

# Chemicals

The Chemicals segment comprises our business with basic chemicals and intermediates. Our portfolio ranges from solvents, plasticizers, glues and electronic chemicals to starting materials for detergents, plastics, textile fibers, paints and coatings, as well as for crop protection products and pharmaceuticals. In addition to supplying customers in the chemical industry and numerous other sectors, we also ensure that other BASF segments are supplied with chemicals for producing downstream products.

#### Key data Chemicals (million €)

	2012	2011	Change in %
Sales	13,824	12,958	6.7
Thereof Inorganics	1,735	1,415	22.6
Petrochemicals	9,179	8,839	3.8
Intermediates	2,910	2,704	7.6
EBITDA	2,409	3,188	(24.4)
Income from operations before special items	1,717	2,441	(29.7)
Income from operations (EBIT)	1,718	2,442	(29.6)

# **Performance Products**

Our Performance Products lend stability and color to countless everyday items and help to improve their application properties. Our product portfolio also includes vitamins and food additives as well as ingredients for pharmaceuticals and for hygiene, home and personal care items. Other products from this segment improve processes in the paper industry, oil and gas production, mining and water treatment. They can also enhance the efficiency of fuels and lubricants, the effectiveness of adhesives and coatings, and the stability of plastics.

#### Key data Performance Products (million €)

		2012	2011	Change in %
Sales		15,871	15,697	1.1
Thereof	Dispersions & Pigments	3,677	3,509	4.8
	Care Chemicals	4,957	5,174	(4.2)
	Nutrition & Health	1,959	1,862	5.2
	Paper Chemicals	1,634	1,623	0.7
	Performance Chemicals	3,644	3,529	3.3
EBITDA		2,113	2,312	(8.6)
Income from	operations			
before speci	al items	1,428	1,727	(17.3)
Income from	operations (EBIT)	1,286	1,361	(5.5)

# **Agricultural Solutions**

Our crop protection products guard against fungal diseases, insects and weeds, increase the quality of agricultural products and secure crop yields. Our research in plant biotechnology concentrates on plants for greater efficiency in agriculture, better nutrition, and use as renewable raw materials.

Research and development expenses, sales, earnings and all other data pertaining to BASF Plant Science are not included in the Agricultural Solutions segment; they are reported in Other.

## Key data Agricultural Solutions (million €)

	2012	2011	Change in %
Sales	4,679	4,165	12.3
EBITDA	1,182	981	20.5
Income from operations before special items	1,037	810	28.0
Income from operations (EBIT)	1,026	808	27.0

# **Plastics**

The Plastics segment includes a broad range of products, system solutions and services. We offer a number of engineering plastics for the automotive and electrical industries as well as for use in household appliances and sports and leisure products. Our styrenic foams are used as insulating materials in the construction industry and in packaging. Our polyurethanes are extremely versatile: As soft foams, for example, they improve car seats and mattresses, and as insulating rigid foams they increase the energy efficiency of refrigerators.

#### Key data Plastics (million €)

	2012	2011	Change in %
Sales	11,402	10,990	3.7
Thereof Performance Polymers	5,110	5,138	(0.5)
Polyurethanes	6,292	5,852	7.5
EBITDA	1,314	1,678	(21.7)
Income from operations before special items	873	1,203	(27.4)
Income from operations (EBIT)	874	1,259	(30.6)

# **Functional Solutions**

In the Functional Solutions segment, we bundle system solutions and innovative products for specific sectors and customers, in particular for the automotive, chemical and construction industries. Our portfolio comprises automotive and industrial catalysts, battery materials, automotive and industrial coatings and concrete admixtures as well as construction systems such as tile adhesives and decorative paints.

#### Key data Functional Solutions (million €)

	2012	2011	Change in %
Sales	11,460	11,361	0.9
Thereof Catalysts	6,184	6,380	(3.1)
Construction Chemicals	2,315	2,181	6.1
Coatings	2,961	2,800	5.8
EBITDA	894	921	(2.9)
Income from operations before special items	561	559	0.4
Income from operations (EBIT)	435	427	1.9

# Oil & Gas

As the largest German producer of oil and gas, we focus our exploration and production on oil and gas-rich regions in Europe, North Africa, South America, Russia and the Caspian Sea region. Together with our Russian partner Gazprom, we are active in the transport, storage and trading of natural gas in Europe.

## Key data Oil & Gas (million €)

	2012	2011	Change in %
Sales	16,700	12,051	38.6
Thereof Exploration & Production	5,330	3,182	67.5
Natural Gas Trading	11,370	8,869	28.2
EBITDA	4,721	2,616	80.5
Income from operations before special items	4,104	2,111	94.4
Income from operations (EBIT)	3,904	2,111	84.9
Net income	1,201	1,064	12.9

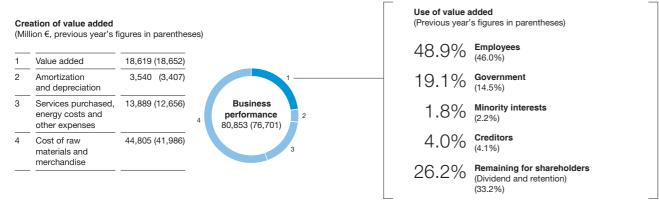
# BASF Group 2012 at a glance

## **Economic data**

		2012	2011	Change in %
Sales	million €	78,729	73,497	7.1
Income from operations before depreciation and amortization (EBITDA)	million €	12,516	11,993	4.4
Income from operations (EBIT) before special items	million €	8,881	8,447	5.1
Income from operations (EBIT)	million €	8,976	8,586	4.5
Income before taxes and minority interests	million €	8,436	8,970	(6.0)
Net income	million €	4,879	6,188	(21.2)
Earnings per share	€	5.31	6.74	(21.2)
Adjusted earnings per share	€	5.71	6.26	(8.8)
Dividend per share	€	2.60	2.50	4.0
Cash provided by operating activities	million €	6,733	7,105	(5.2)
Additions to long-term assets <sup>1</sup>	million €	5,397	3,646	48.0
Depreciation and amortization <sup>1</sup>	million €	3,540	3,407	3.9
Return on assets	%	14.6	16.1	_
Return on equity after tax	%	20.4	27.5	_

<sup>&</sup>lt;sup>1</sup> Including acquisitions

# Value added 2012<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> Value added results from the company's performance minus goods and services purchased, depreciation and amortization. It shows the BASF Group's contribution to both private and public income as well as the distribution of this contribution among all stakeholders.

# Innovation

	2012	2011	Change in %
Research and development expenses million €	1,746	1,605	8.8
Number of employees in research and development as of December 31	10,542	10,126	4.1

# **Employees and society**

	2012	2011	Change in %
Employees as of December 31	113,262	111,141	1.9
Apprentices as of December 31	2,809	2,565	9.5
Personnel expenses million €	9,089	8,576	6.0
Annual bonus % of Group companies	97.5	93.7	4.1
Donations and sponsorship million €	49.2	48.7	1.0

# Supply chain management and Responsible Care

	2012	2011	Change in %
Number of on-site audits of raw material suppliers	210	206	2.0
Number of environmental and safety audits	112	97	15.5
Number of occupational medicine and health protection audits	42	35	20.0

# Safety and health

		2012	2011	Change in %
Transportation accidents	per 10,000 shipments	0.24	0.18	33.3
Product spillages during transportation	per 10,000 shipments	0.25	0.30	(16.7)
Lost time injuries	per million working hours	1.7	1.9	(10.5)
Health Performance Index <sup>3</sup>		0.89	-	-

 $<sup>^{\</sup>scriptscriptstyle 3}$  The Health Performance Index was newly defined in 2012.

## Environment

		2012	2011	Change in %
Primary energy usage <sup>4</sup>	million MWh	61.5	63.8	(3.6)
Energy efficiency in production processes	metric tons of sales product/MWh	0.589	0.621 <sup>6</sup>	(5.2)
Total water withdrawal	million cubic meters	2,009	2,130	(5.7)
Withdrawal of drinking water	million cubic meters	23	24	(4.2)
Emissions of organic substances to water <sup>5</sup>	thousand metric tons	21.6	24.3	(11.1)
Emissions of nitrogen to water <sup>6</sup>	thousand metric tons	2.8	2.9	(3.4)
Emissions of heavy metals to water <sup>7</sup>	metric tons	26	24	8.3
Emissions of greenhouse gases	million metric tons of CO2 equivalents	24.7	25.8	(4.3)
Emissions to air (air pollutants) 8	thousand metric tons	31.6	34.47	(8.1)
Waste	million metric tons	2.24	2.118	6.2
Operating costs for environmental protection fa	cilities million €	910	850	7.1
Investments in environmental protection	million €	272	190	43.2

<sup>&</sup>lt;sup>4</sup> Primary energy used in BASF's plants as well as in the plants of our energy suppliers to cover energy demand for production processes

<sup>&</sup>lt;sup>5</sup> Excluding emissions from oil and gas production

<sup>&</sup>lt;sup>6</sup> Deviation from Report 2011 due to reclassification of natural gas usage

<sup>&</sup>lt;sup>7</sup> Deviation from Report 2011 due to retroactive inclusion of emissions from a former Cognis site

<sup>&</sup>lt;sup>a</sup> Deviation from Report 2011 primarily due to retroactive inclusion of waste from construction activities at the Ludwigshafen site

# **BASF** in Greater China

# Report 2012

Innovation

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# **About this report**

"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 2012. The financial data of BASF Group presented in this report is prepared in accordance with the German Commercial Code and the International Financial Reporting Standards (IFRS). Local sales figures in this report refer to sales by BASF Group companies to customers located in Greater China. Environmental data at joint venture companies in Greater China are reported pro rata based on our stake. Employee numbers refer to total employment by major BASF Group companies in Greater China and companies where BASF has a stake of greater than 50%, and proportional employment of companies in Greater China where BASF has a stake of 50%, as of December 31, 2012. All figures are based on the scope of consolidation and segment structure of BASF Group valid on December 31, 2012. IFRS 10, IFRS 11 and IAS 19 (revised) have not yet been taken into account.

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# Year of change in Greater China

Dear Stakeholders

2012 was a year of change for BASF in Greater China, with volatile market conditions, the rapid expansion of our production footprint, and the opening of our largest research and development (R&D) facility in the region to date. Although the market environment has been challenging over the past year, we achieved steady growth in 2012 in Greater China, thanks to the continuous efforts of our employees, and our collaboration with customers and the community.

Our Pudong site in Shanghai was a focal point for our activities in 2012. More than 1,000 colleagues from functional, sales, marketing as well as R&D units moved into the new BASF Greater China headquarters and the Innovation Campus Asia Pacific. With more than 2,000 employees, this is now one of the biggest BASF integrated sites worldwide. The overall expansion of the Pudong site marks an important milestone in the history of BASF in Greater China. Adding value as one company, the Pudong site will be a key enabler for collaboration between BASF employees, customers and the science community.

With our new Greater China headquarters at the Pudong site, we now have the first LEED® (Leadership in Energy and Environmental Design) certified building in Asia Pacific. The innovative concept requires specific measures in energy and water saving, as well as low emission construction materials.

BASF will contribute to establishing the Pudong New Area in Shanghai as a valuable hub and a showcase for innovative chemical research, development, modern specialty production as well as logistics.

**BASF** in Greater China

Report 2012

## Innovation and sustainability drive success

In September 2012, Shanghai was the first stop in Asia Pacific for the BASF "We create chemistry" world tour. On this world tour, state-of-the-art innovations and technologies showcased how chemistry can help solve the challenges of the future.

In addition to scientific innovations that enable sustainable solutions for our customers. BASF continues to promote responsible behavior and share best practices with our supply chain through innovative models in Greater China. In 2012, BASF continued the successful "1+3" project, which fosters environmental protection, health and safety along the supply chain, including customers, suppliers and logistics service providers.

We manage sustainability also by continuously enhancing our performance in environment, health and safety. In 2012, we maintained our good safety record, with a very low rate of work-related accidents for both employees and contractors. Our safety and health performance was also recognized by the local authorities and associations in Shanghai, Jiangsu and Taiwan this year.

## Continuous development in Greater China

BASF further developed its local production footprint with new investments in China. For example, BASF-YPC Co. Ltd., a 50-50 joint venture between BASF and China Petroleum & Chemical Co., broke ground on a new superabsorbent polymers plant in Nanjing. Another milestone of this successful partnership has been the completion of a joint feasibility study for the establishment of a world-scale isononanol plant in Maoming, Guangdong, China. This plant will provide feedstock for next generation plasticizers. In Chongging, our 400,000 tons per year methylene diphenyl diisocyanate (MDI) project is progressing. Our local production has been further solidified with new production plants focusing on water treatment chemicals, paper chemicals and polyurethane systems customized to customers' needs. At the same time, we have added battery materials to our portfolio in China through the acquisition of Novolyte Technologies in early 2012.

People are the most important assets of BASF and we are seeing the results of our investment in people in Greater China. Our "Grow" Graduate Program™ for university graduates has been running for five years, and successful trainees from the program are now playing increasingly important roles with BASF in Greater China. As of 2012, BASF has been named one of China's Top Employers for the third consecutive year by the CRF Institute.

At the same time, BASF has continually expanded its capacities for R&D in China in order to provide innovative and tailor-made solutions to our local customers. In 2007, BASF established its

first R&D center for automotive industry solutions in Shanghai. This was followed by a plasticizer application lab, care chemicals development centers and a polytetrahydrofuran (PolyTHF®) lab. BASF also has R&D facilities in Guangzhou, Taipei and Guilin. In 2012, the company inaugurated its new Innovation Campus Asia Pacific at BASF's Pudong site in Shanghai, which, together with our new Greater China headquarters, forms a €55 million investment. With this new facility as part of our global R&D network, we are strengthening our R&D capabilities to provide innovations for customers in Asia Pacific and beyond.

As the Greater China market develops, it takes an even more important position in BASF's global and regional strategy. With the roll-out this year of our Asia Pacific strategy, "grow smartly", BASF will further strengthen its focus and develop additional growth momentum in this crucial market. We want to continue to work with you, our employees, customers, and stakeholders around the region, to create chemistry in Greater China.

**Albert Heuser** 

President Functions Asia Pacific President and Chairman Greater China

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# Dr. Albert Heuser

- Graduated with a doctoral degree in materials science
- 26 years with BASF in Germany, Belgium and Asia Pacific
- President, Functions Asia Pacific, BASF
- President and chairman, Greater China, BASF



## Strengthening the Greater China organization

From April 1, 2013, Dr. Albert Heuser, President Market & Business Development Asia Pacific, has assumed the responsibility for BASF's overall operations in Greater China as well as for all functional units in Asia Pacific. As President Greater China and Functions Asia Pacific, he is now based in Shanghai, China. This organizational change underlines the strategic importance of the Chinese market for BASF.



# The BASF Group

The world's leading chemical company – The Chemical Company

We are the world's leading chemical company – The Chemical Company. Around 113,000 employees work in the BASF Group toward contributing to the success of our customers from nearly all sectors and almost every country in the world. Our broad portfolio is arranged into six segments: Chemicals, Plastics, Performance Products, Functional Solutions, Agricultural Solutions and Oil & Gas.

### Markets and sites

BASF has subsidiaries in more than eighty countries and supplies products to a large number of business partners in nearly every part of the world. In 2012, we achieved 55% of our sales with customers in Europe, of which 36% were in the Oil & Gas segment. In addition, 18% of sales were generated in North America; 19% in Asia Pacific; and 8% in South America, Africa, Middle Fast.

We operate six Verbund sites as well as approximately 380 additional production sites worldwide. Our Verbund site in Ludwigshafen is the largest integrated chemical complex in the world. This was where the Verbund concept was developed and continuously optimized before it was applied to other sites around the world.

The Production Verbund, for example, intelligently links production units and energy demand so that heat from production processes can be used as energy in other plants, saving both primary resources and costs. Another important part of the Verbund concept is the Know-How Verbund. Expert knowledge is pooled in our central research areas.

 $\,\,$  For more on the Verbund concept, see basf.com/verbund\_e



Tank storage facility at Friesenheim Island section of BASF's Verbund site in Ludwigshafen.

## Organization of the BASF Group

Until the end of 2012, BASF's six segments contained 15 divisions which bore operational responsibility and managed our 70 global and regional business units. The divisions develop strategies for our approximately 80 strategic business units and are organized according to sectors or products.

The regional divisions contribute to the local development of our business and help to exploit market potential. They are also responsible for optimizing the infrastructure for our business. For financial reporting purposes, our divisions are grouped into the following four regions: Europe; North America; Asia Pacific; and South America, Africa, Middle East.

Three central divisions, six corporate departments and eleven competence centers provide Group-wide services such as finance, investor relations, communications, human resources, research, engineering, site management and environment, health and safety.

## The BASF Group

- Six Verbund sites and approximately 380 other production sites worldwide; around 113,000 employees
- Ludwigshafen is the location of the largest BASF Verbund site, and where the Verbund concept was created
- Verbund: Intelligent plant networking in the Production Verbund; Know-How and Research Verbund

# Organization of the BASF Group

- Six segments contain 15 divisions that manage our global and regional business units
- Regional divisions optimize the infrastructure and support operations
- Corporate divisions and departments as well as competence centers provide Group-wide services

The BASF Group BASF in Greater China Report 2012

# The BASF Group

# Corporate strategy

With the "We create chemistry" strategy, BASF has set itself ambitious goals in order to strengthen its position as the world's leading chemical company. We want to contribute to a sustainable future and have embedded this into our corporate purpose: "We create chemistry for a sustainable future."

In 2050, around nine billion people will live on this planet. While the world population and its demands will keep growing, the planet's resources are finite. On the one hand, population growth is associated with enormous global challenges; but we also see many opportunities, especially for the chemical industry.

## Our purpose

# We create chemistry for a sustainable future

Growth in the chemicals sector will be particularly dynamic in the emerging economies. We expect that these markets will account for around 60% of global chemical production by 2020.

Innovations based on chemistry will play a key role in these countries, particularly in three areas:

- Resources, environment and climate
- Food and nutrition
- Quality of life

Our leading position as an integrated global chemical company opens up opportunities for us in all three of these areas. In pursuing them, we act in accordance with four strategic principles.

## Our strategic principles

We add value as one company

Our Verbund concept is unique in the industry. We plan to strengthen this sophisticated and profitable system even further. It extends from the Production Verbund and Technology Verbund to the Know-How Verbund, and provides access to all relevant customer industries worldwide. In this way, we combine our strengths and add value as one company.

# We innovate to make our customers more successful

We want to focus our business even more strongly on our customers' needs and contribute to their success with innovative and sustainable solutions. Through close partnerships with customers and research institutes, we link expertise in chemistry, biology, physics, materials sciences and engineering to jointly develop customized products as well as functional materials and system solutions.



## We drive sustainable solutions

In the future, sustainability will increasingly become a starting point for new business opportunities.

We therefore value sustainability and innovation as important drivers for profitable growth.



## We form the best team

Committed and qualified employees around the world are the key to making our contribution to a sus-

tainable future. That is why we will continue to pursue our goal of building the best team. We offer excellent working conditions and an open leadership culture that fosters mutual trust and respect and encourages high motivation.

#### Our values

How we act is critical for the successful implementation of our strategy: This is what our values represent. They guide how we interact with society, our partners and with each other.

#### Creative

In order to find innovative and sustainable solutions, we have the courage to pursue bold ideas. We bring together our expertise in many different fields and build partnerships to develop creative, value-adding solutions. We constantly improve our products, services and solutions.

## Oper

We value diversity – in people, opinions and experience. That is why we foster dialog based on honesty, respect and mutual trust. We explore our talents and capabilities.

## Responsible

We act responsibly as an integral part of society. Thereby, we strictly adhere to our compliance standards. And in everything we do, we never compromise on safety.

## Entrepreneuria

We all contribute to BASF's success, as individuals and as a team. BASF turns market needs into customer solutions. We succeed in this because we take ownership and embrace accountability for our work.

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# The BASF Group

Goals

## Growth and profitability<sup>1</sup>

	Annual goals	2015 Goals	2020 Goals	Status at year-end 2012
Sales		Approx. €85 billion	Approx. €115 billion	€78.7 billion
Premium on cost of capital	At least €2.5 billion on average each year			€1.5 billion
EBITDA		Approx. €15 billion	Doubling compared with 2010 to approx. €23 billion	€12.5 billion
Earnings per share	_	Around €7.50		€5.31

We have set ourselves these goals as part of the "We create chemistry" strategy adopted in 2011. Our goals are based on the assumptions that we will continue to grow two percentage points faster than global chemical production annually and that global gross domestic product will grow by an average of 3% every year until 2020 and worldwide chemical production by 4% every year.

## **Employees**

	Long-term goals	Status at year-end 2012
International proportion of senior executives	Increase in the proportion of non-German senior executives (baseline 2003: 30%)	33.8%
Senior executives with international experience	Proportion of senior executives with international experience over 80%	80.4%
Women in executive positions	Increase in the proportion of female executives worldwide	17.0%
Personnel development	Establishment of personnel development as a responsibility shared by employees and managers based on relevant processes and tools	Introduced for around 30,000 employees worldwide in first phase

# **Environment, safety and health**

+35%	+19.3%
-40%	-31.7%
100%	100%
-10%	-22.1%
-80%	-76.4%
-80%	-87.3%
-60%	-56.8%
-50%	-23.2%
100%	3.1%
-70%	-63.1%
-70%	-57%
-80%	-48%
>0.9	0.89
>99%	45%
	-40% 100% -10% -80% -80% -60% -50% 100% -70% -70% -80% >0.9

<sup>&</sup>lt;sup>2</sup> Excluding oil and gas production

# **BASF** in the Regions

Sales 2012: €78,729 billion; EBIT 2012: €8,976 million



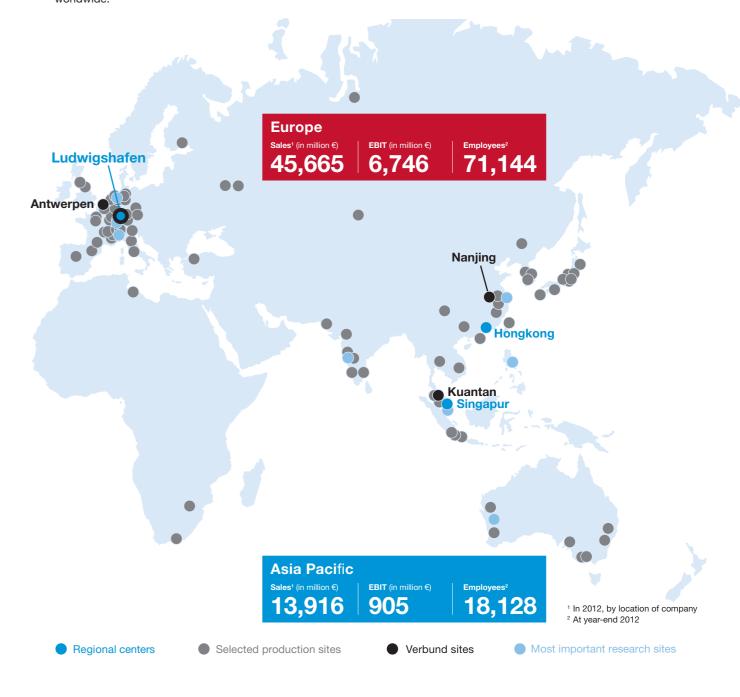
## **North America**

At €14,599 million, sales for companies headquartered in North America were 1% below the level of 2011. In local-currency terms, sales were 8% lower than in the previous year. Income from operations decreased by 27% to €964 million, mostly as a result of the lower contribution from the Chemicals segment.

## South America, Africa, Middle East

Compared with 2011, sales for companies in the region rose by 3% to €4,549 million. Sales were 3% above the previous year's level in local-currency terms, as well. Income from operations in the region declined by 23% to €361 million, predominantly as a result of the lower contribution from the Oil & Gas segment in Argentina.

Around 113,000 employees work in the BASF Group toward contributing to the success of our customers from nearly all sectors and almost every country in the world. We operate six Verbund sites as well as approximately 380 additional production sites worldwide.



# Europe

In 2012, companies headquartered in Europe recorded a significant increase in sales compared with the strong previous year: Sales grew by 11% to  ${\leqslant}45,\!665$  million. Income from operations amounted to  ${\leqslant}6,\!746$  million, an improvement of 19% compared with 2011.

## Asia Pacific

Companies headquartered in the Asia Pacific region increased sales by 5% to €13,916 million in 2012. Positive currency effects boosted sales growth, while lower prices reduced sales. In local-currency terms, sales declined by 3%. Income from operations fell by 20% to €905 million. This was mostly due to weaker margins in the Chemicals segment.

An interview with Dr. Martin Brudermüller

## What is BASF's plan for Asia Pacific?

In the next decade, Asia Pacific will face a lot of huge challenges while remaining the world's fastest growing market for the chemical industry. We call our Asia Pacific strategy "grow smartly", because we want to make BASF the leading provider of sustainable solutions for the Asia Pacific region. Based on our strong global R&D network, we will considerably strengthen our innovations capabilities in Asia Pacific, enabling us to better serve our customers in all industries in the region.

"The challenges for our customers are increasing due to the growing demand for environmentally-friendly and energy-efficient solutions. With our focus on sustainability, we are an attractive partner to companies across all industries."

Dr. Martin Brudermüller Vice Chairman of the Board of Executive Directors, **BASF SE** 

## What are BASF's expectations from its new strategy?

According to our strategy, we intend to grow profitably at least two percentage points above chemical production to achieve sales of €25 billion by 2020, by developing innovations that create sustainable solutions for its customers. With our partners we will invest €10 billion in order to achieve local production of 75% of our sales to Asia Pacific, and we will create around 9,000 new jobs in the region between 2013 and 2020.

**BASF in Greater China** 

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## How will BASF grow sustainably in the region?

BASF aims to contribute to the social development of the communities where we do business. This includes innovative solutions for our customers, partnerships for energy- and resource-efficient investments, transparency in reporting, and engagement with society and stakeholders. With our chemistry, we focus on providing solutions for areas such as mobility, housing, food safety, wind energy, and water purification.

## What is the role of Greater China in BASF's Asia Pacific strategy?

Accounting for 64% of real chemical production in the region by 2020, Greater China continues to be the most important market in Asia Pacific. At the same time, the challenges for our customers are increasing due to the growing demand for environmentally-friendly and energy-efficient solutions. With our focus on sustainability, we are an attractive partner to companies across all industries, ranging from the automotive industry to the food industry. To better meet our customers' needs, we have just opened our first Innovation Campus Asia Pacific in Shanghai which is the perfect location for us to work jointly with customers and universities on innovative solutions based on chemistry. Greater China is already BASF's third largest market worldwide - and we will continue to invest and strengthen our presence in this important market and thus, adding value to the communities in which we operate.

## Dr. Martin Brudermüller

Vice Chairman of the Board of Executive Directors, BASF SE, responsible for Asia Pacific



# **Asia Pacific Strategy**

BASF is implementing its global "We create chemistry" strategy in Asia Pacific with a set of ambitious targets and a focus on sustainability. According to this regional strategy, called "grow smartly", BASF intends to grow profitably at least two percentage points above chemical production and achieve sales of €25 billion in Asia Pacific by 2020.

Goal 2020

Talent development



**Goal 2020** Portfolio More than €2 billion in regional sales are targeted through new business and acquisitions in new product areas in identified growth fields.



Between 2013 and 2020,

employment opportunities.

BASF needs to create

9.000 value-adding





## Employees

12	18,128	
011	17,342	
2010	15,965	
2009	14,817	
2008	13,734	

## Sales (billion €) (by location of customer)

2012	14.9	
2011	14.4	
2010	12.5	
2009	8.7	
2008	9.3	
		•

**BASF** in Greater China

# **BASF** in Greater China

History

12 BASF in Greater China

BASF has a history of more than 125 years in Greater China. In 1885, the company began selling dyes to the then Imperial China. In 1913, China already accounted for 14% of BASF global sales. Since then, BASF's activities in the country have grown and diversified steadily. By now, BASF operates 21 major wholly-owned subsidiaries and 10 major joint ventures in Greater China, showcasing its long-term commitment to providing innovative and sustainable products and solutions to China from a local source.

## **Entering China**

After the second world war, BASF began diversifying its business into indanthrene dyes and fertilizers. In the 1950s, it chose Hong Kong-based German company Jebsen & Co. to represent it as its exclusive agent for its trade with China. BASF's first direct investment in Greater China took place in Taiwan in 1969, when BASF bought into Cheng Kuang Chemical Co. Ltd. which later became BASF Taiwan.

In 1982, BASF decided to conduct its China business directly and established BASF China Ltd. in Hong Kong. Over the years, business in mainland China grew steadily which made direct investment there an increasingly attractive option. Consequently, BASF founded its first joint venture in 1986: Shanghai Gaoqiao BASF Dispersions Co. Ltd. which produces styrene-butadiene dispersions for coating paper and carpets. Other joint ventures followed, for example Shanghai BASF Colorants and Auxiliaries Co. Ltd. (a company now called BASF Auxiliary Chemicals Co. Ltd.), BASF Shanghai Coatings Co. Ltd. and BASF Vitamins in Shenyang. In 1995, BASF established its East Asia regional headquarters in Hong Kong, reflecting the increasing importance of the China market. The following year, the holding company BASF (China) Co. Ltd. was formed in Beijing to integrate the growing number of mainland China ventures.

## Yesterday

BASF's history in China dates back more than 125 years. Innovative chemical solutions laid the foundation for BASF's success right from the beginning. Only 20 years after the company's foundation in Germany in 1865, BASF started doing business in China by trading textile dyes, one of the most important chemical products of the time (right: dye label for the Chinese market more than 125 years ago).

## Major investments and sustainable growth

In 2000, BASF signed its largest single investment in the company's history. BASF and China Petroleum & Chemical Corp. (Sinopec) together established the BASF-YPC Co. Ltd. joint venture to build a Verbund site in Nanjing which involved an initial investment by both partners of \$2.9 billion. It marked the beginning of a period of remarkable growth, reorganization and integration of BASF's operations in China. In 2005, the Verbund site in Nanjing started production. Only one year later, the partners agreed to expand the site, a project which was completed in early 2012.

During the same years, BASF also developed production clusters around the Gaogiao and Caojing areas in Shanghai, all equipped with the latest technologies. Together with foreign and local partners, BASF in 2006 opened an integrated isocyanate production at the Shanghai Chemical Industrial Park in Caojing, making methylene diphenyl diisocyanate (MDI) and toluene diisocyanate (TDI). In order to serve the growing market of Western China, BASF in 2011 started construction of another large MDI plant in Chongging.

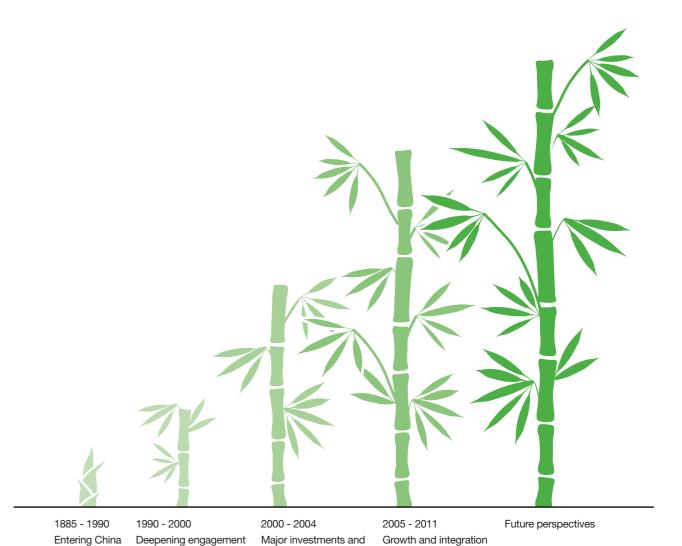
Since 2001, BASF's sales in Greater China have grown more than sixfold. During the past decade. BASF has centralized the administration of its China business: In 2004, BASF moved both BASF (China) Co., its China holding company, and the Greater China headquarters to Shanghai. Major global acquisitions by BASF since 2005 have also benefited its China activities, among them the electronic chemicals business of the Merck Group in 2005, the construction chemicals business of Degussa and the catalysts business from Engelhard Corp. in 2006, as well as specialty chemical makers Ciba in 2009 and Cognis in 2010.

## Sustainability and innovation drive success

While growing the business steadily, BASF has also adopted the company's global standards for environment, health and safety in China. In 2004, China was the first among BASF operations in Asia Pacific to establish a fully-fledged team to address sustainability management.







reorganization

BASF's ongoing successful "1+3" Corporate Social Responsibility project has become a model program on how to improve sustainability along the chemical industry value chain in China.

At the same time, BASF has continually expanded its capacities for research and development (R&D) in China in order to provide innovative and tailor-made solutions to our local customers. In 2007, BASF established its first R&D center

for automotive industry solutions in Shanghai. This was followed by a plasticizer application lab, care chemicals development centers and a polytetrahydrofuran lab (PolyTHF®). Apart from Shanghai, BASF now has research facilities in Guangzhou, Taipei and Guilin. In 2012, the company inaugurated its new Innovation Campus Asia Pacific at its Pudong site in Shanghai, further enhancing China's role in the company's research activities in the region.

## Today

In 2012, Greater China was BASF's third-largest market globally after Germany and the United States, and accounts for nearly half of its business in Asia Pacific. In 2012, BASF inaugurated its new Greater China headquarters (pictured here) and Innovation Campus Asia Pacific in Shanghai's Pudong New Area. The Greater China headquarters building is the first BASF's facility to have received a LEED® (Leadership in Energy and Environmental Design) certification in Asia Pacific.



# **BASF** in Greater China

At a glance

China is BASF's third-largest market worldwide. The company operates 21 major wholly-owned subsidiaries and 10 major joint ventures in Greater China. In 2012, it achieved sales of €6.7 billion in China with 8,435 employees. Over the last 20 years, BASF has invested more than €4 billion (more than €6 billion with partners) in Greater China in order to build a locally competitive production base as well as research facilities, and a marketing, sales and technical service network. 2012 saw several milestones in our ongoing expansion of activities across the country.

### Shanghai: Expansion of Pudong site

In 2012, BASF inaugurated its new Greater China headquarters and the Innovation Campus Asia Pacific at its expanded site in Shanghai's Pudong New Area. Ultimately employing more than 2,500 employees, the site will be one of the company's major integrated sites outside of Germany. With its new Innovation Campus, BASF will now focus even more strongly on market and customer needs in the region to develop customized innovative solutions for its customers in various industries.

Also in Pudong, BASF produces engineering plastics and specialty chemicals, such as amino resins, pigment preparations, leather and textile chemicals, coolants and dispersions. Besides, BASF operates a thermoplastic polyurethanes plant, a Cellasto® plant, a system house and an Asia technical research center which develops individual polyurethane solutions for each customer. Nearby at Jinqiao, BASF Catalysts (Shanghai) Co. Ltd. is currently in the process of expanding its production capacity for mobile emission catalysts.

In the Shanghai Chemical Industry Park in Caojing, BASF operates two joint ventures with Huntsman, Shanghai Hua Yi (Group) Co. and Sinopec Shanghai Gao Qiao Petrochemical Corp., which manufacture polyurethane components methylene diphenyl diisocyanate (MDI) and toluene diisocyanate (TDI). At the same site, BASF Chemicals Co. Ltd. produces polytetrahydrofuran (PolyTHF®), a major raw material for spandex fibers, and polyisocyanate (Basonat®) for the coating and furniture finishing industry. There is also a newly launched facility that produces precious metals based salts and solutions to support BASF's mobile emissions catalysts manufacturing operation in Shanghai and other industrial applications.

**BASF in Greater China** 

Report 2012

## Bringing Verbund operations to the next level in Nanjing

BASF-YPC Co. Ltd. (BASF-YPC) is jointly operated in Nanjing by BASF and China Petroleum & Chemical Co. (Sinopec) as an integrated petrochemical Verbund site. In early 2012, BASF-YPC inaugurated the second phase of the site, which had involved the expansion of the existing steam cracker and the construction of additional plants. The Nanjing site now produces three million tons of high-quality chemicals and polymers annually for the Chinese market.

BASF-YPC also broke ground on a new superabsorbent polymers plant in Nanjing. This milestone signifies the commitment of both companies to bringing the manufacturing of important chemicals to the Chinese market, which will support the development of more sustainable local industries. The plant is expected to begin commercial operation in 2014.

BASF's Verbund system is unique in the industry, and an example of how we add value as one company. Our Verbund sites achieve extremely efficient production and safety by clustering plants and re-using by-products. We plan to extend the Verbund system further beyond production to include the concepts of Technology Verbund and Know-How Verbund.

## **Greater China Headquarters and Innovation Campus**

In November 2012, BASF celebrated the opening of the new Greater China headquarters and its new Innovation Campus Asia Pacific (pictured here) at its Pudong site in Shanghai. The €55 million expansion of the Pudong site marks one of BASF's most important innovation investments in the region. The site will eventually become one of BASF's largest integrated sites outside Germany.



# **Sites**

2008

4.2





#### Sales (billion €) (by location of customer) 2012 6.7 2011 6.5 2010 5.8 2009 4.1

# **BASF** products

BASF offers a broad product range in Greater China, including intermediates, monomers, petrochemicals, dispersions and pigments, care chemicals, nutrition and health, paper chemicals, performance chemicals, catalysts, construction chemicals, coatings, performance materials as well as crop protection products.

<sup>1</sup> Some sites are not shown due to scale. Site and office numbers refer to companies of significant size where BASF holds a stake of 50% or greater.

## Construction of MDI plant in Chongqing

BASF is currently constructing a large-scale MDI facility at the Changshou Economic & Technological Development Area, 60 kilometers northeast of downtown Chongqing. With an investment of around RMB 8 billion (approximately €860 million), the first units of the site are scheduled to start up in 2014. The site is designed to produce an annual capacity of 400,000 tons of MDI. The BASF facility will operate in a highly integrated production system, involving over a dozen of plants constructed by our local partners. Polyurethane is an extremely versatile plastic material used in many everyday products, and helps improve livelihood and reduce energy consumption. The new facility will make Chongqing a world-class manufacturing base for polyurethane raw materials and a technical service center for polyurethane products, forming the nexus of a new industry hub in Western China.

## **Polyurethane solutions to Northern China**

In October 2012, BASF has opened a new polyurethane system house in Tianjin. As BASF's first investment in this northern port city, the new site is the company's eleventh polyurethane system house in Asia Pacific and the fourth in Greater China. It will join our comprehensive and unparalleled worldwide network which currently includes 38 system houses. BASF's system houses deliver customized polyurethane solutions to its customers, supported by local production, in-house sales, technical service and development teams.



BASF opened a new polyurethane system house in Tianjin.

## Water treatment facility in Nanjing

BASF has started a new facility in Nanjing which produces chemicals for water treatment and paper manufacturing at the end of 2012. These BASF's wholly-owned, world-scale plants will be able to manufacture 40,000 tons of quaternized cationic monomers and 20,000 tons of cationic polyacrylamide annually. These chemicals are the feedstock for organic flocculants which are crucial for municipalities and industries in waste water treatment. They are also used as retention and drainage aids in the paper industry. Key precursors are supplied by the adjoining facilities at the Verbund site of BASF-YPC.

# New dispersions plant in Huizhou

In November 2012, BASF inaugurated a new dispersions plant at the Daya Bay Petrochemical Industrial Park in Huizhou in Southern China. The new plant will produce styrene butadiene (XSB) dispersions and styrene acrylic (SA) dispersions. XSB dispersions are mainly used as coating binders for paper, while SA dispersions are used in paint and coatings, printing and packaging, construction materials and adhesives. The factory's advanced technological design ensures utmost efficiency in the use of energy, water and resources.

## Supporting water treatment in China

The demand for sustainable solutions to improve water and waste water management in China is rising. BASF's new facility for water treatment chemicals in Nanjing (pictured here) is located at the heart of the water treatment industry in Asia.



# Catamold® facilities in Shanghai and Kuanyin

BASF is currently expanding its activities in the field of metal injection molding in Asia Pacific with two new facilities for Catamold®, its ready-to-mold feedstock for metal injection molding and ceramic injection molding. A new Catamold® production facility will be set up at BASF's Kuanyin site in Taiwan. The new plant will have an annual production capacity of more than 5,000 tons and is scheduled to launch in the second half of 2013. In addition, BASF has opened a new technical service lab for the company's metal injection molding feedstock business in Shanghai. The new technical service lab for Catamold® is located within BASF's Innovation Campus Asia Pacific in Pudong, providing technical support as well as customer training.

# World-scale iso-nonanol plant in Maoming

BASF and long-time partner Sinopec have completed a joint feasibility study on the establishment of a world-scale isononanol (INA) plant in Maoming Hi-tech Industrial Development Zone in Southern China. INA is used as the feedstock for the production of next-generation plasticizers. Under the terms of the feasibility study, a new 50-50 joint venture will be formed, named BASF MPCC Co. Ltd. The partners expect to begin production at the new plant in 2015. The full integration of the new INA plant into the existing petrochemical site of MPCC in Maoming will allow for a competitive cost position as well as a comprehensive system for managing energy consumption, emissions and waste.

## Solutions for lithium-ion batteries

In 2012, BASF acquired the U.S. company Novolyte Technologies, a global manufacturer of electrolyte formulations for lithium-ion batteries, as well as specialty chemicals for several key market segments. Through the acquisition, BASF now operates two production sites in the field of lithium-ion batteries in China. The first, in Suzhou, is an electrolyte manufacturing plant and application technology center that will help us develop innovative solutions for electromobility and other sustainable industries. An additional joint venture site, in Nantong, Jiangsu Province, is operated with Korean partner Foosung Co. Ltd., a global producer of the high-purity specialty salt Lithium Hexafluorophosphate (LiPF6). The Nantong plant will also manufacture LiPF6, which is a key material used in the production of electrolytes for lithium-ion batteries.

## **BASF-YPC** broke ground on new facility

In May 2012, BASF-YPC broke ground on a new superabsorbent polymers plant in Nanjing, reflecting the rising demand for high-quality superabsorbent materials in China. The plant will have an annual capacity of 60,000 metric tons and is scheduled to begin production in early 2014. BASF-YPC is also planning to build a new acrylic acid facility as well as a new world-scale butyl acrylate plant.



# Stakeholder engagement

Working with partners across the value chain

"We create chemistry for a sustainable future" is our corporate purpose. One way we live this purpose is by establishing strong relationships with stakeholders across the value chain. BASF is a founding member of the United Nations Global Compact (UNGC) which calls on companies around the world to align their strategies and operations with ten universal principles in the areas of human rights, labor, environment and anti-corruption. In 2012, BASF's Chairman of Board of Executive Directors was appointed to the UNGC Board. BASF is also a member of the founding presidium of the Global Compact Network China.

## Sustainability in BASF's whole supply chain

For BASF, sustainability within our supply chain is a significant factor for growth and value-adding. Suppliers are selected and evaluated not only on the basis of economic criteria, but also on environmental, social and corporate governance (ESG) standards. In 2012, our Supplier Code of Conduct was fundamentally revised based on internationally recognized guidelines, such as the principles of the UNGC Initiative, the International Labor Organization (ILO) conventions and Responsible Care, in order to make our expectations even more transparent worldwide.

Depending on risk potential, BASF conducts on-site supplier audits. In order to further minimize supply chain risks, BASF regularly organizes a Supplier Day in China where it offers information on the opportunities available through sustainable business practices.

## The BASF "1+3" CSR project in China

BASF is currently going through the third round of its successful "1+3" Corporate Social Responsibility (CSR) project which has been designed to improve overall sustainability along the chemical industry value chain in China. In 2006, BASF initiated the program under the platform of the China Business Council for Sustainable Development. "1+3" means that BASF teams up with three types of business partners along its entire supply chain - customer, supplier and logistics service provider - by

## "1+3" CSR project site tour

On December 18, 2012, BASF invited its partners of the "1+3" CSR project to the integrated Pudong site in Shanghai. During the day, all partners led an open exchange of Responsible Care leadership concepts and the success factors for their implementation. The day also featured a site tour, leading partners through specific facilities where they could meet production and technical experts.

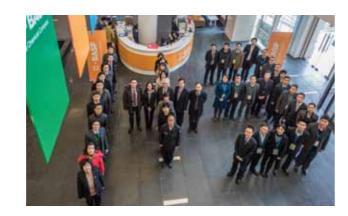
sharing best practices in sustainability management. BASF has successfully completed two rounds with 18 business partners, which have since made great achievements in their environment, health and safety management, notably in environmental protection, transportation safety or emergency response.

During the third round, which was launched with another nine partners in March 2012, all participants went through various steps such as self-assessments, evaluations by a special task force, and "Eyes for Safety" inspections by BASF Responsible Care specialists at partners' sites, which helped to identify potential areas of improvement for each individual participating company. In December 2012, BASF invited its partners to the integrated Pudong site in Shanghai for their first-hand experience of production management best practices and Responsible Care implementation. The project partners also shared their own improvement action plans, which included measures such as upgrading their facilities to reduce emissions to air, or replicating the "1+3" model to manage their own supply chain.

The project has begun to generate a steadily increasing multiplier effect by reaching out to the wider business community. The "1+3" model was introduced to the academic community by the Guanghua School of Management at Peking University and is now being proposed as an MBA case study on supply chain management.

# Golden Bee concept and CSR China Honor Roll

BASF is the initiator and founding partner of the "Golden Bee" concept in China. A "Golden Bee" company is a sustainable enterprise that achieves profitable growth while realizing social responsibility and environmental integrity. The "Golden Bee CSR China Honor Roll" was launched in 2008 by BASF and the China WTO Tribune - a magazine under the Ministry of Commerce focusing on CSR issues - in order to annually recognize some of the most responsible companies. To date, the honor roll has attracted over 1,560 applicants countrywide, and 142 enterprises have been honored.





11 companies have committed themselves to acting as role models and to leading 11 respective working groups.



innovate solutions addressing social or environmental challenges. As part of the initiative, 11 companies, including BASF, have committed themselves to acting as role models and to leading 11 respective working groups such as low-carbon, water resources, or community engagement. BASF is leading a working group on "Sustainable Supply Chain".

## Stakeholder dialog

A fixed component of BASF's sustainability approach is a continuous exchange with stakeholders. We utilize our ongoing exchange with stakeholder groups to systematically analyze and evaluate opportunities and risks in a broad range of sustainability issues. In China, BASF regularly organizes dialog sessions to obtain feedback about BASF's operations from key stakeholders. During a dialog session in Beijing in August 2012, BASF obtained feedback from key stakeholders on BASF's updated corporate strategy and the publication "BASF in Greater China - Report 2011". Leaders from industry associations, academia and media organizations offered constructive suggestions on how BASF can improve to drive sustainable growth in China.



BASF regularly organizes stakeholder dialogs to obtain feedback about BASF operations.

In August 2012, BASF and China Environment News for the third time hosted a media seminar in Beijing, bringing together officials from the Ministry of Environmental Protection, economists and academic experts to discuss how to provide the public with accurate, up-to-date information on the

BASF also organizes Community Advisory Panels (CAP) to communicate directly with the communities surrounding its facilities, offering them a platform to address topics of mutual concern. By the end of 2012, 78 CAPs had been established at BASF sites globally.

Established in 2000, the CAP at BASF's Pudong site has been conducting regular community dialogs for years. There are meetings with Shanghai Gao Qiao Town government members twice a year, as well as gatherings with local residents living nearby. The open, transparent and frequent dialogs have helped BASF to create a harmonious relationship with the local

The CAP at BASF's site in Chongqing convened three times in 2012 regarding the methylene diphenyl diisocyanate (MDI) facility under construction. One meeting included a trip to the existing BASF isocyanate production site in Shanghai's Chemical Industry Park. There, CAP members were able to understand more about a site similar to BASF's project in Chongqing.

## Open dialog brings transparency

"Media should have the professional awareness that reporting should be timely and accurate, comprehensive and objective. BASF has set a good example for open dialog with environmental media to enhance mutual understanding and transparency. We aim to make this dialog a regular practice to share ideas on how to further enhance sustainable development in the chemical

Yang Mingsen, Editor-in-Chief of the China Environment News

# Strategic areas

Overview

In 2050, around nine billion people will live on this planet. On the one hand, this population growth is associated with enormous global challenges but we also see many opportunities, especially for the chemical industry. We expect the chemical industry to grow particularly strongly in the emerging economies, and that these markets will account for around 60% of global chemical production by 2020. Innovations based on chemistry will play a key role in three areas in particular:



Dramatically rising energy demand is one of the world's most pressing challenges. In addition, access to clean water and other non-renewable resources is becoming increasingly important.

## Food and nutrition

A growing world population obviously needs correspondingly more food. And it will be necessary to enhance nutrition quality.

## Quality of life

Population growth and globalization present further challenges. Aspirations differ greatly from region to region and among different social groups, but there is a common ambition: people want to improve their individual quality of life.

BASF's products and solutions will contribute to conserving resources, ensuring healthy food and nutrition, and improving quality of life. Sustainability and innovation will be significant driving forces.



Resources, environment and climate



Food and nutrition



Quality of life

# We create chemistry for a sustainable future

We combine economic success, social responsibility and environmental protection. Through science and innovation, we enable our customers in almost all industries to meet the current and future needs of society.



**BASF** in Greater China Report 2012 **BASF in Greater China** 

# Resources, environment and climate

Sustainable solutions enabled by chemistry

The increasing demand for energy worldwide presents us with a number of challenges. At the same time, it is more important than ever to conserve resources and to protect the environment and the climate. Environmentally friendly energy sources, especially wind energy, are on the rise, as important components of both current and future energy concepts around the world. BASF's fully biodegradable and certified compostable polymers enable organic waste composting, while an array of other sustainable solutions are applied in water treatment systems or in energy saving building projects.

## Sustainable solutions for Beijing sewage treatment

It is one of BASF's stated goals to promote the reduction of water withdrawal and a cyclic utilization of water. To this end, BASF in December 2012 signed a three-year strategic cooperation agreement with Beijing Drainage Group, the biggest drainage firm in China, to provide solutions for 85% of Beijing's sanitary sewage disposal which is handled by the company's eight drainage facilities. Products provided by BASF will include high cationic polyacrylamides flocculant Zetag® which can dewater sludge. After treatment with Zetag®, the water can reach a standard for being discharged into rivers. Through additional experiments, BASF was able to develop a customized product mix and technical solution to improve the effectiveness of the customer's existing equipment. Over the next three years, BASF and Beijing Drainage Group will work together to promote new technologies and products in the water treatment industry.



BASF promoted composting of organic waste in a pilot project in Wuhan.

## Composting of organic waste

Landfilling and incineration, the most common waste treatment methods, are not the best options for managing organic waste. According to a 2011 study by the United States Environment Protection Agency, landfilling of organic matter is environmentally detrimental as it generates methane, a greenhouse gas that is 23 times more potent than carbon dioxide. Since organic waste has a high water content, incineration is also not a suitable alternative because it requires significant amounts of energy and results in higher emissions of carbon dioxide. Fully biodegradable and certified compostable shopping and waste bags made of BASF's ecoflex® and ecovio®, enable separation of organic waste at the source, and allow for hygienic collection. Additionally, these bags can be sent directly to industrial composting sites, and be quickly processed and converted into high-quality compost without the need to first separate the bag from the organic waste.

## Certified compostable and fully biodegradable bags help reduce greenhouse gas emissions

If all organic waste in China was to be collected separately and composted, 45 million tons of carbon dioxide equivalents could potentially be reduced every year. Certified compostable and fully biodegradable bags, made of BASF's ecoflex® and ecovio®, enable separation of organic waste at source, as well as its hygienic collection. Diverting organic waste from landfill and incineration plants to industrial composting sites also helps to recover nutrients which can be returned to the soil in the form of compost.

In June 2012, BASF joined hands with Wuhan Huali Environmental Technology, the wholly owned subsidiary of Ecoplast Technologies Inc., to promote composting of source-separated organic waste collected in certified compostable and fully biodegradable bags in a pilot project at the Wanke community in Wuhan. The compost generated from this pilot project served as organic fertilizer to be used in the Wanke community and on farms in Wuhan's Xinzhou District, thus demonstrating the benefits for residents as well as the environment.

Report 2012

## Supporting Green Building Industry Demonstration Area

Due to the increasing urgency to save energy in China, there is rising demand for innovative solutions that support sustainable living environments. BASF's in-depth expertise in energy efficiency in buildings will be showcased at the Green Building Industry Demonstration Area in Wujin, Jiangsu Province, where BASF's innovative thermal insulation materials and exterior insulation finishing systems, flooring and waterproofing systems as well as waste management solutions will be prominently featured.

For example, the Research Building of the Science and Innovation Park will be designed as a "passive house" according to German standards, which requires very little energy for heating and cooling. BASF will provide cost-effective construction materials and solutions for the building, including Finestone® EIFS and polyurethane spray foam for roof insulation etc.

## Polyurethane solutions for containers

BASF has signed a new strategic cooperation agreement with China International Marine Containers (Group) Ltd. (CIMC), to reinforce the cooperation on polyurethanes and explore new collaboration in better coating materials. Through our long-standing partnership, both companies have already developed a number of sustainable solutions together. For example, BASF has helped CIMC develop environmentally friendly reefer containers with the polyurethane system cyclopentane foaming technology, which does not cause damage to the ozone layer. BASF also provides a new polyurethane composite solution to replace the traditional wood flooring of containers. In order to save wood and make the containers lighter, thus reducing fuel needed for transport, BASF came up with a suitable substitute for wooden flooring - PU Composite (a matrix of bamboo and polyurethane) which combines functionality, consistent quality and efficiency.

## **High-performance cleansing solutions**

Driven by the growing market for body wash and other hygiene products in China, mild and natural surfactants have never been in greater demand. BASF's APG® nonionic surfactants are manufactured from natural, renewable resources, and notable for their high biodegradability and low irritation. Even during mineralization to carbon dioxide and water, no environmentally-harmful intermediates are formed, nor do the surfactants release any undesired by-products such as nitrogen or ethylene oxide.

BASF is now the world's largest manufacturer of the original APG® surfactants, with extensive experience in production and comprehensive application know-how. Shanghai has one of three global production sites of APG® surfactants, and BASF has successfully cooperated with several cosmetics companies in Greater China in offering personal care ingredients in 2012.

## Strategic partnership for sustainable growth

"CIMC and BASF have been in close cooperation for 15 years. Over the long term, BASF has been providing us with many first-class solutions driven by its broad product portfolio, advanced technologies and excellent innovation capabilities. With our newly established strategic partnership in 2012, we look forward to extending our cooperation to a broader field by combining both companies' expertise, and to growing together by shouldering greater social responsibilities."

Huang Tianhua, Assistant President and Head of Cold Chain Business, CIMC

Innovations to improve nutrition and food production efficiency

China's population has a growing demand for high quality food with good nutritional value, which can be produced efficiently while minimizing environmental impact. BASF is a leading global supplier of nutritional ingredients and food and feed additives for human or animal nutrition, such as vitamins, enzymes or organic acids. We are also a leading provider of agricultural solutions, including herbicides, fungicides, insecticides and seed treatment technologies that help maximize crop yields.

## **Keeping China's corn healthier**

BASF's Cabrio® is a broad-spectrum, fast-acting fungicide against major diseases threatening Chinese crops. Thanks to its unique AgCelence® benefits it helps farmers increase yield and quality of their crops. In April 2012, it was officially registered by the Chinese Ministry of Agriculture as the first plant health product in the market. Since 2011, BASF has been cooperating with the China National Agricultural Technology Extension and Service Center on demonstration projects in major corn production areas in seven provinces in China. The results show Cabrio® increases yields and improves the quality of corn

# Tackling vitamin A deficiency in children

Vitamin A deficiency is considered a major contributor to malnutrition. Inadequate intake of vitamin A can lead to reduced eyesight in the dark, a dry conjunctiva and cornea, as well as a weakened immune system. According to a 2002 survey by the Chinese Center for Disease Control and Prevention, around 45% of Chinese children between three and twelve years of age experienced marginal vitamin A deficiency. The body can only

get vitamin A through foods rich in vitamin A, or through supplements. BASF is thus helping local governments to solve the health problem by working with local food manufacturers to fortify staple foods such as oil, rice and flour with vitamin A.

Due to China's vast area and lack of infrastructure in many rural regions, BASF is working with private and public partners to establish a practical and sustainable Public Private Partnership model for food fortification by focusing first on rural areas near large cities. In that way, local rural populations can benefit from our local private partners' food production sites and their distribution networks. Together with a local cooking oil partner, BASF provided vitamin A fortified edible oil to 29 boarding schools in mountainous areas of Beijing Municipality, Yanqing county and Huairou district, for a year since 2011 via the local partners' distribution networks. In the future, BASF is planning to conduct similar projects in the vicinity of other large cities in China. With the expansion of cities, this model has the potential to cover more rural areas.

## Tomato production project with COFCO Tunhe

BASF and China National Cereals, Oils and Foodstuffs Corp. (COFCO) Tunhe, one of the world's largest tomato producers and processors, are working together to develop and enhance sustainable tomato cultivation in China. According to their strategic cooperation framework signed in 2011, the project has been based on the use of BASF's AgCelence® product line of excellent crop protection solutions, the use of biodegradable mulch film and an agricultural sustainability assessment. In 2012, the partners conducted joint field trials in Xinjiang Autonomous Region, showing that application of BASF's AgCelence® products resulted in a remarkable increase in



At one demonstration plot in Yanqi, tomato yield increased by 26%

tomato yield without any increase in resources consumed. At one demonstration plot of 0.8 ha in Yanqi in Xinjiang's south, tomato yield increased by 26% compared to plots under conventional treatment. BASF and COFCO Tunhe will expand the trials in Xinjiang in 2013 as a first step to disseminate this method for boosting crop yield to more farmers in the future.

## Preserving feed with BASF's organic acid

BASF's organic acids are used to preserve raw materials and compound feeds and to prevent mold in high protein silage. High protein silage from corn or alfalfa is a main feed for dairy cows and helps them produce more protein in their milk. It is easily contaminated, for example with the toxic substance aflatoxin. Aflatoxin is known as one of the most carcinogenic

substances and is transferred from contaminated silage feed. In 2012, BASF and its local distributor organized several successful organic acid trials with the Ningxia Animal Husbandry Workstation in China's northwest, using BASF's acid mixtures product Lupro-Mix® NC in local silage production. BASF has also teamed up with CLAAS KGaA mbH (CLAAS), a global leader of silage harvest equipment, to provide forage harvest machines together with BASF's organic acid Lupro-Mix® NC in order to make its usage more convenient for farmers.

## Research grant program focuses on plant sterols

BASF has launched a platform for local scientific researchers to connect, collaborate and promote the awareness of nutrition ingredients throughout Asia, called the annual BASF (Asia) Human Nutrition Research Program. In March 2012, it awarded its first grants to five winning research proposals from China and Indonesia on plant sterols, which have positive health effects such as lowering cholesterol levels. The winners were selected based on scientific merit conducted by a BASF Scientific Advisory Committee. While plant sterols have been used extensively in Europe and the USA, awareness and research in Asia is still very limited. Through the new program, BASF hopes to generate more local innovative research for the benefit of local populations in Asia, as well as to encourage more collaboration on plant sterols across the scientific community in the region.

## Research grant program focuses on plant sterols

Plant sterols have positive health effects such as lowering cholesterol. In order to raise awareness for and promote research on plant sterols in Asia, the new BASF (Asia) Human Nutrition Research Program has awarded research stipends to five teams at universities in China and Indonesia (right: group photo at the award ceremony).



## Preserving feed with BASF's organic acid

Driven by many farmers' need to make corn and alfalfa silage in a more efficient and sustainable way, BASF has teamed up in China with CLAAS, a global leader of silage harvest equipment, to provide forage harvest machines together with BASF's organic acids which help to preserve the feed (right: the cooperation model of BASF and CLASS).



# Solutions to improve standard of living

BASF offers a vast range of products and solutions that play a key role in making our daily life safe, comfortable and environmentally friendly.

## Increasing comfort on roads and railways

Polyurethanes contribute towards more attractive, lightweight design of cars as well as more comfortable and safer cabins. BASF collaborates closely in this area with Great Wall Motors Co. Ltd. (Great Wall), the largest producer of sports utility vehicles in China. BASF's Elastoflex®, a polyurethane flexible foam, is used by Great Wall for NVH (noise, vibration and harshness) solutions. It is also used in the insert-foaming of engine cover parts to absorb noise and to insulate heat generated by the engine. BASF also developed Cellasto® customized spring aids and top mounts for Great Wall.

BASF also cooperates with China South Locomotive & Rolling Stock Corp. Ltd., China's premier high speed train and urban transit manufacturer, to whom BASF has supplied Basotect® foam for acoustic and thermal insulation, Emgard® RW-A for excellent weathering resistant gear box, and coatings for exterior parts.

## Better air quality with BASF's catalysts solutions

Ultra-fine particles less than 2.5 microns in size, known as PM2.5, can be harmful to health. BASF is a leader in emissions control catalysts that offer solutions to reduce PM2.5, as well as other pollutants from diesel engine exhaust, to meet tightening emission standards. The Stage IV emission standard for heavy duty diesel vehicles in China, similar to the Euro IV standard in Europe, is scheduled to take effect nationwide in July 2013. It requires an 80% reduction in particulate matter compared to the current standard. In addition, the government has announced a new low-sulfur standard for automotive diesel fuel which will come into effect by the end of 2014. BASF's advanced catalysts technologies can help meet these stringent regulations and enable cleaner air.

## Better and quieter household appliances

BASF is cooperating with Haier, China's leading maker for household goods, in order to create solutions for noise reduction and more efficiency in refrigerators and washing machines. Haier is using Hexamoll® DINCH®, BASF's non-phthalate plasticizer, for refrigerator door seals, and Basotect®, a noise reduction foam, for washing machines. BASF is also working with Haier to introduce innovations showcased in the concept refrigerator coolpure 1.1, including noise reduction, the use of bio-degradable materials and the application of engineering plastics for home appliances. Haier's first refrigerator with BASF's innovative metal texture coating on its shell was showcased at Appliance World Expo 2012 in Shanghai.

## Strengthening safety standards in soft PVC products

In March 2012. BASF launched a new exclusive business platform in Asia Pacific for companies who manufacture, develop, or use soft polyvinyl chloride (PVC), a material fundamental to everyday products such as toys, medical tubes, flooring or sporting goods. To take part in the "Hexamoll® DINCH® Trusted Partners" program, companies have to complete a qualification process, conducted by BASF

# Innovations for the concept refrigerator coolpure 1.1

BASF is working with Haier to introduce innovations showcased in the concept refrigerator coolpure 1.1, including noise reduction, the use of bio-degradable materials and the application of engineering plastics for home appliances.





**BASF in Greater China** Report 2012

Hexamoll® DINCH® is developed for applications with close human contact.

Plasticizer Application Lab in Shanghai and a certification body, TüV Rheinland. In this program, we aim to engage industry leaders to guarantee the highest possible standards of product safety along the soft PVC value chain. As of March 2013, selected companies from China, Hong Kong, Taiwan, India, Japan, Korea and Vietnam had already joined this program. Hexamoll® DINCH® is BASF's non-phthalate plasticizer especially developed for applications with close human contact.

## Healthier skin and hair with BASF's ingredients

Under high-definition cameras, even small skin imperfections can be visible. To solve this problem, BASF provides an array of high-quality products particularly suitable for skins appearing under high-definition cameras. These BASF products help skins to be healthier and free of visible flaws both on magnifying high-definition screens and on the street. As the world's leading supplier of Ultra-Violet (UV) filters, BASF offers broad-spectrum sun protection solutions which helps preventing skins from premature photoaging. These solutions include Tinosorb® M and Tinosorb® S broad-spectrum UV filters, which provide optimal UV protection, reduce risk of skin cancer, and prevent premature photoaging, and Uvinul® A Plus, the photo stable UVA filter which can help reduce free radicals.

Other BASF premium products and solutions for the "high-definition era" include ingredients for skin moisturization, hair styling and color cosmetics. For skin moisturization, BASF introduced anti-aging solutions in gel form with improved skin sensation. Tinocare® GL is a Native Sclerotium gum with triple-helical architecture which brings immediate and long-lasting moisturization and reduces skin roughness and redness, in order to make skin glow naturally in high-resolution

## Basotect® makes railway travel significantly quieter

Basotect® provides a quieter and more comfortable ride to commuters, especially in high-speed operations on heavily tunneled routes. The weight reduction in the wall and ceiling areas lowers the center of gravity of the cars and thus increases safety when negotiating curves - particularly for narrow-gauge railroads. Moreover, it will not slip down due the vibration of the vehicle thus provides reliable thermal insulation performance.

## **Innovation**

With its newly enhanced capacity for research and development (R&D) in China and thanks to continuous collaboration with the Chinese scientific community, BASF in Greater China is playing a major role in driving innovative solutions and products for customers throughout Asia Pacific.

## **Driving innovations from Greater China for Asia Pacific**

BASF's R&D facilities in Greater China are located in Shanghai, Taipei, Guangzhou and Guilin. Our R&D portfolio in China covers every step from product development, testing, approval and registration to application technology development. Through innovations from Greater China for Asia, BASF provides products and solutions to help our customers to address the megatrends in the region. These efforts have been widely recognized by industries and customers. In 2012, BASF received innovation awards including the Ringier Technology Innovation Award for the coatings industry, as well as the Excellent Supplier Award and Best Quality Award from Great Wall Motors Co. Ltd.

The first BASF Innovation Campus Asia Pacific was inaugurated in November 2012 at the Pudong site in Shanghai, marking the company's single most important innovation investment in Asia Pacific. Spanning 35,000 square meters, the new Innovation Campus Asia Pacific comprises of various lab buildings including a new R&D Center, Asian Technical Centers and a Polyurethane Technical R&D Center. Around 450 researchers and developers in technical teams from 17 regional business units have come together, forming a powerful innovation hub for BASF in Asia Pacific.

To foster closer communication and synergies among various R&D and technical teams, BASF awards outstanding innovations of its teams in Asia Pacific. The Innovation Campus Award 2012 was granted to the Catalysts R&D team for its breakthrough technology of Three-Way-Catalyst, which is capable of simultaneously destroying over 98% of hydrocarbons, carbon monoxide and nitrogen oxides produced by gasoline-powered automobile engines.

As creative thinking departs from conventional technologies, new technology uses advanced materials, and an efficient process which led to favorable washcoat texture and stability. With these advantages, the new technology enables flexible design for high performance catalysts to be tailored for the specific requirements of the markets. So far, in Asia Pacific, this innovative technology has won several projects from major original equipment manufacturers and some have been implemented in mass production.

## Low processing temperature TPU

Owing to its excellent mechanical properties and cold flexibility, thermoplastic polyurethane (TPU) is an ideal choice for thermoplastic elastomers, which are widely used for sporting goods, automotive and mechanical parts, tubing, sheet and film, and so on. However, the thermal processing of TPU usually requires a pre-drying procedure and a high processing temperature over 200°C, which consumes a considerable amount of energy.

BASF has developed a new series of low processing temperature TPU products – Elastollan® LPT, which can be processed at a temperature 30°C lower without losing any mechanical properties, while eliminating the pre-drying procedure. This reduces energy use by a fifth. The products are extensively used in traditional applications of TPU, as well as for hotmelt adhesives and melt spandex fibers in the textile industry.



TPU is an ideal choice for thermoplastic elastomers, which are widely used for sporting goods.

#### **BASF Sino-German Research and Development Fund**

The BASF Sino-German Research and Development Fund was established in 1997 to enhance the R&D strength of BASF in Greater China, and to forge collaboration with the Chinese scientific community. To this end, the fund cooperates with universities, research institutes under the Chinese Academy of Sciences, and research and development companies.

To date, more than RMB 100 million (€12 million) has been invested in the fund. It has established some 200 research projects with 96 Chinese research groups in the fields of advanced material science, nanotechnology, organic synthesis, industrial catalysts, industrial biotechnology, plant science as well as chemical engineering and technology.

→ For more on BASF higher educational programs, see page 43

## "We create chemistry" world tour

Chemistry enables us to turn creative ideas into real-life solutions and trail-blazing products and applications, in response to the world of change. BASF's "We create chemistry" world tour began its 18-month journey in January 2012, and Shanghai was its first stop in Asia Pacific. During its four-day stop in September 2012, more than 1,500 BASF employees and external stakeholders in Greater China, including customers, government representatives, partners, academics as well as media experienced a selection of the company's leading innovations created for a sustainable future.

## **BASF Innovation Campus Asia Pacific**

Spanning 35,000 square meters, the newly inaugurated Innovation Campus Asia Pacific comprises of various lab buildings including a new R&D Center (pictured here), Asian Technical Centers and a Polyurethane Technical R&D Center.



## Stronger innovation platform built with Chinese scientific community

"Through close cooperation with the Chinese scientific community for years, BASF has established an extensive innovation platform with Chinese and international experts, which has not only enabled innovative and sustainable solutions for various related industries, but also contributed to cultivating talent and fostering communications. With the inauguration of the new Innovation Campus Asia Pacific, I'm of the firm belief that BASF will make greater achievements together with Chinese scientists in the near future."

Prof. Yang Zhenzhong, Secretary-General of Chinese Chemical Society

# **Environment, health and safety**

Responsible care management system

We act responsibly as an integral part of society. We never compromise on the safety and security of our employees, contractors and neighbors as well as of our facilities, logistics and products. Our Responsible Care Management System sets the framework for our voluntary commitments.

## System and standards

Environment, health and safety

BASF was among the companies that initiated and signed the Responsible Care Global Charter of International Council of Chemical Associations in 2006, under which companies, through national associations, work together to improve their performance in environment, health and safety (EHS).

BASF's Responsible Care Management System comprises BASF global rules, standards and procedures for environmental and health protection, safety and security along our value chain, as well as the local laws and regulations. BASF regulations cover the transportation of raw materials, the activities at our sites and warehouses, the distribution of our products and guidelines for our customers' application of the products. Concrete specifications for implementing these measures are laid out in binding directives. These describe the relevant responsibilities, requirements and assessment methods. We regularly conduct audits at our sites in Greater China to monitor our performance and progress. We use the findings from these audits for continual improvement.

We set ourselves ambitious goals for environmental and health protection, safety and security, and our efforts at BASF in Greater China substantially contribute to achieving these goals. Our guidelines and requirements are constantly updated. In 2012, we enacted two new global Group directives for energy and for emergency response, and defined new worldwide requirements for occupational safety as well as for safety in transportation and storage.

## Risk control at the workplace

At BASF, we have many potential occupational risks at the workplace due to the handling of chemicals and construction activities. In order to manage and control workplace risks and create a safer and healthier workplace, effective occupational safety tools like hazard identification, risk assessment, work permit systems and standardized operational procedures have been developed and implemented. Employees use these tools to identify and evaluate workplace hazards and risks in order to effectively prevent accidents or harm.

All staff, including our personnel leasing force and contractors' staff are encouraged to report any incident or unsafe situation. Every incident is shared on a regular basis among BASF's EHS network in Greater China. In the company's Global Incident Database, we can find all reported incidents at BASF companies worldwide. Via a monthly teleconference, the global incidents are shared among EHS managers at all sites, so that BASF Greater China can learn from cases elsewhere as well and identify potential risks at our own sites. At BASF, we also share our experience on safety management with our partners, for example via programs like the "1+3" Corporate Social Responsibility project and construction site audits. This is one of the most effective ways to avoid incidents in the future.

→ For more on the "1+3" Corporate Social Responsibility project, see page 18

## Occupational safety

The safety and health of our employees is a top priority to BASF, and we never compromise on safety. In 2012, we have worked successfully to maintain our good safety performance.

BASF aims to globally reduce work-related accidents per million working hours by 80% by 2020, compared to 2002. Ultimately, the target is to prevent all injuries and accidents. In 2012, work-related accidents per million working hours at BASF Greater China were 0.3 (2011: 0.2 per million working hours). No work-related fatalities occurred in 2012.

In October 2012, BASF Taiwan has been selected as one of the four winners of the "National Industrial Safety & Health Award" – the highest safety award in Taiwan. Four sites in China were recognized as advanced companies on EHS Performance in 2012 by local governments.

#### Employees Lost Time Injuries (Per million working hours)

2012	0.3	
2011	0.2	
2010	0.5	
2009	0.6	
2008	0.4	

## **Contractor safety management**

As part of our operations, more contractors are entering BASF sites to carry out construction and maintenance work. BASF proactively extends its safety initiatives to these contractors, helping them improve their safety performance and to create a sustainable safety culture. We have introduced a comprehensive contractor safety management system, including contractor qualification assessments, safety programs and trainings, regular site supervisions, inspections and auditing as well as performance evaluations to prevent contractor-related injuries and incidents. Internally, we also share our contractor management knowledge and skills with the Engineering Procurement Construction contractor management team through workshops.

Among employees of partner companies working at BASF sites, work-related accidents per million working hours were 0.2, the same as the previous year.

## Contractors Lost Time Injuries (Per million working hours)

2012	0.2	
2011	0.2	
2010	0.4	
2009	0.0	
2008	0.2	

# **Global Safety Week**

BASF's Global Safety Week events aim to further raise safety awareness and to share best practices among all employees. In 2012, more than 7,000 employees in Greater China attended the activities, including safety games such as a forklift competition and hazard hunting, or exercises such as practicing communication on safety issues.



## Taiwan government's highest industrial safety honor

In 2012, BASF Taiwan received the National Industrial Safety & Health Award from the Council of Labor Affairs, the highest award for industrial safety in Taiwan. In addition, BASF Taiwan's Tainan site was the recipient of the Council of Labor Affairs' Five-Star Safety Award.



# **Environment, health and safety**

Environmental protection

We are committed to energy efficiency and global climate protection. We make an important contribution through our efforts to further reduce emissions along our value chain, as well as with our climate protection products. The conservation of resources is also one of our fundamental principles. We use efficient technologies to generate steam and electricity as well as energy-efficient production processes, and have implemented comprehensive energy management.

## Carbon emission trading in China

In Greater China, we are committed to continuously reducing carbon emissions through our advanced technology. In 2012, five BASF sites in Shanghai actively participated in a carbon emission trade pilot scheme approved by the National Development and Reform Commission in November 2011. BASF supports the local government by attending training sessions, submitting qualified data, and sharing best practices.

## Greenhouse gas emissions

In 2012, emissions of greenhouse gases from BASF's chemical operations in Greater China totaled 2,227,369 metric tons (2011: 1,974,229 metric tons). This increase mainly resulted from higher production volumes, including those at our expanded operations at BASF-YPC Co. Ltd. (BASF-YPC) in Nanjing. BASF Greater China continued to promote the optimization of fuel usage at several sites. For example, in 2012, one BASF site in Shanghai invested RMB 2 million to upgrade a thermal oil burner so it can run on liquid natural gas fuel instead of diesel oil. Another Shanghai site invested RMB 1.5 million to replace diesel fuel with natural gas in their spray dryer.

In 2012, many sites have also taken measures to save energy and to reduce greenhouse gas emissions. For instance, one site in Shanghai optimized its circulation system to reduce steam consumption while another site upgraded several motors into more efficient frequency conversion types, thus reducing electricity consumption. One site in Shandong optimized its production process to reduce energy consumption, resulting in an overall reduction of CO<sub>2</sub> emissions for the site.

**BASF in Greater China** 

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## Greenhouse gas emissions (Metric tons of CO<sub>2</sub> equivalents<sup>1</sup>)

2012	2,227,369
2011	1,974,229
2010	1,924,812
2009	1,991,039
2008	1,831,154

<sup>&</sup>lt;sup>1</sup> CO<sub>2</sub> equivalents include: CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFC, PFC, SF<sub>6</sub>

## Emissions to air

Besides measuring greenhouse gas emissions, we also monitor emissions of air pollutants which include inorganic compounds such as carbon monoxide, sulfur oxides, nitrogen oxides or ammonia as well as dust or non-methane volatile organic compounds. In 2012, emissions to air from BASF's chemical operations in Greater China totaled 1,304 metric tons (2011: 1,282 metric tons). This increase is mainly due to the rising production volumes and the expansion of our operations in

For example, one site in Shanghai invested RMB 1.3 million to reduce emissions of nitrogen oxides. We also encourage all sites to burn environmentally-friendly fuels to further reduce the emissions of air pollutants.

Nanjing. We continuously improve our off-gas treatment facilities.

## Air pollutants (total)1 (Metric tons)

2012	1,304	
2011	1,282	
2010	1,182	
2009	1,164	
2008	951	
		•

<sup>&</sup>lt;sup>1</sup> Air pollutants consist of: CO, NO<sub>X</sub>, SO<sub>X</sub>, NMVOC (Non-methane volatile organic compounds), dust, NH3, and other inorganic compounds

## Energy

In 2012, the total energy consumption of BASF sites in Greater China rose, mainly due to the increase of production volumes and the expansion of our operations in Nanjing. Electricity consumption totaled 1,021,753 MWh, (2011: 983,527 MWh), and steam consumption totaled 5,127,288 metric tons (2011: 4,572,683 metric tons). Fuel consumption for central energy supply was 2,868,342 MWh in 2012 (2011: 2,599,364 MWh).

## Electricity consumption (MWh)

012	1,021,753	
011	983,527	
2010	875,172	
2009	856,734	
2008	818,959	

#### Steam consumption (Metric tons)

2012	5,127,288	
2011	4,572,683	
2010	4,630,474	
2009	3,874,034	
2008	2,744,931	

#### Fuel consumption (MWh)

2012	2,868,342	
2011	2,599,364	
2010	2,365,279	
2009	2,287,504	
2008	1,955,265	

#### Global greenhouse gas emissions along the BASF value chain in 20121 (in million metric tons of CO<sub>2</sub> equivalents)

25 BASF Production (including of steam and electric		16 Disposal Incineration with energy recovery, landfilling (C 12)	(C 3b, 3c, 5,
50 Suppliers	57 Custome	ers	4 Transport
Purchased products, services and capital goods (C 1, 2, 3a)	Emissions fro the use of end products	emplo	sport of products byees' commuting d business travel (C 4, 6, 7, 9)

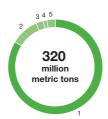
<sup>&</sup>lt;sup>1</sup> According to Greenhouse Gas Protocol, Scope 1, 2 and 3 (categories within Scope 3 shown in parentheses)

# Global corporate carbon footprint

BASF is the only industrial company worldwide to have published a comprehensive corporate carbon footprint since 2008, and we are constantly updating the base for our calculations. We report on all emissions along the value chain and show the volume of emissions prevented through the use of our climate protection products. We plan our climate protection activities along the value chain based on our corporate carbon footprint.

Global prevention of greenhouse gas emissions through the use of BASF products by sector (in million metric tons of CO2 equivalents)

1	Housing and construction	269
2	Industry	30
3	Transport	8
4	Agriculture	4
5	Other	9



# Global prevention of greenhouse gas emissions

We have defined climate protection products as those product groups which, compared with the alternatives, avoid greenhouse gas emissions over their entire life cycle and whose eco-efficiency is at least as good as that of the alternatives. The use of climate protection products we sold in 2012 reduces our customers' emissions by 320 million metric tons of CO<sub>2</sub> (2011: 330 million metric tons).

## Water

BASF uses water as a coolant, solvent and cleaning agent, and to manufacture its products. The company aims to use water sparingly and has set its global goals to this end. For example, we have a Group directive with globally applicable standards. China has been recognized as a water stress country in terms of water quality and availability. Therefore, BASF in Greater China now follows global programs to introduce a more sustainable water management system at production sites.

In order to continue improving our processes and identify further potentiality for environmental protection, especially in water use, an active network of experts around the world has been established.

In 2011, we began a review of water protection concepts at our Greater China production sites. In 2012, several sites already conducted waste water risk assessments. This project will be expanded to all production sites in Greater China by 2015.

Despite the increase of production volumes in 2012, emissions to water slightly decreased due to a variety of site-level efforts. One site in Shanghai managed to decrease emissions by process optimization, while another site in Jilin managed to improve waste water pre-treatment facilities.

Emissions of organic substances - measured in chemical oxygen demand (COD) - were at 514 metric tons (2011: 521 metric tons). Emissions of nitrogen decreased slightly to 22 metric tons (2011: 23 metric tons). Emissions of heavy metals to water were maintained at the same level as in 2011, 0.1 metric tons.

#### Emissions to water (total): Organic substances (COD) (Metric tons)

**BASF in Greater China** 

2012	514
2011	521
2010	565
2009	434
2008	457

#### Emissions to water (total): Nitrogen (Metric tons)

2012	22	
2011	23	
2010	25	
2009	18	
2008	80	

#### Emissions to water (total): Heavy metals (Metric tons)

2012	0.1	
2011	0.1	
2010	0.3	
2009	0.1	
2008	1.0	

## **Our Waters Initiative**

Under Our Waters Initiative, BASF was among the six first companies to commit themselves to a series of actions to improve water management. The initiative is driven by the China Entrepreneurs' Club in cooperation with the World Wide Fund for Nature and The Nature Conservancy.



BASF strives to gradually reduce water consumption and to reuse the water for cooling as much as possible. For BASF in Greater China, water used for cooling - including both actual water used as well as recirculated water - amounted to 907.3 million cubic meters in 2012 (2011: 834.5 million cubic meters). This increase mainly results from two more cooling water systems installed in BASF-YPC.

Although the amount of water used for cooling increased, water supply in 2012 decreased to 13.8 million cubic meters (2011: 13.9 million cubic meters) resulting from several water reuse projects implemented in 2012. Water used for production, or water that comes into contact with our products, totaled 4.7 million cubic meters (2011: 4.2 million cubic meters). The increase was mainly due to higher regular water demand for the normal operations of our expanded production at BASF-YPC in 2012. BASF sites in Greater China have taken several measures to save water in 2012. For example, a waste water reuse project was launched at BASF-YPC in 2012. With the launch of water reuse projects in 2011 at two sites in Shanghai, a significant quantity of waste water and rain water has been reused in 2012. BASF also analyzes water risks in its supply chain.

## Water used in production (Million cubic meters)

4.7	
4.2	
3.9	
3.9	
4.2	
	4.2 3.9 3.9

In 2012, waste generated by BASF's chemical operations in Greater China totaled 80,801 metric tons (2011: 67,323 metric tons). This increase is mainly due to the increase of production volumes at major facilities in Shanghai, and the expanded operations of BASF-YPC. However, the recovery rate in 2012 was still maintained at 80%, the same as in 2011.

## Water supply (Million cubic meters)

2012	13.8	
2011	13.9	
2010	12.7	
2009	11.9	
2008	12.9	

BASF continued its efforts to reduce waste as much as possible, and to encourage recycling. A BASF site in Shanghai is using waste industrial soda as part of the raw materials for its waste water treatment plant. Another site in Shanghai recycles empty drums after having them cleaned by a certified third party rather than send them to incineration as in the past. One site in Qingdao optimized its process of waste water pre-treatment and replaced some raw materials in 2012, which resulted in reduction of sludge by 27,000 kg per year. Furthermore, a site in Jiangsu improved its sludge disposal process through a

Based on their risk, third party waste treatment and disposal companies are periodically assessed to ensure compliance with regulatory requirements. Assessment results are sent by BASF to the facilities for their continuous improvement.

## Total amount of waste (Metric tons)

2012	80,801
2011	67,323
2010	68,012
2009	59,349
2008	42,237

## Recycling of waste (%)

2012	80	
2011	80	
2010	64	
2009	71	
2008	65	
		I.

## Water supply

Although the amount of water used for cooling increased, water supply in 2012 decreased to 13.8 million cubic meters (2011: 13.9 million cubic meters) resulting from several water reuse projects implemented in 2012.

# **Environment, health and safety**

Lifecycle management

For BASF, product stewardship does not end at the factory gates: We review the safety of our products from research to production and finally to our customers' use of the products. We work continually to ensure that our products pose no risk to people or the environment when they are used responsibly and in the manner intended.

## **Product stewardship**

BASF attaches utmost importance to product stewardship, not only in order to meet legal requirements, but also to demonstrate our commitment to Responsible Care, one of the most important tools for BASF to ensure sustainable development.

We work hard to implement the Global Trade Services (GTS) system, which is an internal BASF compliance checks and control system to protect and support our business activities. BASF in Greater China has successfully implemented GTS at more than 20 legal entities in 2012.

During a safety management forum jointly organized by the Association of International Chemical Manufacturers, the State Administration of Work Safety and the National Development and Reform Commission in November 2012, BASF experts presented the EU Regulations and Practices on Hazardous Chemicals Management and advocated to adopt the European Chemical Industry Association's hazard selection criteria for hazardous chemical inventory.

## Process safety

When designing a new facility, we apply a five-step review system from conception to startup that takes into account the most important safety, security, environmental and health protection aspects in order to incorporate them early on and observe and review them in every stage of planning. In 2012, employees including plant managers, process engineers and technicians in BASF Greater China received process safety training.

In 2012, we continued a global project to investigate our plants' safety concepts in order to constantly improve the safety of BASF's production facilities in Greater China. Incidents at our sites which led to fires, explosions or the release of substances are recorded and evaluated in detail.

#### **Emergency response**

With our emergency response plans, we are prepared for potential incidents. The emergency call center of BASF in Greater China not only provides offsite emergency services but also assists employees in difficulties when traveling on business trips. The call center was extended to 25 locations in Greater China in 2012.

In 2012, BASF's "Group Directive on Emergency Response" was published. It stipulates global guidelines and measures for hazard prevention and emergency response. In order to implement this directive and to ensure the efficiency and effectiveness of our emergency prevention measures, BASF conducted individual training with proper drills to Site Incident Management Team and Site Emergency Response Team in 2012. An emergency response workshop was organized for all production sites in Greater China in November 2012. Two BASF's Taiwan sites were awarded by the local government for actively participating in joint emergency response drills with the local fire protection bureau.

## Security

In 2012, we continued to implement our global and regional requirements for preventive measures to protect our sites in Greater China through compulsory onsite training programs, especially at new production sites. We also analyze potential risks to the safety, security and health of our employees, particularly in regard to investments and projects in emerging markets. Safety and security-related assessments are the key considerations in our decision-making process.

## Taiwan joint emergency response drill

BASF regularly conducts emergency drills and workshops. In 2012, all production sites in Greater China held emergency response workshops. For participation in joint emergency drills with the local fire protection bureau, two BASF's Taiwan sites were awarded by the local government.



## Chemical transportation and warehouse safety

Our regulations and measures for transportation and warehouse safety encompass the delivery of raw materials, the storage and distribution of chemical products among BASF sites and customers, and the transportation of waste from our sites to the disposal facilities.

We have set out Global directives for the transportation and storage of chemical products both in our own warehouses as well as in rented facilities. In order to make the storage of goods – especially sensitive ones – even safer, we have defined additional requirements in 2012. Moreover, we implemented a further global requirement in 2012 for the assessment of transportation safety in deep-sea tankers.

In 2012, BASF in Greater China has focused on better managing our logistics service providers. The non-compliance rate during BASF's gate checks was included into contracts as a new key performance indicator for road transportation service providers. Gate check standards and result analysis were harmonized for all production sites in Greater China in 2012.

To ensure safe and secure operation of all BASF distribution-related partners, we successfully piloted a cargo lashing and securing project at one of our major sites in 2012, sharing the best cargo lashing models and some good practices at the loading points. We also work hard to guarantee safety during filling and discharging bulk cargo. For example, the International Standard Organization (ISO) tank container structure model was showcased to all transportation and distribution safety advisers during the annual workshop.

For the transportation of raw materials with a high hazard potential, we conduct a risk assessment for alternative transportation routes as early as in the construction stage of a new plant. For example, we conducted route risk assessments in 2012 for the transportation of benzene in China.

If an incident occurs despite all preventive measures, we provide swift and specially coordinated assistance worldwide. Our transportation safety advisors are involved in these processes and procedures, and they subsequently evaluate all of the information. In Greater China, a network of trained transportation safety advisors was set up. They collaborate within BASF's global network, helping us to establish proper measures and to avoid incidents in the future.

### **Audits**

Regular audits ensure uniformly high standards within the BASF Group for environmental and health protection, safety and security. In 2012, environmental, safety and security audits were carried out at seven BASF sites in Greater China. Two sites were audited in regard to occupational medicine and health protection. Most of the results fully met BASF standards and local regulatory requirements. Meanwhile, we adopt recognized external standards. By 2012, 22 BASF production sites in Greater China had been certified with the ISO 14001 standard for environmentally friendly production facilities.

Depending on risk potential, we also conduct on-site supplier audits. Risk matrices help us to identify high-risk suppliers based on country and product risks. Based on this risk analysis, we conducted on site audits of 59 raw material suppliers in Greater China in 2012.

For our logistics service providers, we stipulate worldwide requirements and assess them with regard to safety and quality. In 2012, we assessed 33 companies in Greater China, using both our own assessment tools and internationally approved schemes such as Safety Quality Assessment System.

## ISO tank container structure model

BASF works hard to guarantee safety during the transport of chemicals. In 2012, it showcased the International Standards Organization (ISO) tank container structure model (pictured here) to all transportation and distribution safety advisers during an annual safety workshop.



# **Employees**

As of the end of 2012, BASF in Greater China had 8,435 employees (2011: 7,772). Our employees are fundamental to achieving the goals of our "We create chemistry" strategy. We want to attract the right talent and support them in their development within our company. To this end, we cultivate a working environment that inspires and connects people. It is founded on inclusive leadership and based on mutual trust, respect and dedication to top performance.

Number of employees (as of December 31, 2012)

12	8,435						
011	7,772						
2010	6,983						
2009	6,432						
2008	6,288						

### Programs for students and graduates

As part of the company's goal to form the best team, the BASF "Grow" Graduate Program™ aims to recruit, train and develop talented, passionate and enthusiastic graduates from all over China by offering customized training and job rotation. Under this program, new recruits experience various positions within the company for 24 months, while receiving guidance and mentoring. This enables participants to adapt quickly to the company and get a clear picture of their intended career.

BASF also holds regular Campus Talk sessions at China's major universities where senior executives from BASF introduce the company values, challenges and opportunities of the chemical industry as well as the company's career opportunities and training programs. In 2012, Campus Talk sessions toured ten cities nationwide, covering around 80 universities and attracting more than 4,000 students.

BASF also provided hundreds of internship opportunities for students from Greater China and abroad in 2012.

## Training and development programs

BASF aims to establish employee development as a top priority within the company. We provide tailor-made training resources and development opportunities to our employees according to the company's requirements. Programs comprise face-to-face training sessions, online self-learning courses, experience and knowledge sharing activities, on-the-job coaching, and even cross-country assignments.

BASF established the global "Senior Project Employee Development" in 2011. The project encompasses a series of integrated career advancement initiatives aimed at optimizing the company's learning and career system. In Greater China, various career development programs were organized for all levels of employees. In 2012, workshops were organized on "How to create your Individual Development Plan" and six Talent Review sessions.

Employee development also relies on the combined efforts of all managers. Reflecting this, BASF has created the Development<sup>+</sup> Program in Greater China to encourage managers to share their knowledge and experience with colleagues within the company. Through this program, managers participated as internal trainers or observers at workshops held under BASF's Greater China leadership program, in order to develop their skills in coaching and training, and at the same time share their own skills with the trainees.

## **Global Family Program**

During BASF's Global Family Program in 2012, teenagers from Shanghai and Nanjing stayed with families in Germany, Switzerland and Belgium, while their teenage counterparts came to China. BASF organized a summer party for the participants, themed "City loves Chemistry".



## **Diversity and Inclusion**

BASF considers diversity and inclusion strategic factors for business success. Diversity refers not only to gender, age, nationality and religion, but also to the various cultural backgrounds and experiences of our employees. BASF pursues an ongoing Diversity + Inclusion initiative to further strengthen the culture of appreciation and cooperation within the company.

We provide equal opportunities for all employees and are committed to the equal treatment of men and women. In 2012, BASF held a "Women in Leadership Forum" in Shanghai, where some 80 employees discussed the opportunities, challenges and career development opportunities of female leaders.

BASF employees come from a variety of age groups. In 2012, the largest proportion of BASF employees in Greater China was from the 26 to 39 age group.

#### Employee age structure (proportion of employees %)

up to and including 25 years	9.1	
between 26 and 39 years	58.0	
between 40 and 54 years	30.7	
55 years and older	2.2	

## Working environment and work-life balance

At BASF, we are committed to creating an attractive and productive working environment and to balancing the needs of our employees and the company's requirements. We constantly review working conditions at our facilities, including equipment, transportation to our sites, and flexibility in regard of working time and locations. We implement tailor-made solutions which meet the specific requirements of our business and the needs of our employees working at our sites and places. For example, we developed a set of measures to accompany the move of more than 1,000 employees to our extended Pudong site around the end of 2012.

## **Family programs**

The BASF Global Family Program is an international holiday exchange opportunity created for employees' children aged from 14 to 19. BASF host families in different countries exchange children for two weeks, so the kids experience living overseas during their summer vacations. In 2012, 20 teenagers from Shanghai and Nanjing stayed with families in Germany, Switzerland and Belgium, while their teenage counterparts came to China. BASF also holds Open Day programs where employees and their family members are invited to visit our sites to better understand the work places as well as the company.

## Open dialog

BASF holds an annual "Employee Dialog", in which line managers talk to fellow employees individually about their performance, targets, development and cooperation. In order to encourage employees to take an active part in the management of the company, BASF has maintained a special program since 2008 called "Suggestion Scheme", where every employees is entitled to offer advice and make suggestions on how to improve customer service, enhance work efficiency, realize cost saving, stimulate cooperation and teamwork, enhance the corporate image or promote occupational health, safety and environmental protection.

# Strictly enforcing high standards for compliance

For BASF, compliance means the duty of every employee to abide by laws and internal corporate directives. To this end, the company implements a comprehensive compliance program in order to inform employees of all corporate and legal policies that apply to their work environment, thus protecting the employee and the company as a whole and supporting sound business practices.

BASF was the first major German company to appoint a global Chief Compliance Officer in 2003, who manages the program and oversees a network of around 100 regional compliance coordinators.

## **Sports Day**

BASF held its third Sports Day in Shanghai in the summer of 2012, with exciting competitions as well as a "Run for Charity" activity to support the company's Goodwill Teacher program.



BASF employees regularly receive mandatory compliance training which is tailored to the characteristics of each different region. Worldwide in 2012, more than 49,000 employees participated in compliance training. This included multiple training sessions and workshops in Greater China. For employees with actual or potential contacts with customers, suppliers or competitors, BASF holds a mandatory web-based antitrust learning program which focuses on ethical competition. BASF also offers tailor-made compliance training programs to its agents, distributors and contractors.

Employees in every country, including Greater China, can address their local Compliance Officer or anonymously call a local BASF external compliance hotline to seek advice or report incidents in the company. BASF's practices in corporate compliance were acknowledged and included in "2012 Global Compact China Network Yearbook".

## Responsibility for employees

Compliance with the national law in each country we operate in and the core labor standards of the International Labor Organization (ILO) is the foundation of our social responsibility. Beyond that, we also comply with the OECD (Organisation for Economic Cooperation and Development) Guidelines for Multinational Enterprises, as well as to local requirements such as industry standards. To this end, we continuously evaluate the adherence to our voluntary commitments, using a monitoring system implemented Group-wide.

Our employees' opinions are important to us: BASF once again held its Global Employee Survey in 2012. Employees from all across Greater China participated in this survey, anonymously answering questions on topics such as leadership, employee development and change management. After data collection and analysis, the results were discussed between employees and management in order to identify potential areas of improvement. The follow-up process will be evaluated in the next Global Employee Survey, which we conduct on a regular basis.

# **Employee health promotion**

Our global health management serves to promote and protect the health and productivity of our employees. Contributing to this were numerous emergency planning and health promotion activities including BASF's Global Health Promotion Campaign, which promoted topics like "Office and Home: Smoke-free", "Step to Health" and "Stress Management" in the previous years. In 2012, BASF launched its fifth campaign, with focus on hearing protection, conducting sound checks at its facilities, and hearing conservation programs at the workplace. In Greater China, all production sites including labs have monitored noise level, placed warning signs, and provided hearing protection equipment and hearing tests for all workers.

#### **BASF Joint Trade Union**

BASF's Joint Trade Union in Shanghai was established in 2009. In its first stage, the Joint Trade Union encompassed individual unions each from the five BASF wholly-owned companies in Shanghai and their branches in Beijing and Guangzhou. In 2011, it signed a collective agreement with BASF, covering basic salary adjustment, insurance, benefits and other related topics, making BASF and its Joint Trade Union a pioneer among multinational companies in China. Since then, collective bargaining has been a regular practice at BASF, which includes the annual renewal of the agreement.

BASF's Joint Trade Union also organizes regular team events such as outings and sports activities for employees with the support of the company. In 2012, the third Sports Day in Shanghai attracted 4,600 colleagues and their families. The union also organizes Christmas Party for kids and Happy Weekend activities to enable interactions among employees and encourage work-life balance. In recognition of these trade union initiatives, BASF was named as one of ten "Harmonious Labor Relations Model Units" by the Pudong New Area government in 2012.

## **Happy Weekend**

BASF is committed to promoting a good work-life balance for employees. On April 14, 2012, the second "Happy Weekend" friend-making activity was organized by BASF Joint Trade Union in Shanghai, themed "Happiness is Simple – Just Have a Try".



# Society

## Educational and social initiatives

BASF has a long tradition of acting in a socially responsible manner. For us, sustainability means balancing economic success with environmental protection and social responsibility. Through educational initiatives, we promote innovative capacity and future viability. Across BASF, employee volunteers contribute to the society by helping people in need or supporting environmental protection.

## **Goodwill Teacher program**

In Shanghai, children whose parents are disabled often face challenges at school and cannot afford additional expenses for extracurricular tutoring. To help them address these difficulties, BASF employees have been providing tutoring in spoken English to these students on weekends for the past eight years. The program was initiated by BASF under the umbrella of the



More than 120 people participated the "Run for Charity" activity.

"Intellectual Assistance to the Disabled" program run by the Shanghai Association of Persons with Physical Disabilities. As an extension of the initiative, BASF has also set up a scholarship program supporting outstanding students from disabled families who have entered high schools or universities. As of the end of 2012, 195 students have benefited from the scholarship, 27 of whom received their grants in 2012.

BASF has also been holding a "Run for Charity" event at the company's Sports Day in Shanghai since 2010 to support the company's Goodwill Teacher program. All runners seek support from colleagues, friends or supervisors to raise funds for this project. In 2012, it attracted over 120 participants, including BASF employees and representatives from BASF's two joint venture partners - Sinopec Shanghai Gaoqiao Co. and Shanghai Huayi (Group) Co.

#### **BASF Taiwan volunteer initiatives**

Formed by dozens of passionate employees at the end of 2011, the BASF Taiwan Volunteer Club mostly targets projects related to environmental protection, education and underprivileged groups. In 2012, 36 club members took part in two International Coastal Cleanup (ICC) events in the cities of Kaohsiung and Taoyuan. ICC is the world's largest volunteer effort to clean up waterways and the oceans, initiated by Ocean Conservancy. In Taoyuan alone, BASF volunteers picked up 164 kilograms of garbage. By participating in these events, the BASF Taiwan Volunteer Club has inspired actions to rid the oceans of harmful trash.

## **Best CSR Team Award**

In 2012, BASF was the only multinational company in China honored with the Best CSR Team award, presented by the newspaper *Southern Weekend*. The award recognizes BASF's strong commitment to integrating corporate social responsibility into its operational strategy and creating a platform to collaborate with stakeholders in order to create economic value and at the same time create value for the society.

# Support to schools in Sichuan

After the devastating earthquake in Sichuan Province in 2008, BASF supported the reconstruction of two schools in the affected areas. Muma School in Pengshan County of Meishan City and Yongquan Village School in Mingshan County of Ya'an City were rebuilt with the help of funds and insulation materials from BASF. The company continues to assist schools in Sichuan Province. For example, a scholarship program to support and encourage outstanding students at Muma School was extended in 2012 to another school which is affiliated to Muma School that was destroyed by the earthquake as well. BASF has granted scholarships to around 100 students at the two schools, giving them encouragement and hope.



Kids were doing an experiment at BASF Kids' Lab.

#### **BASF Kids' Lab**

For more than ten years, BASF has engaged kids across Greater China in the magical world of chemistry through its interactive chemistry laboratory, BASF Kids' Lab. Kids conduct safe, hands-on chemical experiments and learn in a fun way about how chemistry can benefit the environment and contribute to a better future. In 2012, kids conducted three experiments: a water storage experiment with a focus on plant protection, an ultraviolet investigation experiment showing how chemistry helps in health care, and a water research experiment designed to demonstrate physical principles in a visual manner.

Since 2002, more than 120,000 kids have participated in the program in 11 cities across Greater China. In 2012, kids took part in BASF Kids' Lab sessions in Beijing, Shanghai, Hong Kong, Taipei, Kaohsiung and Taoyuan.

BASF Kids' Lab also engages children in disadvantaged circumstances. In Taiwan, several Kids' Lab sessions were reserved for children sponsored by the Taiwan Fund for Children and Family, a social welfare organization. In Taoyuan county, Kids' Lab was held at a remote school near BASF's Kuanyin site, where many students come from minority families or are raised by single parents or grandparents. BASF also invited around 50 boarding school students from remote areas to participate in the 2012 Kids' Lab session in Beijing.

## Support for higher education in China

For many years, BASF has supported students and scientific research in China. For example, more than 2,000 undergraduates and postgraduates from 15 universities have received a variety of BASF scholarships. Through the BASF Sino-German Research and Development Fund, BASF holds regular scientific symposiums. BASF also holds annual summer courses in China as well as at its headquarters in Ludwigshafen, Germany. They provide university students an opportunity to experience the Verbund concept in the modern chemical industry. Since 2006, several classes of undergraduates have attended BASF Greater China Industry Summer Course. In addition, the "PKU-BASF Fascinating Chemistry Course", hosted together with Peking University, is open to 200 non-chemistry freshmen every year.

BASF also supports and honors academic excellence in China. Together with Beijing University of Chemical Technology, BASF again hosted the "BASF Cup" in 2012, a chemical engineering contest designed to improve students' practical and innovation capabilities, through which 48 students received awards.

Since 2011, the "BASF Excellent PhD Prize" has been honoring outstanding doctorates. The prize deepens cooperation with universities and provides professionals with more valuable working opportunities. In addition, BASF recognized 24 young scientists through the "BASF Youth

Innovation Prize", a program held in cooperation with the Chinese Chemical Society. Over the past ten years, BASF has also been sponsoring young scientists to attend important international academic conferences in Germany, America, Japan and France.

→ For more on the BASF Sino-German Research and Development Fund, see page 29

# Support for higher education in China

Undergraduates and postgraduates who have received BASF scholarships

>2,000

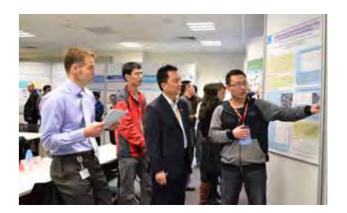
# BASF Kids' Lab at Taiwan elementary school

In 2012, BASF Kids' Lab welcomed children at Shu-Lin elementary school, which is near to BASF's Kuanyin site in Taoyuan County in Taiwan. Many of its students come from minority families or are raised by single parents or grandparents. Kids' Lab provided these children with a rare chance to pursue interest in science.



## **BASF Excellent PhD Prize**

In March 2012, BASF recognized 22 excellent PhD students in China. The "BASF Excellent PhD Prize" not only strengthens the company's relationship with top universities, but also provides professionals with more valuable working opportunities.



**BASF in Greater China** 

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# Recognition



## **Carbon Disclosure Project**

In 2012, BASF again achieved the top ranking in Materials & Energy sector in the Carbon Disclosure Project's (CDP) Carbon Disclosure Leadership Index (CDLI). BASF was also once again included in the Carbon Performance Leadership Index (CPLI) which assesses companies' performance in dealing with climate change.



## **Dow Jones Sustainability Index**

BASF shares were again included in the global Dow Jones Sustainability Index (DJSI World) in 2012. The company received particular recognition for its commitment in the areas of climate strategy, risk and crisis management as well as human capital development.



## China's Top 100 Green Companies

For the sixth year in a row, BASF was named one of China's Top 100 Green Companies by China Entrepreneur Club in its annual ranking of corporate sustainability. BASF ranked the third among all the listed multinational companies, and topped the chemical industry. Last year, BASF ranked ninth among all the multinationals.



### Fortune Global 500 for outstanding contributions to China

The popular and influential newspaper *Southern Weekend* ranked BASF ninth in its listing of Outstanding Contribution of Fortune Global 500 Enterprises in China in 2012. BASF has been on the list for six consecutive years, and received the highest ranking among all business-to-business companies.



## **China's Low Carbon Pioneer Enterprise Award**

For the third consecutive year, BASF was recognized by the leading business newspaper 21st Century Business Herald for its pioneering climate protection strategy and comprehensive carbon reporting along the value chain. The jury particularly lauded the position of a Chief Climate Protection Officer which BASF was the first global enterprise to create in 2008.



## Gold LEED® (Leadership in Energy and Environmental Design) certification

BASF received its first LEED certification in Asia Pacific for its Greater China headquarters building in Shanghai. The gold certification we've earned is the second highest achievement attainable through the LEED green building certification program, which encourages adoption of sustainable green building and development practices.

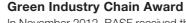
## United Nations honor best practices in chemical management

The Strategic Approach to International Chemicals Management (SAIM) program, which is part of the United Nations Environment Programme (UNEP), aims to have chemicals produced and used safely everywhere in the world by 2020. At the international SAICM conference in 2012, UNEP honored BASF for best practices in chemical management. BASF's "1+3" Corporate Social Responsibility project in China, which establishes greater responsibility along the entire supply chain, was also declared a best practice by UNEP.



## **Best Corporate Citizenship Award**

For the eighth consecutive year, BASF received the Best Corporate Citizenship Award from the 21st Century News Group. BASF was recognized as a long-standing role model for its excellent performance in all criteria, and especially for its commitment to employees, environment, resources and society. BASF was the only chemical company to be listed among the top 10 in 2012, and the only multinational company that has received such a continuous recognition.





In November 2012, BASF received the Green Industry Chain Award from China Business News (CBN), one of China's leading business media groups. The award is part of the annual Love of Green – Annual Green Awards presented at the CBN Annual Environment Summit. BASF was recognized for its strategic approach in promoting sustainability as a key driver for growth and value creation. The jury highlighted BASF's unique eco-efficiency analysis tools, which addresses the entire life cycle of products and processes. BASF is the only chemical company that has been recognized for three years in a row.

#### China's Top Employer 2013



BASF was honored as one of China's Top Employers 2013 by the Corporate Research Foundation Institute, one of the world's leading research organizations in the field of human resources, leadership and strategy. This is the third consecutive year BASF has received this honor, for its strong HR management and culture of respect. Selected out of several hundred organizations with a China presence, the certification means BASF has met or exceeded the highest international standards in more than a hundred HR policy and employee benefit criteria.



## Ranking in Most Admired Company Survey in Taiwan

In October 2012, CommonWealth Magazine, the most influential business magazine in Taiwan, ranked BASF Taiwan third in the petrochemical industry in its Most Admired Company Survey. Industry peers and experts evaluated companies in 22 industry sectors, based on 10 key variables, among them foresight, customer orientation, employee development, innovation and corporate social responsibility. BASF was ranked third for the second time in a row.

## Role model in responsible reporting

"The 'BASF in Greater China – Report' fully demonstrates the clear strategy, rigorous management, advanced technology, remarkable business performance and strong social commitment of a multinational company. BASF has not only achieved significant business success in China, but has also set a role model for Chinese enterprises and the chemical industry."

Li Shousheng, Executive Vice Chairman of China Petroleum and Chemical Industry Federation

Million €	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sales and earnings <sup>1</sup>										
Sales	33,361	37,537	42,745	52,610	57,951	62,304	50,693	63,873	73,497	78,729
Income from operations before depreciation and amortization (EBITDA)	5,110	7,685	8,233	9,723	10,225	9,562	7,388	11,131	11,993	12,516
Income from operations (EBIT)	2,658	5,193	5,830	6,750	7,316	6,463	3,677	7,761	8,586	8,976
Income before taxes	2,168	4,347	5,926	6,527	6,935	5,976	3,079	7,373	8,970	8,436
Income before minority interests	976	2,133	3,168	3,466	4,325	3,305	1,655	5,074	6,603	5,222
Net income	910	2,004	3,007	3,215	4,065	2,912	1,410	4,557	6,188	4,879
Capital expenditures, depreciation and amortization <sup>1</sup>										
Additions to property, plant and equipment and intangible assets	3,415	2,163	2,523	10,039	4,425	3,634	5,972	5,304	3,646	5,397
Thereof property, plant and equipment	2,293	2,022	2,188	4,068	2,564	2,809	4,126	3,294	3,199	4,215
Depreciation and amortization of property, plant and equipment and intangible assets	2,452	2,492	2,403	2,973	2,909	3,099	3,711	3,370	3,407	3,540
Thereof property, plant and equipment	1,951	2,053	2,035	2,482	2,294	2,481	2,614	2,667	2,618	2,850
Number of employees										
At year-end	87,159	81,955	80,945	95,247	95,175	96,924	104,779	109,140	111,141	113,262
Annual average	88,167	85,022	80,992	88,160	94,893	95,885	103,612	104,043	110,403	112,388
Personnel expenses <sup>1</sup>	5,891	5,615	5,574	6,210	6,648	6,364	7,107	8,228	8,576	9,089
Research and development expenses <sup>1</sup>	1,105	1,173	1,064	1,277	1,380	1,355	1,398	1,492	1,605	1,746
Key data <sup>1</sup>										
Earnings per share <sup>6, 7</sup> €	0.81	1.83	2.87	3.19	4.16	3.13	1.54	4.96	6.74	5.31
Cash provided by operating activities <sup>2</sup>	4,878	4,634	5,250 <sup>3</sup>	5,940	5,807	5,023	5,693	6,460	7,105	6,733
EBITDA margin %	15.3	20.5	19.3	18.5	17.6	15.3	14.6	17.4	16.3	15.9
Return on assets %	7.4	13.2	17.7	17.5	16.4	13.5	7.5	14.7	16.1	14.6
Return on equity after tax %	6.0	12.9	18.6	19.2	22.4	17.0	8.9	24.6	27.5	20.4
Appropriation of profits										
Net income of BASF SE <sup>4</sup>	1,103	1,363	1,273	1,951	2,267	2,982	2,176	3,737	3,506	2,880
Transfer to retained earnings <sup>4</sup>	334	449								_
Dividend	774	904	1,015	1,484	1,831	1,791	1,561	2,021	2,296	2,388
Dividend per share <sup>6</sup> €	0.70	0.85	1.00	1.50	1.95	1.95	1.70	2.20	2.50	2.60
Number of shares as of December 31 <sup>5,6</sup> million	1,113.3	1,080.9	1,028.8	999.4	956.4	918.5	918.5	918.5	918.5	918.5

Since 2005, the accounting and reporting of the BASF Group have been prepared in accordance with International Financial Reporting Standards (IFRS). The previous year's figures have been restated in accordance with IFRS. The figures for the years up to and including 2003 were prepared according to German GAAP.

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**BASF** in Greater China

Report 2012

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<sup>&</sup>lt;sup>2</sup> Includes the change in reporting from 2009 onward of the effects of regular extensions of U.S. dollar hedging transactions

<sup>&</sup>lt;sup>3</sup> Before external financing of pension obligations

<sup>&</sup>lt;sup>4</sup> Calculated in accordance with German GAAP

<sup>&</sup>lt;sup>5</sup> After deduction of repurchased shares earmarked for cancellation

<sup>&</sup>lt;sup>6</sup> In the second quarter of 2008, we conducted a two-for-one stock split. The previous years' figures for earnings per share, dividend per share and number of shares have been adjusted accordingly.

<sup>&</sup>lt;sup>7</sup> Adjusted for special items and impairment of intangible assets, earnings per share were €5.71 in 2012 and €6.26 in 2011.

# **Further information**

You can find this report and other information from BASF on the Internet at www.greater-china.basf.com. For easy access to our website, please simply scan the codes below with your smartphone and an appropriate app.



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