checks ensure that all aspects of process safety comply with the safety concept and are always up-to-date.

We prepare a comprehensive mitigation plan for the management of energy and hazardous materials involved in our operations’ storage, reaction, and physical processing. To maintain the highest level of safety at our plants throughout their entire life cycles, we ensure that our protection concepts, safety reviews and resulting safety measures are carried out at timely intervals in all of our plants based on risk potential opportunities and regulatory developments.

BASF’s global health and safety team takes proactive measures to promote, track and share process safety incidents all over the world by strengthening the regional collaboration. In Greater China, the safety team translates global incident reports into local languages on a monthly basis to share lessons learned and best practices across the region. We organized tailor-made process safety workshops and fundamental training for our employees based on specific topics such as regulatory compliance and pain points in sites. To more effectively resolve shortcomings and to improve risk detection and control at our operations, we use a globally uniform procedure for managing changes in regulatory requirements.

In 2021, BASF’s Global Safety Days campaign, themed “We care. Stay Safe!” was held to raise employee risk awareness, with a particular emphasis on process safety incident (PSI) prevention and machinery and equipment operating safety. In Greater China, 12,788 employees and contractors from over 30 sites participated in 182 activities related to the campaign.

Tracking process safety incidents is also a key performance indicator. BASF’s global goal is to reduce the safety incidents rate to less than 0.1 per 200,000 working hours by 2025. In 2021, Greater China’s process safety incident rate was 0.03 per 200,000 working hours. Greater China’s success can be attributed to our focus on continuous improvement of incident management by investigating high severity/high severity potential incidents, analyzing root causes, and implementing changes as needed.

**Process safety incidents (PSIs)**

per 200,000 working hours

2021	0.03
2020	0.02

**Transportation and distribution safety**

- Perpetually contributing to road safety regulations

Keeping chemicals safe on the road is in everyone’s best interest. That is why, in Greater China, we are steadily improving China’s domestic chemical transportation – we assess the road safety of our carriers, support internal business on chemical transportation route risk assessments, such as Benzene, Propylene, etc. and advise on new regulations to improve transportation safety. We advocate for and advise Chinese authorities and chemical associations, including the Association of International Chemical Manufacturers (AICM), the China Petroleum and Chemical Industry Federation (CPCIF), the China Storage & Distribution Association, and the National Dangerous Goods Road Transportation Alliance.



We conduct routine examination of trucks to ensure they are in a safe condition when entering and leaving the site.

Topics include new regulations or standards for drafting the “Regulations Concerning Road Transport of Dangerous Goods” and “General Rules for Hazardous Chemical Storage”.

We helped establish the Chemical Road Safety Assessment System (CRSAS) in 2018. CRSAS is a network of logistic partners dedicated to ensuring road safety through assessments. In 2021, CRSAS membership increased to 40 chemical companies and 338 logistics companies. The network also held six public online training sessions, reaching over 800 people.

In 2021, BASF received the official appreciation letters and recognition from the People’s Republic of China’s Ministry of Transport for its efforts and contributions to safety improvement in China’s chemical industry. The National Dangerous Goods Transportation Service Alliance also presented BASF with the “Excellence Contribution Award” to China Chemical Road Transportation Safety Sustainable Development”.

## Emergency response

- **Ensuring emergency response preparedness and fire safety at sites**
- **Shanghai Pudong Innovation Park is recognized for best practices in firefighting management by the local fire authority**

The constant theme for emergency response management is disaster prevention, reduction, and relief. Ensuring effective preparedness for emergency response is our goal. We have a well-maintained incident management system and properly engage the emergency response structures based on the situation to minimize the impact scope in the event of an emergency.

Fire prevention inspections at production sites were carried out regularly by emergency response experts to keep the firefighting systems in good working order. The high-competence emergency response team responds quickly to any incident that occurs in operations, transportation, and along the supply chain.



Fire prevention inspections were carried out regularly at sites to keep the firefighting systems in good working order.

Throughout 2021, BASF sites in Greater China completed emergency response training and drills based on actual scenarios in a variety of forms. We continue to strengthen our collaboration with the Ministry of Emergency Management of the People’s Republic of China to support emergency management in China, particularly with regard to standard formulation.

BASF chairs the emergency response working group of the Responsible Care Committee of CPCIF and the Responsible Care Committee of AICM. We proactively leverage these two platforms to share our best practices in emergency response management. We also support CPCIF in developing the “Implementing Rule of Responsible Care – Community Awareness / Emergency Response”.

BASF Shanghai Pudong Innovation Park was honored once again by the local fire authority for excellent firefighting management in 2021. BASF received the recognition for the fifth consecutive year.

In 2021, we took a proactive approach to epidemic prevention and implemented timely precautionary measures to safeguard the health of our employees and contractors, under the guidance of the Country Incident Management Team.

## Security

- **“Security by design” principle to review and optimize IT applications**
- **Cyber Security Defense Center experts are available around the clock**
- **Risk awareness education for all employees**

We protect our employees, sites, plants and company know-how against third-party interference. BASF applies the “security by design” principle to critically review and optimize IT applications from a cybersecurity standpoint as early as in the design phase. This includes, for example, analyzing potential security risks in the communities surrounding our production sites and addressing in-depth issues of cybersecurity and information security.

BASF protects itself with a comprehensive program that is constantly working to prevent, detect, and react to cybersecurity incidents as technology advances. By establishing a global Cyber Security Defense Center, BASF has made its cybersecurity experts available around the clock, including teams in Greater China. To protect investments and strategic plans, we analyze associated potential risks and define appropriate safety and security concepts. We continued to improve our ability to prevent, detect and react to security incidents through various measures and investment projects. This includes conducting comprehensive analyses of potential risks and defining appropriate protection measures.

We want to raise employee awareness of cybersecurity and equip them with the tools necessary to defend themselves effectively. Throughout 2021, we organized a number of information-sharing activities to raise employees’ risk awareness. It included interactive online training and exchange of case-studies. We further defined



mandatory requirements for conducting audits and ensuring process compliance when dealing with sensitive information. We are also anticipating and enacting new measures to protect personal information.

### Occupational safety

- **Developing a safety management system for accident prevention**
- **Cultivating a culture of safety through digital campaigns**
- **Optimization of the Work Permit System**

To prevent work related accidents, we promote risk-conscious behavior and safe working practices, learning from incidents and engaging in regular discourse. We constantly refine and enhance our requirements and training.

The annual Greater China EHS Awareness & Knowledge Competition (GEAR) program was held for the second time to encourage employees to learn about the importance of safety through competition. Over 4,200 BASF workers and contractors from 30 BASF plants and offices across Greater China took part in the program. Meanwhile, we expanded our EHS knowledge database to include over 105 topics and 1,650 questions to improve staff training effectiveness.

The optimization of the work permit system is critical to ensure compliance with both global requirements and national standards. To meet the latest BASF global requirements on work permits which were promulgated and implemented in January 2021 and GB30871-2014, a national standard specifying the requirements for special operations in China, a working group was set up to optimize the work permit process. The updated, recommended processes and templates were communicated online to relevant personnel from Greater China sites.

BASF aims to reduce the worldwide lost-time injury rate to no more than 0.1 per 200,000 working hours by 2025. In 2021, we recorded 0.02 work-related lost-time injuries per 200,000 working hours and no fatality at any BASF sites in Greater China.

#### Lost-time injury rate

per 200,000 working hours

2021	0.02
2020	0.04

#### Fatalities

Total

2021	0
2020	0

### Occupational health

- **Worldwide standards for occupational health directed by experts**
- **The “Recharge Yourself” campaign focused on regeneration and personal health**

At BASF, our commitment to providing a safe, healthy work environment is unwavering. BASF’s global corporate health management team serves to promote and maintain the health and productivity of our employees. A directive specifies global occupational health standards, which are applied by a network of specialists around the world.

We measure our performance in health protection using the Health Performance Index (HPI). The HPI comprises five components: recognized occupational diseases, medical emergency preparedness, first aid, preventive medicine, and health promotion. Each component contributes a maximum of 0.2 to the total score, meaning that the highest possible score is 1.0. Every year, we strive to achieve a value greater than 0.9. With an HPI of 0.96, we once again reached the goal in 2021 (2020: 0.92).

In 2021, our team in Greater China continued to make great efforts in carrying out epidemic prevention measures at our sites. For example, at the BASF Shanghai Pudong Innovation Park, we distributed appropriate masks every week, disinfected all public areas and cleaned the air conditioning systems regularly, took daily temperatures of everyone entering the site and enforced social distancing with special seating arrangements. BASF also provided assistance to employees and contractors, including Shanghai-based BASF employees with foreign passports and their family members, to get vaccinated through weekly commutes to hospitals, on-site services, and group vaccinations in hospitals. BASF constantly monitored the impact due to local transmission, assisted sites and offices with control measures and provided staff with weekly updates.

We launched the ‘Recharge Yourself’ global campaign with a focus on regeneration and personal health. In Greater China, we developed our own tailor-made health promotion programs, such as ‘Go for Fitness’, ‘Management of Chronic Diseases’, ‘Healthy Diet’, ‘Prevention of Heat Stress’, ‘Mental Health Survey’, and ‘Summer and Health’ among others.



In conjunction with the “Recharge Yourself” global campaign, a trekking event was held at the Rudong site, Jiangsu province.



## Energy Efficiency and Environmental Protection

As an energy-intensive company, we are committed to energy efficiency and global climate protection. With our carbon management, we are trying to drastically minimize our own carbon footprint by utilizing sophisticated technologies and processes, constantly upgrading our facilities, and increasing our use of renewable energies. We make our manufacturing operations as energy efficient as possible with the help of comprehensive energy management. We are researching and developing completely new processes and technologies to reduce our greenhouse gas emissions over the long term.

### Energy

■ Energy consumption is stable and comparable with output

In 2021, the total energy consumption at BASF sites in Greater China increased primarily due to higher production capacity and output. Electricity consumption totaled 1.015 million megawatt hours (MWh) in (2020: 0.845 million MWh). Steam supply totaled 3.076 million MWh (2020: 2.709 million MWh). Fossil and residual fuel used for power supply was higher than in 2020 (2021: 0.912 million MWh, 2020: 0.834 million MWh).

#### Electricity consumption<sup>1</sup>

MWh

2021	1,015,216
2020	845,140

#### Steam supply<sup>1,2,3</sup>

MWh

2021	3,076,013
2020	2,709,769

#### Fossil & residual fuel used for power supply<sup>1</sup>

MWh

2021	912,096
2020	834,320

We are committed to achieving our carbon neutrality goals through improving energy efficiency. In 2021, many sites in Greater China continued their efforts to save energy. For example, one site in



This photo is a nightview image taken at the BASF Chongqing site.

<sup>1</sup> The comparative figure for 2020 has been restated in alignment with the Corporate Report consolidation rules and change of calculation method to GHG Protocol 5<sup>th</sup> Assessment Review instead of 4<sup>th</sup> in the 2020 report.  
<sup>2</sup> Adjusted method for recognizing import/export of electricity and steam  
<sup>3</sup> Conversion factor: 0.75 MWh per metric ton Of steam

Nanjing reduced its electricity usage by optimization of its chillers after adding electrical heat tracing to control oil separator temperature and optimizing operation to reduce energy consumption of the plant. By installing vapor line insulation, one site in Xinjiang was able to save steam. One site in Shanghai reduced material loss and avoided hundreds of tons of CO<sub>2</sub> emissions by optimizing the sump temperature.

In addition to site-specific upgrades, we also collaborated with external partners to ensure broader environmental protection. Shanghai has seven facilities actively participating in a local pilot carbon emission trading system (ETS). We also work closely with industry associations such as CPCIF and AICM to prepare for the national ETS and conducting dialogues with relevant authorities.

BASF had set a goal of introducing certified energy management systems (DIN EN ISO 50001) at all relevant production sites by 2020. Since 2016, several sites in Greater China have been ISO 50001 certified. All energy efficiency measures are recorded in a global database, and are available as best practices for all our sites worldwide.

## Emissions to air

### Greenhouse gases (GHG) reduced but emissions to air increased due to higher production output

BASF has set itself even more ambitious goals on its journey to climate neutrality. The company wants to reduce its greenhouse gas emissions worldwide by 25% by 2030 compared with 2018, and achieve net zero emissions by 2050. All BASF sites in Greater China have taken measures to contribute to these goals.

In 2021, GHG emissions from BASF's chemical operations in Greater China totaled 1.182 million metric tons, a decrease of 4.5% from the previous year (2020: 1.238 million), despite higher production volume and an increase in newly acquired sites in 2021.

GHG emissions from a few sites were reduced even with higher production due to key initiatives such as increasing the use of renewable energy by joining the R-DPP pilot trade in China and building up photovoltaic power stations.

Besides GHG emissions, BASF measures emissions of other air pollutants, including inorganic compounds such as carbon monoxide (CO), sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>) and ammonia, as well as dust or non-methane volatile organic compounds (NMVOC). In 2021, air pollutants from BASF's operations in Greater China totaled 312 metric tons, an increase of 14% from 2020 (274 metric tons in 2020).

Several sites upgraded NMVOC treatment facilities in order to meet the increasingly stringent VOC emission standards in China.

More sites in Shanghai, Jiangsu, Chongqing and Guangdong province have installed online monitoring facilities and set internal alarms to avoid any potential emissions. Almost all sites with NMVOC emissions in Shanghai, Jiangsu, Chongqing, Guangdong and Xinjiang conducted Leak Detection and Repair programs for fugitive NMVOC. These measures will not only ensure BASF's full compliance with China's increasingly stringent emission rules, but they will also minimize the impact on the environment.

### Greenhouse gas emissions<sup>1</sup>

Metric tons of CO<sub>2</sub> equivalents<sup>a</sup>

2021	1,181,711
2020	1,238,283

<sup>a</sup> CO<sub>2</sub> equivalents consist of CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFC, PFC, SF<sub>6</sub>

### Air pollutants<sup>b</sup> (without CH<sub>4</sub>)<sup>1</sup>

Metric tons

2021	312
2020	274

<sup>a</sup> Air pollutants consist of: CO, NO, SO<sub>x</sub>, NMVOC (Non-methane volatile organic compounds), dust, NH<sub>3</sub>, and other inorganic compounds

## Water

- Sustainable water management with mandatory protection plans
- Water consumption increase is comparable to increased output
- Decreased emissions of water pollutants

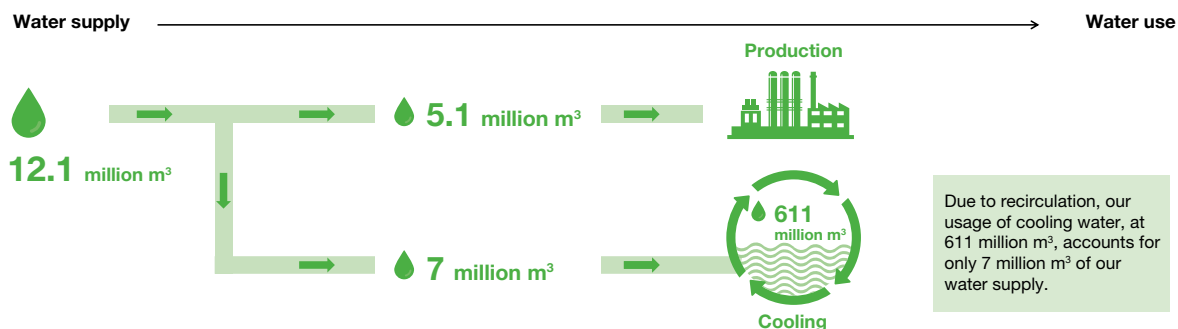
Water is a scarce resource but is of fundamental importance in chemical production. It is used as a coolant, a solvent, and a cleaning agent, as well as in the manufacturing of our products. BASF is committed to its responsible use along the entire value chain, and especially in its production sites' water catchment areas. We aim to use water as sparingly as possible and further reduce emissions into water. We have set global goals for sustainable water management. BASF sites in Greater China follow the group requirements and local regulations. The European Water Stewardship (EWS) Project has been completed at twelve BASF facilities in water-stressed parts of Greater China, with four more sites to be covered by 2030.

To minimize unforeseen emissions and the pollution of surface or groundwater, we have developed a water protection strategy for each production site, as a mandatory part of the global Responsible Care initiative, of which BASF is a member. The wastewater protection plans involve evaluating wastewater in terms of risk and drawing up suitable monitoring strategies. The result of the evaluation was audited to check if these measures were being implemented and followed.

<sup>1</sup> The comparative figure for 2020 has been restated in alignment with the Corporate Report consolidation rules and change of calculation method to GHG Protocol 5<sup>th</sup> Assessment Review instead of 4<sup>th</sup> in the 2020 report.

### Water use in Greater China<sup>1</sup>

Million cubic meters



#### Water supply<sup>1</sup>

Million cubic meters

2021	12.1
2020	9.7

#### Water use<sup>1</sup>

Million cubic meters

	Production <sup>1</sup>	Cooling <sup>1</sup>
2021	5.1	611
2020	4.3	609

Wastewater risk assessment helps in the identification of potential risks from unanticipated wastewater releases. In 2021, one site in Shanghai optimized the transesterification unit, which significantly reduced the amount of wastewater production. Another site in Nanjing re-evaluated the steam condensate drainage system to reduce 4,000 tons of wastewater. A few sites in Shanghai have installed mass flow meters to optimize their process of water usage.

In 2021, emissions of water pollutants were decreased compared to 2020. Emissions of organic substances (COD) totaled 104.2 metric tons (2020: 141.9 metric tons). Phosphorus emissions were at 1.097 metric tons (2020: 2.222 metric tons). Nitrogen emissions were at 11.5 metric tons (2020: 13.9 metric tons), and heavy metals emissions increased to 0.037 metric tons (2020: 0.028 metric tons).

Due to higher production, and the launch of new sites and projects in Greater China, the total water supply in 2021 in Greater China was 12.1 million cubic meters (2020: 9.7 million cubic meters). Among them, 5.1 million cubic meters were used in production in 2021 (2020: 4.3 million cubic meters), while the rest was predominantly used for cooling purposes. We reduce our water use by recirculating as much water as possible. The recirculated water used for cooling at BASF's Greater China sites amounted to 611 million cubic meters in 2021 (2020: 609 million cubic meters).

### Emission to water<sup>1</sup>

Metric tons

	2021	2020
Organic Substance (COD)	104.2	141.9
Phosphorus	1.097	2.222
Nitrogen	11.5	13.9
Heavy metals	0.037	0.028

### Waste

- Increased waste recycling amount
- Audit external waste management companies

BASF strives to create products and processes to avoid waste as much as possible. If waste cannot be avoided, we will try to explore options for recycling and energy recovery at BASF's existing Verbund site. Waste from BASF's chemical operations in Greater China in 2021 totaled 109,489.6 metric tons, an increase of 13.5% from last year (2020: 96,484.2 metric tons).

BASF continued to work on reducing waste and improving recycling. One of our sites in Xinjiang recovers the metal from spent catalysts rather than disposing it through landfill. In 2021, the total amount of waste recovered was at 79,598 metric tons, an increase of 14% from the previous year (2020: 69,807 metric tons); while the total waste disposed was at 29,891 metric tons (2020: 26,677 metric tons).

Meanwhile, we regularly audit external waste management companies, ensuring that our hazardous waste is properly disposed of. This helps in preventing soil pollution by preventing today's trash from becoming tomorrow's contamination. We have closely monitored site soil and groundwater status in Greater China and documented the information in a global database since 2013.

### Waste<sup>1</sup>

Metric tons

	2021	2020
Total amount of waste	109,490	96,484
Amount of waste recovered	79,598	69,807
Amount of waste disposed	29,891	26,677

<sup>1</sup> The comparative figure for 2020 has been restated in alignment with the Corporate Report consolidation rules and change of calculation method to GHG Protocol 5<sup>th</sup> Assessment Review instead of 4<sup>th</sup> in the 2020 report.



# Employees and Society

## Employees

Our employees are the key to the success of BASF. We want to attract and retain talented people and support them in their career development. For years, BASF has been dedicated to improving staff competencies and motivation in order to maintain our competitive advantage.

At the end of 2021, BASF employed 11,070 people in Greater China (2020: 8,948).

Number of employees in Greater China (as of December 31, 2021)

2021	11,070
2020	8,948

### BASF Corporate Commitment

We value people and treat them with respect.

### Recruitment

- Looking for young talents through the various training programs
- Cultivating young talents through strategic school-enterprise collaboration
- Adopting new HR technology for recruitment

BASF's success is largely dependent on its ability to place the right people in the suitable jobs. In Greater China, we have put in place a number of recruitment strategies to attract potential candidates.

BASF's "Grow" Graduate Program® is a competitive young talent training program dedicated to identifying and nurturing enthusiastic talent, who will lead the change and make an impact across Greater China. Through this program, young graduates benefit from customized rotations, systematic learning opportunities, and on-the-job training while working alongside experienced leaders and professionals on various projects. This year, we initiated the BASF Zhanjiang Verbund Site Direct Hiring Program for graduates, which will assist BASF in identifying and cultivating young talent for the Zhanjiang Verbund site upon its commencement.

Collaboration with vocational schools plays a vital role in recruiting front-line talent across the country. The "School-Enterprise" collaboration aims to recruit graduates from vocational schools to



At BASF, we care about the health and safety as well as the well-being of our employees.



become the backbone of the operations team for BASF sites. This year, we started in-depth collaborations with four vocational schools in Maoming (Guangdong), Lanzhou (Gansu), Yueyang (Hunan) and Zhuzhou (Hunan), with the goal of developing new talent for the BASF Zhanjiang Verbund site. BASF will collaborate with these schools to build new vocational curriculums that focus on operational training and provide students with hands-on experience.

BASF has accelerated the adoption and implementation of new digital tools, including Artificial intelligence (AI) and virtual interviews, to ride the wave of digitalization and fast-changing environment. AI enables the assessment of a broader range of candidates based on various parameters, such as interpersonal skills, communication skills, learning agility, problem-solving skills, and English proficiency. Due to the COVID-19 social distancing mandates, the adoption of virtual interviews also extended geographically to include overseas applicants, thereby further widening, and diversifying the candidate pool.

**Career development**

- **The Stand-out Development Program focuses on sustainable development projects**
- **CORE Leadership Values strengthen BASF’s leadership culture**
- **Mobile-learning accounts for around 12,800 training hours**

We, at BASF, believe that empowering our employees through a series of career development programs is the way forward to ensure our sustainable growth and business success.



The Senior Management of BASF Greater China shared the insights on the future development of the company with employees in a townhall meeting at the Chongqing site.



BASF is committed to creating an inspiring working environment that enables employees to perform at their best.

The Stand-Out Development Program was implemented to help BASF’s talents broaden their network and business acumen by allowing them to work on a variety of company projects. Employees are exposed to new challenges to showcase their strengths and get guidance on their development areas from senior leaders and experts. They were assigned five projects in 2021 as part of this initiative. These projects were overseen and supported by senior management with an emphasis on inspiring creative solutions for business challenges. The program provides a great platform for talents to deeply grow and develop.

At BASF, the CORE Leadership Values – Creative, Open, Responsible, and Entrepreneurial – are the guiding principles that define our approach in developing and strengthening our leadership culture. The CORE Values not only describe BASF’s expectations for leadership behaviors but also define how we work with our teams, customers, and partners. In Greater China, the CORE Leadership Values are incorporated into the development projects and local training.

The “BASF Micro-Learning” WeChat Platform has created a resourceful and diversified learning journey for Greater China employees for more than two years. In 2021, over 1,000 courses and 1,274 online audio and video files were made available to employees who spent around 12,800 learning hours on this mobile platform.

**Employee engagement**

- **Fostering employee engagement through diversified events and activities**
- **Offering Flexible Working Arrangements**
- **BASF Employee Portal helps boost communication efficiency**

BASF is committed to fostering a safe, healthy, and inclusive workplace to ensure that the well-being and needs of our employees are taken care of.

To foster employee engagement, various corporate events were organized in Greater China for our employees to participate in throughout the year. These included the “2021 BASF’s Family Day” organized for employees from different sites and business units, as well as a series of events around the country for BASF’s Global Safety Days 2021.

To balance and support the needs of our employees in a diverse workforce, we continued to implement the Flexible Work Arrangements initiative last year. We offered flexibility in working hours and workplace settings outside the designated office space. As work-life balance has become one of the key advantages in the modern workplace, this helpful initiative is important for BASF in attracting and retaining talent.

In 2021, BASF’s Employee Portal continued to play a significant role in engaging employees, and in developing a digitally connected workplace culture. With the portal’s self-service features, it enables smoother workflows across departments, and improves employee communication efficiency for the latest corporate information and policies.

**Cultivating a diverse and inclusive workplace**

- **Progress made in promoting gender equality in the workplace**
- **Promote a diversified workforce of different age groups and backgrounds**

At BASF, we value workplace diversity and gender equality in order to achieve long-term success. That is why we intend to increase the proportion of women in leadership positions to 30% globally by 2030. We have made significant strides toward this goal. The global proportion of female leaders with disciplinary responsibility in the BASF Group was 25.6% at the end of 2021 (2020: 24.3%). In Greater China, the proportion of female leaders with disciplinary responsibility was 28.5% at the end of 2021.

In 2021, 26.9% of BASF employees in Greater China were female. The most substantial proportion (54.5%) of employees at BASF in Greater China was in the 26-39-year-old range.



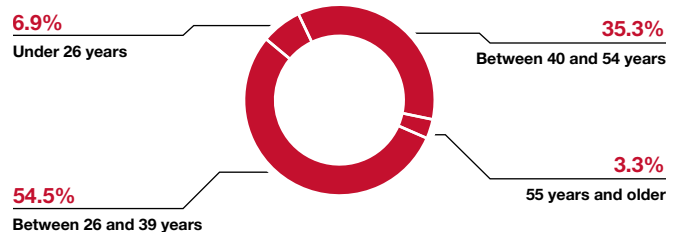
The “2021 BASF Family Day” was held at Shanghai’s Binjiang Forest Park with the participation of over 800 colleagues together with their family members.

**Gender in Greater China (as of December 31, 2021)**



**BASF employee age structure in Greater China**

Proportion of employees %



## Compliance

BASF is committed to upholding a high standard of legal compliance and business ethics. Our group-wide Compliance Program aims to ensure adherence to legal regulations, the company's internal guidelines, and ethical business practices. Our Code of Conduct firmly embeds these mandatory standards into the day-to-day operations of our employees.

### Compliance Program and Code of Conduct

- **Commitment to laws, labor standards, and business ethics**
- **Regular compliance training for employees**

BASF's Compliance Program is based on our corporate values and voluntary commitments, as well as international standards. It describes our commitment to responsible conduct and our expectations of how all BASF employees will interact with business partners, officials, co-workers and the community. At the core of our Compliance Program is the global, standardized Code of Conduct. All employees and managers are obligated to adhere to its guidelines, which cover topics ranging from corruption and antitrust laws to human rights, labor and social standards, conflicts of interest and trade control, and data privacy protection.

Abiding by compliance standards is the foundation of responsible leadership. This has also been embedded in our values. We are convinced that adhering to these standards will be critical in ensuring our company's long-term success. Our efforts are principally aimed at preventing violations from the outset.

One key element in the prevention of compliance violations is compulsory training and workshops held offline like in classrooms or online courses. All employees in Greater China are required, within a prescribed time frame, to take part in basic compliance training, refresher courses and special tutorials dealing with, for example, antitrust legislation, taxes or trade control regulations. In 2021, more than 2,200 participants in Mainland China received approximately 30 sessions of compliance training.

### Compliance culture at BASF Greater China

We firmly believe that for corporate responsibility to be successful, there must be an active culture within the company that lives by

these guidelines. We expect all employees to follow these compliance principles as stipulated in our current global Code of Conduct (revised in June, 2020). Managers play an important role here – they serve as examples and communicate our values and culture both internally and externally.

### Monitoring adherence to our compliance principles

At the global level, BASF's Chief Compliance Officer (CCO) reports directly to the Chairman of the Board of Executive Directors and oversees the further development of our global compliance organization and our Compliance Management System. CCO is supported in this task by the Corporate Compliance unit and more than 100 compliance officers worldwide in the divisions, regions, and countries, including Greater China.

We encourage our employees to seek guidance actively if in doubt by consulting their managers, specialist departments, such as the legal department, and company compliance officers. In addition, we have set up more than 50 external hotlines worldwide that our employees can use – including anonymously – to report potential violations of laws or company guidelines. We improved and standardized these hotlines in 2021. All hotlines and the website can be accessed by the public. Each concern is documented according to specific criteria, properly investigated in line with standard internal procedures and answered as quickly as possible. The outcome of the investigation, as well as any measures taken, is documented accordingly, and included in internal reports.

In 2021, our external hotlines and other channels in Mainland China received a few calls and emails. The information received related to all categories of our Code of Conduct. We carefully investigated all cases of suspected misconduct that came to our attention and, when necessary, took countermeasures on a case-by-case basis. These included, for example, improved control mechanisms, additional information and training measures, clarification, and expansion of the relevant internal regulations, as well as disciplinary measures as appropriate.

In 2021, our compliance team, along with various other teams and stakeholders, paid close attention to China's Corporate Social Credit System (CSCS). To best safeguard BASF's compliance performance and rating level under CSCS, the company has established an internal risk assessment mechanism and a monthly monitoring process, and offered timely regulatory updates, many compliance trainings, and one-on-one systematic dialogues with the relevant key stakeholders.

## Societal Engagement

**BASF's societal engagement aims to help achieve the United Nation's Sustainable Goals (SDGs) by addressing the societal and environmental challenges and needs of the communities around our production sites worldwide. In 2021, we reaffirmed our commitment to bettering the quality of life in the communities near our sites and providing educational opportunities for children.**

### Stakeholder and community engagement

#### ■ Holding dialogues with local communities through Community Advisory Panels

At BASF, we aspire to grow our businesses in ways that are economically, environmentally, and socially sustainable by actively engaging with our stakeholders and local communities in an open and transparent manner. To support and foster mutual understanding with our neighbors, we have been conducting community engagement programs in Greater China for over two decades.

Community Advisory Panels (CAP) are one of the important platforms that we use to engage with the communities around our major production sites. CAP members are selected from local communities to meet regularly and discuss topics of common interest with BASF's site management. In Greater China, BASF supports CAPs in Shanghai, Chongqing, Nanjing and Zhanjiang.

### Science education

- **BASF Kids' Lab helps children explore climate change and health protection**
- **Cultivating young talents through co-creation during Hackathon 2021**

At BASF, we believe that chemistry makes a great contribution to everyday life, helping us solve many present and future challenges.



More than 20 community representatives from BASF Pudong Site CAP participated in the 9<sup>th</sup> dialogue meeting with BASF.

### BASF Greater China expenses for societal engagement activities in 2021

around

**€0.35 million**

Education is the key to personal success and social sustainability. For two decades, BASF has been committed to promoting science education in Greater China, and supporting the United Nations Sustainable Development Goal #4, "Quality Education".

During the summer of 2021, BASF organized the annual Kids' Lab event at the Shanghai Science and Technology Museum and China Science & Technology Museum, allowing more than 3,000 children to explore the wonders of chemistry in everyday life, through safe and interesting hands-on chemical experiments. Two new experiments were introduced on climate change and health protection under the theme, "Chemistry, solving global challenges". Participating children were also inspired to learn about CO<sub>2</sub> and how to "do their bit" by reducing individual carbon footprints.

In Taiwan, BASF brought the fun and interactive BASF Kids' Lab program to San-Wei Elementary School in Kaohsiung. During the event, the grade 5 and 6 students learned how to make sunscreen lotion and understood the water purification process from BASF Kaohsiung site employees.

In addition to the summer events, BASF offered a portfolio of digital learning resources with short videos, games, podcast and cartoons, fostering curiosity, inspiring the spirits of exploration and encouraging children to become lifelong learners. The Kids' Lab online web classes and programs attracted more than 5,000 participants in Greater China in 2021.

In order to cultivate and discover young talents for the chemical industry, BASF supported the 3<sup>rd</sup> Young Talents' Chemical Innovation Challenge (2021 Hackathon), which was organized by the China Petroleum and Chemical Industry Federation (CPCIF).



BASF introduces brand new experiments to help children to understand the importance of reducing greenhouse gas emissions.



With BASF's mentoring, the participating team from China University of Petroleum, which presented a project titled "Low-carbon green oil," won the second prize. Launched in 2018 by CPCIF, the hackathon stands out by focusing on social hot topics and fostering cross-sectoral innovation that integrates science and business. It is the first hackathon competition for university students organized by China's petroleum and chemical industry.

### Volunteering

- **BASF's first nationwide clean-up campaign contributes to cleaner coastlines and riverbanks in China**
- **Goodwill Teachers offer oral English lessons to teenagers from low-income families in Shanghai**
- **Donation of clothing to Taiwan's underprivileged societies**

BASF is determined, as part of its societal engagement, to contribute to a better world and encourages its employees to participate in various local volunteer projects.

On the World Clean-up Day in 2021, BASF kicked off its first nationwide clean-up campaign in Shanghai in September. This is in line with the Clean4Change campaign of the Alliance to End Plastic Waste (AEPW) to promote the reduction and elimination of plastic waste in the natural environment.

The cleanup campaign involved over 300 BASF employees and their families who joined in and cleaned up waste from local beaches, waterways and mountains across 13 BASF sites in five cities: Shanghai, Nanjing, Chongqing, Maoming, and Tianjin. By December 2021, the campaign had cleared over 1,050 kilograms of garbage, including large amounts of plastic foam debris, cigarette butts and mineral water bottles. All the waste was sorted out properly to help with recycling.

In Shanghai, BASF has been supporting teenagers with disabled parents through the "Goodwill Teacher" program since 2005. In 2021, BASF volunteers continued to offer free oral English tuition to these students in Shanghai on weekends. In addition, BASF set up



BASF Taiwan organized employee donation event to collect used garments for underprivileged communities.

a scholarship in 2006 and continues to finance hundreds of outstanding or underprivileged students in high schools or universities.

In Taiwan, BASF organized a series of Corporate Social Responsibility (CSR) related activities to support underprivileged communities. This included an employee donation event organized in September, successfully collecting 1,588 pieces of clothing, 168 pairs of shoes, 91 bags and 214 toys, which were all donated to underprivileged communities. BASF volunteers in Taiwan also celebrated the season of giving by bringing holiday gifts and joy to people with intellectual disabilities in collaboration with Kindgarden, a social welfare organization in Taoyuan City. BASF has organized the Christmas celebration event for this organization for the seventh year in a row.

### Prizes and awards

Recognizing our commitment to sustainability and social engagement in Greater China, BASF received the "Best Corporate Citizenship" award from 21<sup>st</sup> Century Media Group for the 17<sup>th</sup> year in a row.

BASF was also named an "Outstanding Responsible Enterprise" by Southern Weekly for the 14<sup>th</sup> consecutive year. It was also awarded the newly established "Green Enterprise" award.



In 2021, BASF won the "Sustainable Business Award" presented by European Chamber of Commerce in China (Shanghai Chapter) for the first time. This is to recognize BASF's long-term commitment to drive sustainability through chemistry-based innovations, and its innovative polyurethane-based Haptex® solutions.

BASF has also been named China's Top Employer 2022 for the 12<sup>th</sup> year in a row.



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### Photos

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