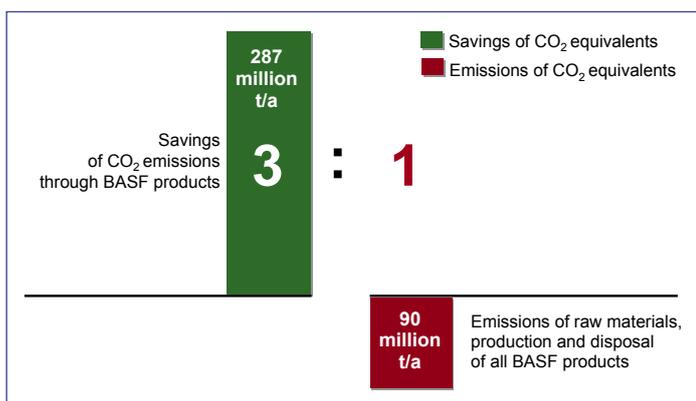


SUSTAINABLE DEVELOPMENT

BASF
The Chemical Company

■ 3:1 for climate protection



BASF presented its updated carbon balance. The results show that in the use of BASF products three times more greenhouse gas emissions are saved than are released in the manufacture and disposal of all products made by BASF. An independent study by the Institute of Applied Ecology (Öko-Institut) in Freiburg has confirmed the accuracy of BASF's calculations.

The calculation of the greenhouse gas emissions involves looking not just at in-house facilities, but also the raw materials

and inputs and how these are manufactured and transported, as well as the disposal of chemical products at the end of their life-time. At the same time, the BASF product portfolio was analyzed to determine the volume of greenhouse gas emissions which may be saved in using the products for climate protection. The ratio of 3:1 results from a comparison of emissions savings relative to the emissions generated from all BASF products.

The products for climate protection made up approximately 10 percent of BASF's sales in 2008. At just under 250 million tons, the greatest contribution in reducing emissions comes from products for the construction and housing sector.

[more information](#)

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■ BASF wins award for best sustainability report

In November, BASF received an award for the best German sustainability report in 2008. The award is bestowed by the German Institute for Ecological Economy Research (IÖW) and future e.V every two years at the annual conference of the German government's Council for Sustainable Development.

The ranking assesses the transparency and completeness of the infor-

mation published by Germany's 150 largest companies on sustainability issues, such as environmental protection and employer responsibility. In addition, specific criteria for various industries are included to ensure comparability across industrial sectors.

According to the jury, BASF's report was particularly convincing on account of its structured treatment of the topics product safety, climate protection and re-

sponsibility in the supply chain. The company's integrated approach was also praised: since 2007, BASF has combined financial and sustainability reporting in a single publication.

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■ High-performance and biodegradable



BASF is now offering a new biodegradable plastic for special packaging. It goes

by the name Ecovio® FS and it has joined the existing Ecovio product line. BASF

has optimized this new plastic for two specific applications: for coating paper and for manufacturing so-called shrink films, which serve to easily wrap packaged goods. As has been demonstrated in recent composting experiments, the new Ecovio FS biodegrades even more rapidly than its predecessors, and it has a higher content of renewable raw materials.

The new plastic has been presented to a technical audience for the first time at this year's conference of the European Bioplastics Association at the beginning of November. Sample material is already available. Initial production tests at customers' facilities have been successful. Introduction into the market at large is scheduled for the first quarter of 2010.

[more information](#)

■ BASF again in Carbon Disclosure Leadership Index

In September 2009, the international investor group Carbon Disclosure Project has again included BASF in the prestigious Carbon Disclosure Leadership Index (CDLI). BASF is number one of all companies in the materials sector. Thus, in the area of climate protection, the Chemical Company is among the top performers in the CDLI. This index only includes corporations that excel in addressing the opportunities and risks presented by climate change and in the transparency of their reporting.

The Carbon Disclosure Project (CDP) represents 475 institutional investors with \$55 trillion in assets under management and provides an evaluation tool for investors.

Sustainability has long been one of BASF's strategic corporate goals. BASF's climate protection strategy simultaneously focuses on reducing its own emissions and preventing carbon emissions resulting from the use of BASF's products by customers.

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■ Microcapsules against malnutrition



Vitamin A deficiency is a serious problem in more than 70 countries around the world. People affected by this form of malnutrition can go blind and more easily contract infections like measles or diarrhea because of their weakened immune system.

The most important objective is to ensure a long-term supply of food containing vitamin A. Fortifying staple foods such as oil, sugar and flour ("Food Fortification") therefore offers a possible medium-to long-term solution.

The vitamin A used to fortify oil, flour and sugar is manufactured by BASF in

Ludwigshafen. To allow it to be mixed with the solid foods flour and sugar at all and to avoid its decomposition by light, oxygen and heat in the target countries, it first has to be specially packaged at BASF's Ballerup site in Denmark.

BASF has also developed a convenient spot test kit to allow pro-

ducers to check the concentration of the vitamin as it is being added.

BASF's Food Fortification Team is operating programs in more than 30 countries around the world. This also includes the "Strategic Alliance for the Fortification of Oil and Other Staple Foods" (SAFO) – a Public Private Partnership (PPP) between BASF and the GTZ. The PPP program is being financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and realized by GTZ.

[more information](#)

[more about food-fortification](#)

■ Solutions for sustainable farming

BASF offers farmers several options to become more sustainable. To reduce fuel, water and pesticide use while increasing profitability, growers may choose to use one of the many precision farming tools co-developed with BASF; and in some parts of the world they may pay for these products and services with a share of their harvests, while BASF hedges the currency and commodity price risk.

BASF has started applying its unique tool, called the eco-efficiency analysis, to farming to be able to model farming sys-

tems along the food value chain. This benchmarking and business development tool helps to compare various production methods and products across industries in terms of profitability and impact on the environment. Packaging systems for crop protection products, organic and conventional apple farming as well as local and exported apples are just a few examples of how the ecoefficiency analysis is being used.

[more information](#)

■ Biodegradable packaging for Interceptor® mosquito nets



BASF has developed a fully biodegradable packaging system for its Interceptor® insecticide-treated mosquito nets. The new packaging concept solves the disposal issue which is pressing in many African countries. It also offers improvements suggested by NGOs working in regions where malaria is endemic: the new bags should come with detachable use instructions and net identifier tags with a

barcode. This will allow users to keep the care and use instructions and allow partners to track and record the distribution of nets. BASF will deliver several thousand nets with the new packaging in the coming months. If customer feedback is positive, all Interceptor nets will be sold in this environmentally friendly packaging.

[more information](#)

■ Better Health from Clear Water

For its new portable Lifestraw® Family water purification system, Vestergaard Frandsen uses Ultrason® E 6020 P resin, a polyethersulfone (PESU) from BASF. The Swiss company manufactures products to protect against illnesses, primarily in developing countries.

The easy-to-use plastic design that characterizes the LifeStraw® Family simplifies on-site conversion of large quantities of dirty water into potable water in villages and by families. The primary element is an approximately 30 cm long plastic housing that contains filter membranes made from Ultrason E. They remove viruses as well as bacteria from dirty surface water that may have come from rivers, lakes, rainwater collection barrels or puddles. The unique benefit of the high-performance resin Ultrason E in such filters is that it lends itself extremely well to production of membranes with a precisely controlled pore size and thus exactly defined filter characteristics. By using the portable purification station, the risk of contracting gastrointestinal illnesses from dirty water is reduced drastically. According to information from the World Health Organization (WHO), 1.8 million people die yearly from diarrheal illnesses. More than one billion people worldwide do not have access to clean drinking water.

[more information](#)



■ Inauguration of Germany's first CO₂ scrubbing plant

In August the pilot scrubbing plant for power station flue gases was officially put into operation at the Coal Innovation Centre of RWE Power in Niederaussem. The plant is part of a joint project of RWE Power, Linde and BASF. Newly developed technologies and solvents from BASF for separating CO₂ are to be tested there. Forty percent of the €9 million project aiming to advance a key technology for a more climate-friendly power generation is being financed by the Federal Ministry of Economics and Technology.

[more information](#)



■ Partnership of BASF and Masdar for world's first carbon-neutral and waste-free city

On August 19, 2009, Masdar and BASF announced a strategic partnership agreement for collaboration on the construction of Masdar City, the world's first carbon-neutral and zero-waste city. BASF is named as a "preferred supplier" of construction materials and system solutions for the city's construction. The chemical company will also open an office in Masdar City once it is completed.

In order to reduce the energy demand in Masdar City, BASF will play an integral role in the city's construction by offering its extensive portfolio of innovative solutions for sustainable and energy-efficient construction.

Masdar City, currently in its first phase of construction, is approximately 30 kilometers from downtown Abu Dhabi.

[more information](#)



■ Magnetic technology revolutionizes refrigeration

BASF and Delta Electronics, Inc. want to use environmentally friendly magnetocaloric technology to develop new cooling systems and explore the opportunities of magnetocaloric power generation. The cooperation partners are working on materials and prototypes for cooling systems and power generators intended to replace conventional compressor technology in refrigerators and air conditioning systems.

BASF experts in material and process development work closely with

scientists in fundamental research at internationally renowned universities such as the TU Delft and the industrial partner Delta Electronics.

BASF has already started the scale-up for the production of special, economically feasible materials that already show a magnetocaloric effect at relatively low temperatures and thus offer a broad range of applications.

Refrigerators account for about one-fifth of total domestic energy consumption. Initial estimates by material researchers sug-

gest that energy consumption can be cut by up to 50 percent by using a unit with magnetic refrigerating technology instead of a conventional refrigerator.

Delta Electronics, Inc. is the world's largest provider of switching power supplies and brushless fans.

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■ Eco-efficiency analysis certified in the United States



In July, BASF's eco-efficiency analysis has been awarded the internationally recognized seal of approval of the NSF International. The U.S.-based organization is an independent non-profit organization that is active in the field of public health protection, consumer safety

and sustainability standards.

The eco-efficiency analysis, which has already been evaluated by the German Association for Technical Inspection (TÜV), provides information on the relationship between the economic value of a product and its impact on the environment. This tool helps BASF and its customers to decide which products and processes are most suitable, both in economic and in environmental terms.

In collaboration with various external stakeholders and product safety experts at BASF Corporation, the NSF International has defined standard requirements for eco-efficiency analyses. The aim of NSF Protocol 352 is to ensure an objective and universal method for companies to analyze the sustainability of their products and services.

BASF's eco-efficiency assessment process is the first methodology to be verified under the requirements of this protocol.

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■ School in Sichuan reconstructed



Sixteen months after last year's devastating May 12 earthquake, more than 600 students from Muma School moved into

their new and expanded campus in Meishan, Sichuan province. Meishan government officials and BASF representatives attended the opening ceremony of the new school, along with faculty and students.

Built on the ruins of Wuyang School, the new Muma School started reconstruction in December 2008 and was completed in June 2009.

Immediately after the Sichuan earthquake, BASF wrote to Meishan Party Secretary Jiang Renfu to initiate the reconstruction project and received a positive response within hours. BASF in Greater China established a Project Team and an Employee Supervisory Council to manage the project. All BASF companies and employees in Greater China, and those from the regional office in Hong Kong, raised a total of RMB3 million (about €300,000) in donations in a very short time for the school's reconstruction.

In addition to the funds BASF also provided energy-efficient building materials.

■ First place award for environmental education initiative

The program "Semente do Amanhã" (Seed of Tomorrow) was recognized as best experience of environmental education in the State of Sao Paulo/Brazil during the "Fórum Diálogo Interbacias de Educação Ambiental em Recursos Hídricos" (Forum Dialogue on Environmental Education in Water Resources) in São Paulo. This event is held since 2003 and aims to encourage the presentation of practices and results, and the implementation of similar works, generating effective results for environmental projects.

Since 2005 the initiative was endorsed by BASF in Guaratinguetá, as part of the ongoing Education Program with the local community. The partners today are municipal government, Secretary of Education,



Autonomous Service of Water and Sewage, the Cooperative "Friends of Garbage" and Environmental Police. The Program was integrated into the schools program and has trained more than 500 educators

to address environmental issues into the classroom, benefiting about 7 thousand students a year.

In 2009, BASF invests about \$70,000 in the initiative.

■ Three Billion Steps to Health



The participants in the BASF health campaign “Steps to Health” in Ludwigshafen walked over two million kilometers

during the twelve weeks of the campaign. More than 8,000 BASF employees – about 25% of the workforce at the Ludwigs-

hafen site – came to collect a step counter. Slightly over 5,000 employees registered their daily step count in the intranet, accumulating the striking total of over three billion steps.

The “Steps to Health” campaign aimed to motivate BASF employees to be more physically active in order to prevent health risk factors such as obesity, high blood pressure and diabetes. The step counters helped many employees realize how little physical activity they did every day. The average adult in Germany takes 3,000 to 4,000 steps on average per day, although it is recommended to take 8,000 – 10,000 steps daily.

“Steps to Health” is a global BASF health campaign. Approximately 22,000 employees in more than 160 sites worldwide participated in the campaign.

[more information](#)

■ BASF again included in the Dow Jones Sustainability Index

On September 3, 2009 BASF was again included in the Dow Jones Sustainability World Index (DJSI World). The company received special recognition by the analysts for its climate strategy, its risk and crisis management as well as the practices in human capital development. The DJSI World is the most important sustainability index and represents the top 10 percent of the largest 2,500 companies in each industry included in the Dow Jones Global Index .

BASF shares are included in the DJSI World for the ninth year in succession

“We are very pleased that BASF is again listed in the Dow Jones Sustainability Index”, said Dr. Ulrich von Deessen, Climate Protection Officer and head of BASF’s Competence Center Environment, Health & Safety. “Difficult times especially show that companies which conduct their businesses sustainably and responsibly are more successful in the long-term. That’s why sustainability is a firm part of BASF’s strategy. The listing in the DJSI confirms that we are on the right path with putting this strategy into practice.”

[more information](#)

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Do you have questions or comments?

We are looking forward to your suggestions:

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