

# Action plan—our key objectives

Sustainability: what we want to achieve in the next five years

Target	Current status	Measures and programs
<b>Ongoing reduction in specific energy consumption by 25% from 2002 to 2012</b>	<ul style="list-style-type: none"> <li>Reduction in energy consumption from approx. 1.5 MWh per metric ton of production volume in 2002 to 1.2 MWh/t in 2007*</li> <li>Systematic recording of energy consumption levels in relation to standard KPIs for all sites and technologies worldwide, along with installation of energy metering and monitoring technology</li> <li>Establishment of Technology Segment Teams (TSTs) to work on best practice approaches for process optimization and energy benchmarking</li> <li>Application of energy-reducing technologies at site level, including major investments</li> <li>Usage of combined heat and power technology (CHP) at our biggest production site in Germany, and also at other European sites, achieving efficiencies far higher than those available in standard boiler plant</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of Energy Saving Teams (ESTs) at the operational level at all sites to create awareness of environmental targets</li> <li>Introduction of latest automation and monitoring technologies</li> <li>Development and implementation of smart technologies for heat recovery</li> <li>Yield improvement and reprocessing avoidance</li> </ul>
<b>Ongoing reduction in specific CO<sub>2</sub> emissions by 25% from 2002 to 2012</b>	<ul style="list-style-type: none"> <li>Since 2002, reduction in CO<sub>2</sub> emissions of approximately 20% related to production volume*</li> <li>Change in mix of primary energy sources, with increased use of natural gas in particular</li> <li>Worldwide modernization of boiler plant with improvements in steam/fuel ratio for greater efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Further decrease in fuel and electricity consumption in production processes</li> <li>Efficiency improvements for existing energy utilities on dedicated sites</li> <li>Increased use of electricity from renewable sources</li> <li>CO<sub>2</sub> credits from sale of secondary products as biomass-originated energy sources</li> <li>Further increase of CO<sub>2</sub>-reducing supplies of steam and electricity from CHP stations</li> </ul>
<b>Ongoing reduction in wastewater by 25% from 2002 to 2012</b>	<ul style="list-style-type: none"> <li>Reduction in organically loaded wastewater by 18% from 2002 to 2007</li> <li>Changes in production, cooling and heating processes</li> <li>Reduced cleaning requirement through dedication of production to specific sites</li> <li>Upgrade of wastewater treatment facilities</li> </ul>	<ul style="list-style-type: none"> <li>Enforced identification, monitoring and prevention of wastewater sources at all sites</li> <li>Improvement of cleaning procedures to reduce water consumption and contamination</li> <li>Recycling of wastewater via simple purification stages</li> <li>Evaluation of secondary uses for wastewater:               <ul style="list-style-type: none"> <li>Cascade usage of cleaning water</li> <li>Reutilization of treated wastewater</li> </ul> </li> </ul>
<b>Ongoing reduction in waste</b>	<ul style="list-style-type: none"> <li>Since 2002, reduction of nonhazardous waste disposed by nearly 25%, down to 12.0 kg/t of production volume in 2007*</li> <li>In the same period, disposed hazardous waste reduced by about 45%, down to 3.3 kg per metric ton of production volume*</li> <li>Constant increase in recycling and re-use of production residues</li> </ul>	<ul style="list-style-type: none"> <li>Pilot project to further increase the recycle rate in Düsseldorf production, started 2008</li> <li>Evaluation of secondary usages for waste:               <ul style="list-style-type: none"> <li>Biogas generation from aqueous organic waste materials, instead of incineration</li> </ul> </li> <li>Avoidance of waste:               <ul style="list-style-type: none"> <li>Improvement of molecular yield in production, e.g. through our Material Efficiency Program</li> </ul> </li> </ul>
<b>Further increase in the use of renewable raw materials</b>	<ul style="list-style-type: none"> <li>About 50% of raw materials are natural-based (natural oils and fats, plants, extracts)</li> <li>Constant monitoring of the share of natural/renewable raw materials</li> <li>Active support of Roundtable on Sustainable Palm Oil (RSPO) since 2004</li> <li>Active support of fair trade platforms for products based on botanicals/extracts</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing activities as described under "Current status"</li> </ul>
<b>Incidence rate: zero lost-time accidents, zero workplace-related injuries</b>	<ul style="list-style-type: none"> <li>Decrease of incidence rate from 0.8 in 2002 to 0.5 in 2007</li> <li>Constant decrease in number of industrial accidents in production worldwide</li> </ul>	<ul style="list-style-type: none"> <li>Further safety awareness training and internal audits</li> <li>Provision of regular training in occupational safety for production employees worldwide</li> <li>Greater emphasis on preventive maintenance</li> <li>Site-specific workplace safety improvement programs</li> <li>Ongoing monitoring of process safety and workplace safety situation ("Top Ten" in safety) at site level</li> </ul>
<b>Healthy working environment and work/life balance</b>	<ul style="list-style-type: none"> <li>Well established health programs at site level</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of further health programs, e.g. for cancer prevention, quit smoking training, etc.</li> <li>Expansion of sport programs (jogging, yoga, soccer matches etc.)</li> </ul>
<b>Maintain and create a high-performance organization</b>	<ul style="list-style-type: none"> <li>Performance management programs in place for all our affiliates</li> <li>Cognis College in place, offering training programs tailored to Cognis' needs</li> <li>Succession management process established</li> </ul>	<ul style="list-style-type: none"> <li>All employees to receive regular feedback on their performance</li> <li>Agreement of individual training and development plans</li> <li>Continuous development and implementation of Cognis College programs based on business needs</li> <li>Further roll-out of succession management process throughout all businesses and functions</li> </ul>
<b>Focus on employee commitment</b>	<ul style="list-style-type: none"> <li>Regular global-based "Cognis Barometer" employee survey</li> </ul>	<ul style="list-style-type: none"> <li>Presentation and discussion of results in workshops</li> <li>Definition and implementation of respective action plans</li> <li>Global monitoring of implementation</li> </ul>

\* Some assumptions have been made where changing criteria for data monitoring (international guidelines and national legislation) along with definition changes of referenced production volumes hamper a direct comparison of 2002 and 2007 figures.