

# THE NOVOZYMES REPORT 2011



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# REPORT

THE NOVOZYMES REPORT 2011







# CONTINUED INNOVATION IN AN EVER-CHANGING WORLD

2011 was an eventful year for Novozymes. The world proved once again to be a challenging environment in which to operate, but a continued focus on innovation enabled us to leverage our technology platform and deliver solid improvement in sales, earnings, and sustainability performance.

Being an innovation-focused solution provider is challenging – it requires insight into and a thorough understanding of the needs and requirements of customers and other stakeholders. It also requires close collaborations, and systems and structures in place to support this demanding task. At Novozymes, this work takes place every day together with customers across more than 40 different industries around the world. Continuously improving all aspects of this complex, global, and highly diversified process is, and will remain, key to our success.

By leveraging our unique technology platform and mastering the innovation process, we can create increased revenue opportunities and make the business more efficient and the world more sustainable. As a result, we can deliver on shorter-term targets while keeping our minds set on long-term value creation, despite the ever-changing world in which we operate.

## AN EVENTFUL YEAR

Macroeconomic and geopolitical events dominated the headlines in 2011 in a world characterized by concerns about growth, uncertainty, and volatility. Although Novozymes was not immune to the uncertainty, we were

able to grow sales by 8% while attaining an EBIT margin of slightly more than 22%, well above our long-term ambition. Productivity improvements continued in 2011, and our operational flexibility proved its worth, with Novozymes able to offset higher raw material prices, a lower USD, and a negative impact from acquisitions.

Turning to sustainability, Novozymes' products and solutions continued to help customers address their environmental footprint in 2011. Customers achieved emission savings of 45 million tons of CO<sub>2</sub> during the year – about three-quarters of Denmark's total annual CO<sub>2</sub> emissions – by applying our solutions in their products and processes, and Novozymes reached almost all operational targets for environmental and social performance.

## INVESTING IN GROWTH

Novozymes continued to invest in the future in 2011. We invested DKK 1.3 billion in new plants, machinery, and intellectual property, most of which was allocated to building our new enzyme facility in the US and finalizing our new hyaluronic acid plant in China. We also invested DKK 1.5 billion in developing our global bioagriculture business through the acquisition of EMD/Merck Crop BioScience, and close to DKK 150 million in new R&D projects and business-building activities.

On the competitive front, Novozymes retained our 47% share of the global industrial enzyme market. The competitive landscape was largely unchanged during the year, although Danisco, Novozymes' largest competitor, was acquired by US chemical group DuPont. Competition helps us remain alert and avoid complacency, and we expect Danisco's enzyme business to remain a strong competitor under its new ownership.

### VALUED EMPLOYEES AND NEW BOARD MEMBERS

We have a global team of close to 6,000 employees. Their skills and dedication are what has built Novozymes and what will continue to build Novozymes in the future. We strive constantly to ensure that Novozymes operates and grows in a responsible manner, with our unwavering business ethics always a top priority irrespective of any turbulence in global markets.

2011 brought three new faces on the Board of Directors: Lena Olving, Deputy CEO and COO of Saab AB; Agnete Raaschou-Nielsen, Chairman of the Board of Brdr. Hartmann A/S; and Jørgen Buhl Rasmussen, President & CEO of Carlsberg A/S. The selection of our three new members was the result of a continuous review of Board competencies with the aim of building a strong bridge between innovation and the marketplace, which is essential to Novozymes' success.

### REWARDING SHAREHOLDERS

Over the years, Novozymes' technology has brought strong growth in revenue, earnings, and cash flow. With the expectation of continued healthy cash flow, we are again able to increase the return to shareholders without eroding our capital strength. We plan to increase the dividend payout ratio from around 30% to around 35% over the next 2–3 years, while at the same time initiating a 2-year DKK 2 billion share buyback program in 2012.

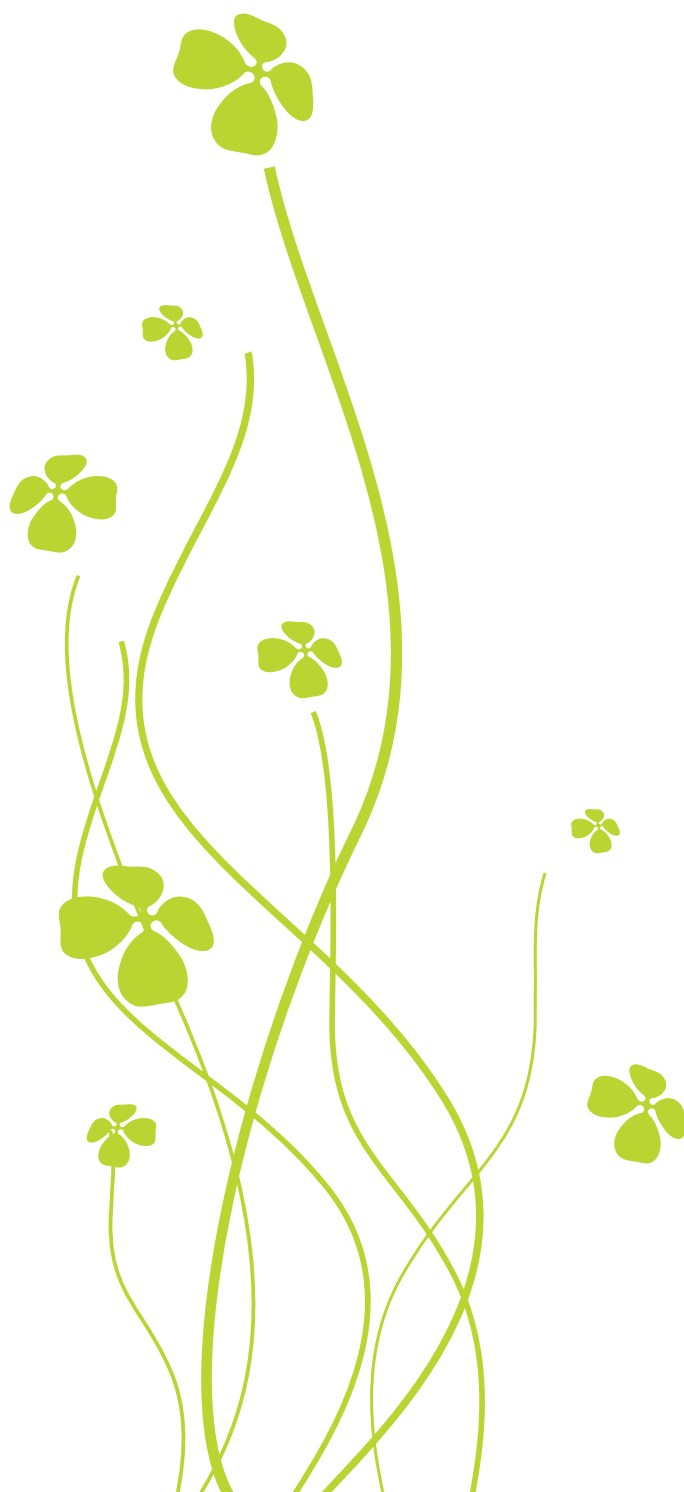
In 2011, we executed a stock split both to give private shareholders better access to the stock and to ensure liquidity. It is also worth mentioning that with a 14% increase in share price during the year, Novozymes generated a return to shareholders that outperformed the NASDAQ OMXC20 by roughly 29 %-points.

### INNOVATION SHAPES OUR FUTURE

With a 2012 sales growth expectation of 7–11% and an EBIT margin expectation of 22–23% in what we anticipate will be a challenging economic climate, we feel confident that Novozymes remains on the right track. In an uncertain environment such as the current one, we keep our eyes on long-term value creation without being naive; we are respectful of what we see out there. Flexibility and vigilance are our best tools for weathering potential storms, and thanks to continuous investments in our business and the efforts of our employees, we have every confidence in the long-term prospects for Novozymes' unique business.

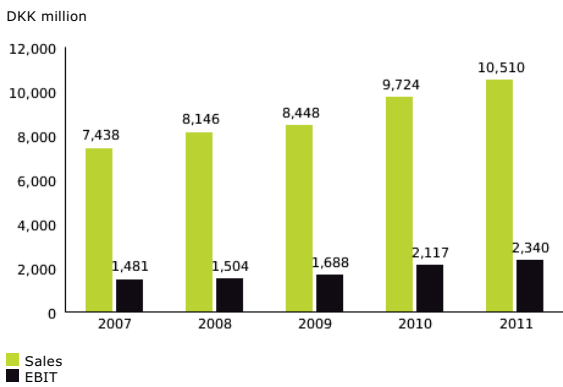
January 2012

The Board of Directors  
Novozymes A/S



# KEY FIGURES

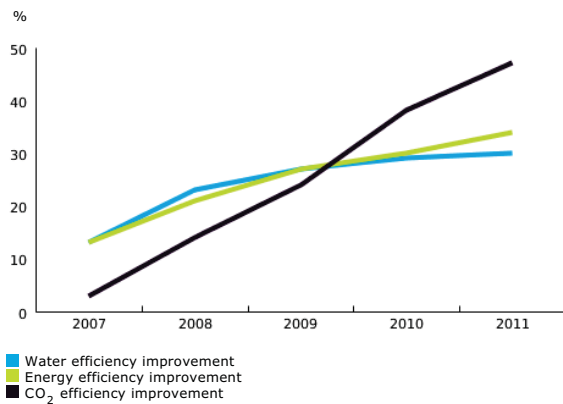
## SALES AND EBIT



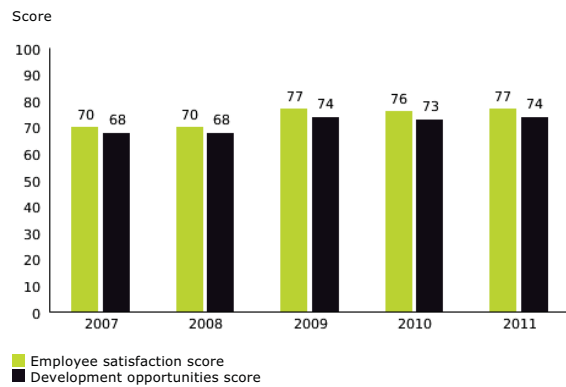
## ROIC AND INVESTED CAPITAL



## EFFICIENCY IMPROVEMENT COMPARED TO 2005



## EMPLOYEE SATISFACTION AND DEVELOPMENT OVERVIEW



		2011	2010	2009	2008	2007
<b>Income statement (DKK million)</b>						
Revenue		10,510	9,724	8,448	8,146	7,438
Gross profit		5,908	5,412	4,700	4,359	3,949
Research and development costs		1,464	1,360	1,207	1,096	995
EBITDA		3,126	2,796	2,252	2,060	1,971
Operating profit / EBIT		2,340	2,117	1,688	1,504	1,481
Financial items, net		75	6	(67)	(85)	(96)
Net profit		1,828	1,614	1,194	1,062	1,042
<b>Balance sheet (DKK million)</b>						
Non-current assets		9,053	7,057	5,991	5,641	5,218
Total assets		13,842	12,593	10,890	9,925	8,871
Shareholders' equity		8,824	7,836	5,841	4,476	3,667
Non-current liabilities		2,661	2,249	2,528	2,563	2,810
Invested capital		9,843	8,182	6,790	5,856	5,436
Net interest-bearing debt		1,019	346	949	1,380	1,769
<b>Investments and cash flows (DKK million)</b>						
Cash flow from operating activities		2,709	2,324	1,817	1,697	1,714
Purchase of property, plant and equipment		1,290	1,326	1,009	902	729
Net investments excluding acquisitions		1,316	1,326	978	942	735
Free cash flow before net acquisitions		1,393	998	839	755	963
Acquisition of activities and companies		1,530	23	-	-	716
Free cash flow		(33)	975	839	755	247
<b>Key ratios</b>						
Revenue growth, DKK	%	8	15	4	10	9
Revenue growth, LCY	%	10	10	2	13	14
Revenue growth, organic	%	7	11	2	13	12
Research and development costs as a percentage of revenue	%	13.9	14.0	14.3	13.5	13.4
Gross margin	%	56.2	55.7	55.6	53.5	53.1
EBITDA margin	%	29.7	28.8	26.7	25.3	26.5
EBIT margin	%	22.3	21.8	20.0	18.5	19.9
Net profit margin	%	17.4	16.6	14.1	13.0	14.0
Effective tax rate	%	24.3	24.0	26.3	25.2	24.8
Equity ratio	%	63.7	62.2	53.6	45.1	41.3
Return on equity	%	21.9	23.6	23.1	26.1	29.5
Return on invested capital (ROIC), including goodwill	%	21.3	22.2	20.3	19.5	21.7
Return on invested capital (ROIC), excluding goodwill	%	23.0	23.7	21.8	21.2	23.4
WACC after tax	%	4.5	5.6	7.0	7.4	8.1
Earnings per share (EPS), diluted*	DKK	5.71	5.05	3.79	3.37	3.29
Dividend per share (2011 proposed)*	DKK	1.90	1.60	1.15	1.05	1.00
* Restated to reflect 1-to-5 stock split of the company's A and B shares.						
<b>Environmental and social data</b>						
Water efficiency improvement (compared to 2005)	%	30	29	27	23	13
Energy efficiency improvement (compared to 2005)	%	34	30	27	21	13
CO <sub>2</sub> efficiency improvement (compared to 2005)	%	47	38	24	14	3
Estimated CO <sub>2</sub> reductions from customers' application of Novozymes products	Million tons	45	40	27	28	25
Total number of employees	No.	5,824	5,432	5,275	5,146	4,933
Rate of employee turnover	%	8.3	7.5	6.7	11.3	9.0
Frequency of accidents with absence per million working hours		4.3	4.1	5.1	4.9	4.8
Employee satisfaction	Score	77	76	77	70	70
Development opportunities	Score	74	73	74	68	68

# COMPANY PROFILE

**Novozymes' biological solutions help our customers make more from less. We are the world leader in bioinnovation, producing a wide range of industrial enzymes, microorganisms, and biopharmaceutical ingredients.**

A growing population is putting increasing pressure on the world's natural resources, and innovation is required if we are to continue to meet our basic needs. Novozymes' solutions are part of the answer. Used in the manufacture of numerous products, they improve the efficiency of industrial processes by saving energy and raw materials and reducing waste. The result is higher quality, lower costs, and improved environmental performance for our customers.

In 2011 alone, the worldwide application of our products helped our customers reduce their CO<sub>2</sub> emissions by an estimated 45 million tons, supporting our shared ambition to drive sustainability around the world.

## WORLD LEADER IN INDUSTRIAL ENZYMES

The development, production, distribution, and sale of industrial enzymes is our largest business segment, Enzyme Business, which accounted for 90% of total sales in 2011. BioBusiness, which accounted for the remaining 10%, is home to our microorganisms and biopharmaceutical ingredients.

We are constantly striving to expand our markets by introducing innovations in existing markets and developing new applications. With a 47% share of the global enzyme market, we retained our position as the world's largest and leading producer of industrial enzymes in 2011, generating total sales of DKK 10,510 million and EBIT of DKK 2,340 million.

## SUSTAINABILITY IS INTEGRATED

Due to the nature of our technology, sustainability is an integral part of our offering to customers. This has become a competitive advantage as more customers look to use sustainability as a differentiator.



**Rethink Tomorrow:** A growing global population puts pressure on our natural resources. With bioinnovation in the form of, for example, industrial enzymes and microorganisms, industries can rethink their processes and products, and produce more with less.



We aim to be a transparent and responsible business where sustainability is an integral part of the way we operate. Our vision is to create the necessary balance between better business, cleaner environment, and better lives. We identify issues and challenges of relevance to our stakeholders and our business through dialogue and commitment to international agreements and universal values. For example, we subscribe to the UN Global Compact and support the UN Convention on Biological Diversity to help steer the global agenda toward a more sustainable world.

### RETHINK TOMORROW

We use our expertise and biotechnology to develop new sustainable solutions, often in partnership with our customers. More than 20% of Novozymes' global workforce is engaged in research and development, and we invest around 14% of sales in research and development worldwide. The company has a global presence with close to 6,000 employees on six continents.

Our solutions are based on a unique industrial biotechnology platform that provides a wealth of opportunities for the world's industries. Microbiology, high-throughput screening, protein engineering, and fermentation technology are some of the tools on which we base our business. Combining industrial insight with this technology platform, we partner with customers across a broad range of industries to create tomorrow's industrial biosolutions. We currently hold almost 7,000 granted or pending patents, which is an indication of the possibilities that emerge when nature and technology join forces.

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### TOUCH THE WORLD

Our vision, company idea, commitment, and values form our guide – what we call Touch the World.

- **Our vision:** A future where our biological solutions create the necessary balance between better business, cleaner environment, and better lives
  - **Our company idea:** Rethink Tomorrow
  - **Our commitment:** To continuously improve our financial, environmental, and social performance to drive the world toward sustainability
  - **Our values:**
    - Dare to lead – because the future is created by you
    - Trust and earn trust – because nothing beats a circle of trust
    - Connect to create – because the world is full of ideas
    - Unlock passion – because passion makes dreams come alive
- 

### MORE THAN 700 PRODUCTS AND 40 END MARKETS GLOBALLY

Novozymes sells products all over the world and serves a broad variety of industries, such as household care, bioenergy, food and beverages, agriculture, biopharmaceuticals, wastewater, textiles, pulp and paper, and leather.

Enzymes for the household care industry are widely used in laundry and dishwashing detergents, and account for a large part of Novozymes' sales. Our solutions improve the performance of detergents by enabling improved stain removal, garment care, and general wash performance. Enzymes can replace petrochemical-derived ingredients, and their unique catalytic action makes enzymes particularly useful ingredients in low-temperature and concentrated detergents.

One of Novozymes' largest focus areas is enzymes that can turn starch (primarily corn) and cellulose into fermentable sugars for the biofuel industry. Biofuels are an important step toward meeting the growing demand for renewable fuel.

Enzymes are also used extensively in the food and beverage industry to enhance the quality of, for example, bread, beer, and wine, and in the feed industry to increase the digestibility and nutritional value of animal feed.

In addition, Novozymes supplies a range of microorganisms for industrial use in the cleaning, wastewater, and agricultural markets, while our biopharma business focuses on improving medical devices as well as drug delivery and formulation using our unique recombinant albumin and hyaluronic acid technologies.

# SALES AND MARKETS

**Novozymes' sales increased by 8% in 2011. Household Care, Food & Beverages, and Feed & Other Technical Enzymes were the largest growth contributors. The highest rate of organic sales growth was in the biopharma industry.**

Total sales in 2011 were DKK 10,510 million, an increase of 8% compared to last year. Exchange rates impacted sales negatively, and sales in LCY were up by 10%. Acquisitions contributed approximately 3 %-points to growth.

According to Novozymes' own estimates, the global industrial enzyme market grew in 2011 to a total market value of approximately DKK 20 billion, up from DKK 19 billion in 2010. The industry did not see any major new entrants to the market in 2011 besides the change of ownership of Danisco, which was acquired by DuPont. Novozymes' overall market share was maintained at roughly 47% and was positively affected by a slight increase in market share in Feed and Food Enzymes, and reduced by a slightly lower market share in the US fuel ethanol enzyme market.

## ENZYME BUSINESS

Enzyme Business sales were up by 6% in LCY. Sales in DKK reached 9,489 million, up by 4% compared to 2010. Sales of Household Care Enzymes, Feed & Other Technical Enzymes, and Food & Beverages Enzymes were the largest growth contributors in the period.

## HOUSEHOLD CARE ENZYMES

Household Care Enzymes sales increased by 6% in both LCY and DKK compared to 2010. Growth was driven by increased enzyme penetration across detergent tiers to enhance wash performance, enable low-temperature washing, and replace traditional chemicals in detergent formulations. Sales of Household Care Enzymes to emerging markets were also a strong growth driver through the year.

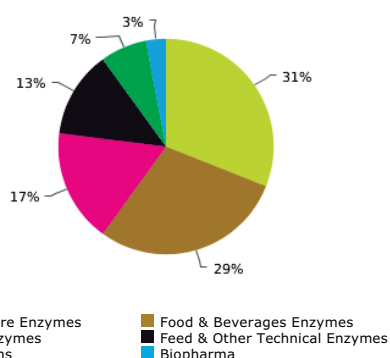
## FOOD & BEVERAGES ENZYMES

Food & Beverages Enzymes sales increased by 8% in LCY and by 6% in DKK compared to 2010. Higher demand, particularly from the specialty food, starch, and alcohol industries, was the main driver. Enzyme sales to the baking industry saw a modest, expected decline, whereas newly introduced products and concepts for the production of healthy foods contributed positively to growth throughout the year.

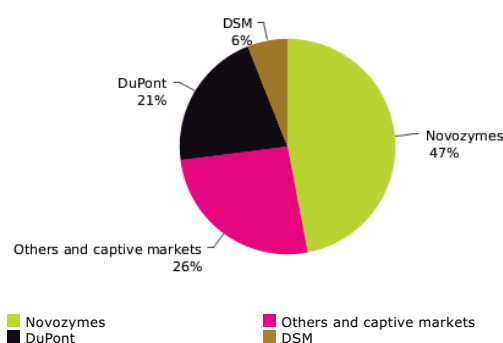
## BIOENERGY ENZYMES

Bioenergy Enzymes sales were up by 1% in LCY and down by 3% in DKK compared to 2010. Growth in US-produced ethanol volumes fell throughout the year – which was also the case for Novozymes' Bioenergy Enzymes sales. Full-year 2011 US ethanol volumes are estimated by the US Energy Information Administration to have reached 13.8–13.9 billion gallons, up by 4–5% compared to 2010. The relatively lower rate of growth in Novozymes' Bioenergy Enzymes sales compared to US ethanol production growth during the year is a result of a slightly lower enzyme content by gallon of ethanol produced across the industry – as ethanol producers have optimized their production – and also of variations in individual producers' ethanol output.

**2011 ENZYME BUSINESS & BIOBUSINESS SALES BY INDUSTRY**



**2011 MARKET SHARE IN ENZYMES FOR INDUSTRIAL USE**



Nevertheless, favorable blending economics and exports throughout the year kept US ethanol production growing compared to 2010.

### FEED & OTHER TECHNICAL ENZYMES

Feed & Other Technical Enzymes sales were up by 9% in LCY and by 7% in DKK compared to 2010. Within the feed area, phytase enzyme sales developed very well in a competitive European phytase enzyme market. In the third quarter, Novozymes launched RONOZYME® HiPhos, an animal feed enzyme currently approved for the Brazilian market with superior phosphate uptake in swine and poultry diets. Approval for this product in North America and Europe is expected in 2012. RONOZYME® ProAct performed very well in the Latin American and European markets, and was also approved for the US market mid-2011. Sales of textile enzymes were challenged during the year due to a contraction in the textile market and a competitive Asian market situation.

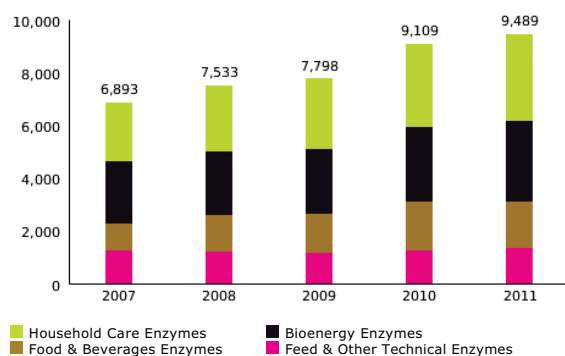
### WORKING ACROSS THE VALUE CHAIN

Gathering key players is a way to drive the household care industry toward sustainability and higher enzyme usage. Novozymes wants to help the household care industry become one of the first to deliver a radical reduction in environmental impact throughout a product's life cycle without increased costs. Innovation and technological advancement are instrumental for this change, but no-one can get there alone. To achieve this bold vision, all players in the value chain need to come together, cooperate, and rethink tomorrow.

Realizing this, Novozymes hosted the first Copenhagen Detergent Sustainability Summit in 2009. Held in conjunction with the UN Climate Change Conference (COP15), it brought together key representatives of a range of detergent manufacturers, retailers, and NGOs to spearhead work toward a more sustainable and profitable future for the industry. The summit

### FIVE-YEAR SALES DEVELOPMENT IN ENZYME BUSINESS

DKK million



concluded that the way to achieve real progress was to expand cooperation not only up and down the value chain, but also sideways to include a range of other raw material producers, such as chemical companies.

### Second sustainability summit

In December 2011, Novozymes hosted the second summit, which fulfilled the promise of broad participation of all players in the value chain. The presentations and discussions explored two ways of making laundry greener: new technical solutions and changes in consumer behavior.

Speakers from Asda, P&G, Henkel, Unilever, BASF, AkzoNobel, Method, Whirlpool, and Ecolab addressed topics such as consumer trends, the needs of developing and emerging markets, and technologies for compact detergents and low-temperature washes. Also presented were the results of a study that concluded that the fact-driven approach to sustainability that most companies rightly take is not necessarily what changes consumer behavior.

The context of consumer needs is important too, and the study revealed rather surprisingly that health and safety, for example, are of increasing importance to consumers in emerging markets, while those in developed markets are still driven very much by traditional factors such as cost and time savings.

### Toward greener detergents

Novozymes' enzyme solutions for the household care industry improve the performance of detergents at low temperatures, enable the formulation of more compact products, and are readily biodegradable. With their unique catalytic action, enzymes are a low-volume ingredient that can reduce the need for oil-based ingredients and chemicals such as surfactants and phosphates that traditionally make up the bulk of detergents.

Interaction with other players in the value chain is important for Novozymes in a number of ways. First and foremost, we can position ourselves as a key technology enabler in the industry. By investing resources in bringing together the players in the value chain, we demonstrate our commitment to invest in our customers' agendas and drive change. This also generates crucial input for our internal development processes, providing the context needed to come up with new and improved enzyme solutions for our global partners.

Through industry associations and technical innovation collaborations, players across the industry are committed to making detergent products with a reduced environmental impact. We aim to lead the industry toward more sustainable products and have committed to continue hosting the Copenhagen Household Care Sustainability Summit on a biennial basis.

## BIOBUSINESS

BioBusiness sales were up by 73% in LCY. Sales in DKK reached 1,021 million, up by 66% compared to 2010. Acquisitions had a positive impact on sales. Organic sales growth was approximately 16% in the period, mainly driven by Biopharma sales.

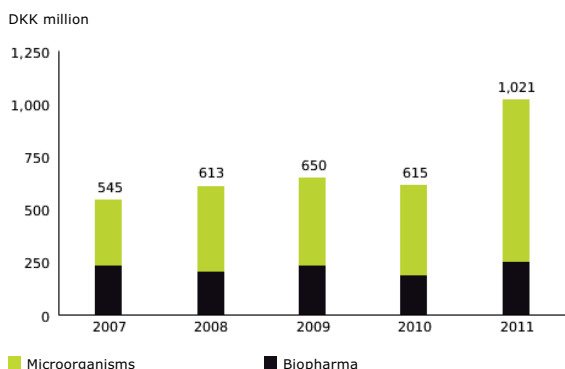
### MICROORGANISMS

Microorganisms sales were up by 86% in LCY and by 79% in DKK compared to 2010. Sales growth was positively impacted by the acquisitions of both EMD/Merck Crop BioScience in early February and, to a minor degree, the Brazilian bioagriculture company Turfal in August 2010. Organically, Microorganisms sales grew by approximately 5%. Sales to the Wastewater and Cleaning Solutions industries performed well during the year, whereas the existing BioAg business was negatively affected by unfavorable weather conditions, which caused flooding and variations in crop-planting patterns.

### BIOPHARMA

Biopharma sales were up by 41% in LCY and by 37% in DKK compared to 2010. The strong sales growth was mainly related to rising sales of Recombumin® and partly also to timing, as the biopharma industry is subject to substantial variations in sales patterns, with sales comprising a small number of transactions of relatively high value.

#### FIVE-YEAR SALES DEVELOPMENT IN BIOBUSINESS



## THE PHOSPHATE CHALLENGE

To feed a growing population, agricultural production per unit of land needs to increase with less input and a reduced impact on the environment. As a building block of all living cells in plants and animals, phosphate is a key ingredient in fertilizer and animal feed. It is also a finite resource, and growing demand has already pushed prices to record-high levels. Phosphate pollution is proving a serious environmental problem, and making better use of this precious resource is therefore a pressing issue in farming.

### Improving phosphate efficiency

Novozymes is at the forefront when it comes to improving phosphate efficiency in agriculture. Our solutions can significantly improve phosphate utilization in both fertilizer and feed, enabling farmers to get more out of less.

Recent acquisitions in North and South America have made Novozymes a global leader in microbial solutions for crop growers. Our fungal inoculant product Novozymes JumpStart®, for instance, enables growers to use fertilizer far more efficiently by making more soil-bound phosphate available to the plant. Another fertility inoculant product, Novozymes TagTeam®, makes better use of phosphate and also provides more fixed nitrogen, delivering higher yields from pulse crops such as soybean and peas.

In the animal feed business, Novozymes and long-term partner DSM Nutritional Products launched their newest phytase enzyme product RONOZYME® HiPhos in 2011, which, for the first time, enables the replacement of all feed phosphate additives in swine and poultry diets and significantly reduces phosphate waste in manure. The product was launched in Brazil in September and will be rolled out globally over the next few years.

### Reducing phosphate pollution

Around 80% of the phosphate in fertilizer and feed is in a form that is normally unavailable to plants and livestock and therefore builds up in the soil, increasing the risk of leaching into groundwater and downstream waterways. This leads to algal blooms and reduces oxygen levels in the water, which is a growing problem in many countries, causing marine dead zones that grow in size every year. The UN Environment Programme estimates that each year more than 20 million tons of phosphate is released into the oceans worldwide, causing serious harm to marine life, and most of this is due to leaching from animal manure and intensive fertilizer use.

By increasing phosphate efficiency significantly in both fertilizer and feed, Novozymes is addressing not only the global challenges of agricultural output and limited phosphate reserves, but also the increasingly costly issue of phosphate pollution.

## SALES BY REGION

Sales in Europe, the Middle East, and Africa (Europe/MEA) increased by 8% in LCY and by 7% in DKK compared to 2010. Household Care Enzymes and Feed & Other Technical Enzymes were the main growth contributors in the period, whereas Bioenergy Enzymes sales fell slightly.

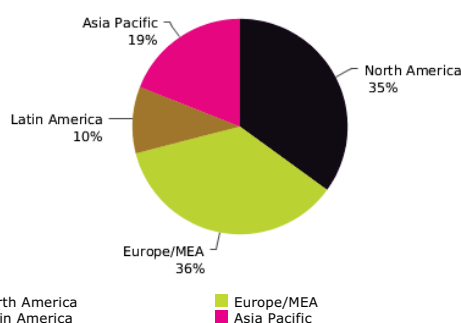
Sales in North America were up by 7% in LCY and by 3% in DKK compared to 2010. Microorganisms sales, positively impacted by acquired BioAg sales, Biopharma sales, and Feed & Other Technical Enzymes sales, were the strongest growth contributors during the year.

Sales in Asia Pacific increased by 8% in LCY and by 7% in DKK compared to 2010. Household Care Enzymes, Food & Beverages Enzymes, and Microorganisms sales were the strongest growth contributors in the period.

Sales in Latin America were up by 43% in LCY and by 38% in DKK compared to 2010. Household Care Enzymes and Feed & Other Technical Enzymes performed very well in the period. Microorganisms sales also grew strongly, mainly due to acquired BioAg sales.

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### 2011 SALES BY REGION



## NEW HYALURONIC ACID PLANT

Novozymes inaugurated a new plant in China in September 2011 to supply hyaluronic acid (HA) to the world market. The plant represents an investment of more than DKK 300 million, and Novozymes expects to play a significant role in the market for this product, which is estimated to be worth around USD 200 million (~ DKK 1,100 million) a year – and growing.

HA is a naturally occurring polysaccharide found throughout the human body in tissues such as skin and cartilage. It functions as a binding and protecting agent in tissue hydration and lubrication, making it well suited to a wide range of biomedical applications such as medical devices and drug delivery.

### Product of the highest purity

Commercial hyaluronic acid on the market today is derived from either rooster combs or attenuated strains of *Streptococcus* bacteria, both of which are associated with a number of challenges. Owing to the risk of animal-derived contamination of the final product, the use of HA from rooster combs is in decline, and *Streptococcus*-based production has become more prevalent. However, as *Streptococcus* is inherently pathogenic to humans, it is not the ideal production organism.

In an effort to overcome these shortcomings, Novozymes has developed Novozymes Hysis<sup>®</sup>, the next generation of high-quality HA, which is produced using the safe, nonpathogenic host *Bacillus subtilis* and offers unprecedented safety, consistency, and performance. Our proprietary technology also improves the recovery process by replacing traditional solvent-based solutions with water-based techniques.

The product offers numerous advantages for medical devices as well as drug delivery and formulation. It can be used in many clinical applications, such as adhesion prevention, dermal fillers, tissue engineering materials, wound healing, and sealants/hemostats, as well as a range of ophthalmology and osteoarthritis applications.

Production complies fully with international requirements for the manufacture of active pharmaceutical ingredients (ICH Q7) and will enable all regulatory requirements for the use of HA in drug products to be met. The new plant is located in the TEDA district outside Tianjin in close proximity to Novozymes' existing enzyme production.



## PRODUCT LAUNCHES IN 2011

Since 2000, Novozymes has invested more than DKK 10 billion in R&D and has launched roughly 100 new products. The following products were launched in 2011:

- Q2**      Blaze® Evity®: An enzyme with the Evity stabilization platform for the automatic dishwashing segment. Blaze Evity addresses all types of protein soils and provides consistent performance even after harsh storage conditions.
- Q2**      Stainzyme® Plus Evity®: An enzyme with the Evity stabilization platform for the automatic dishwashing segment. Stainzyme Plus Evity addresses starch-based soils and provides consistent performance even after harsh storage conditions.
- Q2**      Provia®: An enzyme that improves fermentation performance in starch-based ethanol. Provia breaks down protein present in corn, which improves yeast health and leads to higher ethanol yields.
- Q3**      RONOZYME® HiPhos: An improved phytase enzyme which increases the release of phosphorus in animal feed.
- Q4**      Hyasis®: A high-quality *Bacillus*-derived hyaluronic acid with superior safety, consistency, and performance for use in medical device and pharmaceutical applications.
- Q4**      Terminox® Supreme: An improved and more stable catalase for bleach cleanup in the textile industry.



# FINANCIAL AND SUSTAINABILITY DISCUSSION

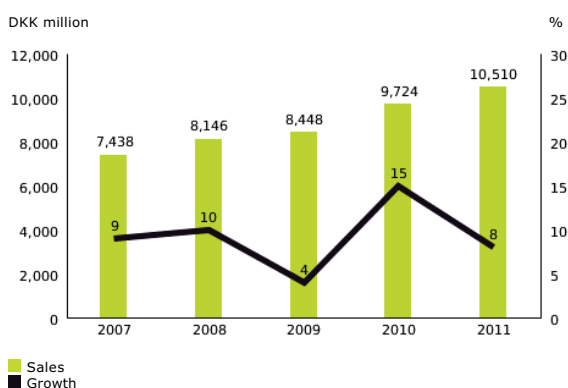
Despite higher raw material prices, acquisitions, and unfavorable currency rates, Novozymes delivered on sales and earnings growth expectations in 2011. Net profit and free cash flow grew strongly, and all financial targets were met. We also achieved all of our sustainability targets except for water efficiency.

## 2011 KEY PERFORMANCE (DKK)

	REALIZED 2011	EXPECTATIONS OCTOBER 2011	EXPECTATIONS JANUARY 2011	REALIZED 2010
Sales, DKKm	10,510	–	–	9,724
Sales growth, DKK	8%	~ 8%	7–10%	15%
Sales growth, LCY	10%	10–11%	7–10%	10%
Sales growth, organic	7%	7–8%	7–10%	11%
EBIT, DKKm	2,340	–	–	2,117
EBIT growth	11%	9–11%	8–11%	25%
EBIT margin	22.3%	~ 22%	21–22%	21.8%
Net profit, DKKm	1,828	–	–	1,614
Net profit growth	13%	11–13%	8–11%	35%
Net investments excl. acquisitions, DKKm	1,316	1,300–1,400	~ 1,400	1,326
Free cash flow before acquisitions, DKKm	1,393	~ 1,400	900–1,000	998
ROIC incl. goodwill	21.3%	~ 21%	21–22%	22.2%
Avg. USD/DKK	536	531	553	562
EPS (diluted), DKK	5.71	–	–	5.05
Water efficiency compared to 2005 index	30%	31%	31%	29%
Energy efficiency compared to 2005 index	34%	32%	32%	30%
CO <sub>2</sub> efficiency compared to 2005 index	47%	41%	41%	38%
Estimated reductions in CO <sub>2</sub> emissions through our customers' application of our products, million tons	45	45	45	40

The following section presents realized financial, environmental, and social data for the year. Data and key figures can be found under Accounts, while an overview of reporting in accordance with the Global Reporting Initiative (GRI) guidelines can be found under Supplementary reporting. Our Communication on Progress with respect to the Global Compact can be found at [www.novozymes.com](http://www.novozymes.com) under Sustainability.

### SALES AND GROWTH



### EBIT AND EBIT MARGIN



## SALES

Total sales in 2011 were DKK 10,510 million, an increase of 8% compared to last year. Exchange rates impacted sales negatively, and sales in LCY were up by 10%. Acquisitions contributed approximately 3 %-points to growth.

## COSTS, OTHER OPERATING INCOME, AND EBIT

### TOTAL COSTS

Total costs excluding net financials and tax increased by 7% to DKK 8,220 million compared to 2010. Cost of goods sold and other operating costs increased due to a higher activity level, higher raw material prices, and a negative impact from acquisitions.

### GROSS PROFIT

Gross profit increased by 9% compared to 2010, resulting in a gross profit margin of 56.2%, 0.5 %-points higher than in 2010. The negative impact from acquisitions in the BioAg business was approximately 0.3 %-points. Increased sales, productivity improvements, and better capacity utilization in the enzyme plants contributed positively to the underlying increase in the gross margin, whereas increased depreciation and amortization and increased raw material prices impacted negatively compared to 2010.

The gross profit margin for Enzyme Business was 58.7%, an improvement of 0.1 %-point compared to 2010.

The gross profit margin for BioBusiness was 33.3%, against 12.0% for 2010. Excluding acquisitions in the BioAg business, the gross profit margin for BioBusiness was roughly 27% for 2011.

### OTHER OPERATING COSTS

Other operating costs increased by 8% to DKK 3,618 million compared to 2010. The ratio of other operating costs to sales was 34.4%, compared to 34.6% in 2010.

- Sales and distribution costs, including business development, increased by 11%, representing 13% of sales
- R&D costs increased by 8%, representing 14% of sales
- Administrative costs were up by 2%, representing 7% of sales

### OTHER OPERATING INCOME

Other operating income fell by DKK 19 million to DKK 50 million in 2011 and was mainly related to milestone payments in BioBusiness and the US Department of Energy-sponsored grant related to work on cellulosic ethanol in the US.

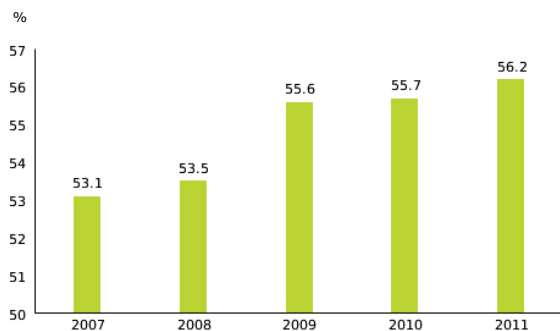
### DEPRECIATION AND AMORTIZATION

Depreciation and amortization rose to DKK 786 million, an increase of DKK 107 million, or 16%, compared to 2010. The higher level of depreciation and amortization was mainly due to the higher investment level over the past years, including the acquisition of EMD/Merck Crop BioScience in February 2011.

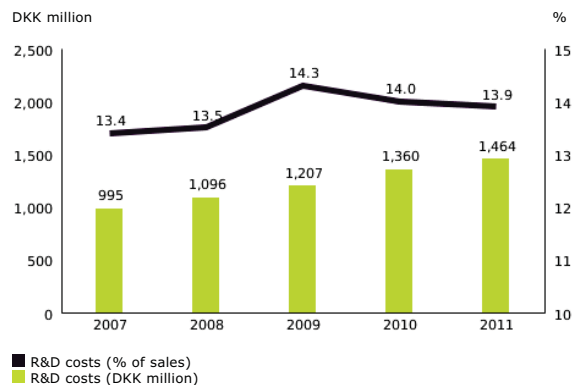
### EBIT

EBIT increased by 11% to DKK 2,340 million, and the EBIT margin was 22.3%, against 21.8% in 2010. Excluding acquisitions, the EBIT margin was roughly 23.3%. Currencies, especially the DKK/USD exchange rate, also impacted the EBIT margin negatively in 2011 compared to last year.

## GROSS MARGIN



## R&D



## NET FINANCIALS AND NET PROFIT

### NET FINANCIAL INCOME

Net financial income was DKK 75 million in 2011, compared to DKK 6 million in 2010. Net currency hedging/revaluation gains were DKK 190 million, DKK 122 million higher than in 2010. Net interest expenses were DKK 76 million, DKK 53 million higher than in 2010, whereas other financial expenses were DKK 39 million, on par with 2010.

### PROFIT BEFORE TAX

Profit before tax increased by 14% to DKK 2,415 million from DKK 2,123 million in 2010.

The effective tax rate in 2011 was 24.3%, against 24.0% in 2010.

### NET PROFIT

Net profit increased by 13% to DKK 1,828 million from DKK 1,614 million in 2010. The strong growth in net profit was the result of higher EBIT and improved net financials.

## CASH FLOW AND BALANCE SHEET

### CASH FLOW

Cash flow from operating activities increased by 17% to DKK 2,709 million, compared to DKK 2,324 million in 2010. The positive development was primarily due to higher net profit and lower corporation tax paid, which was offset by increased working capital compared to 2010.

Net investments excluding acquisitions totaled DKK 1,316 million, against DKK 1,326 million in 2010.

Free cash flow before acquisitions came to DKK 1,393 million in 2011, against DKK 998 million in 2010. The increase was the result of higher operating cash flow.

Net acquisitions amounted to DKK 1,426 million in 2011, relating to the acquisition of the US company EMD/Merck Crop BioScience on February 7 and the divestment of Novozymes Biopharma's Lund operation on December 20.

### BALANCE SHEET

Shareholders' equity was DKK 8,824 million at December 31, 2011, up from DKK 7,836 million at year-end 2010. Shareholders' equity was increased by comprehensive income and decreased by dividend payments. Shareholders' equity represented 64% of the balance sheet total, compared to 62% at year-end 2010.

At the end of 2011, net interest-bearing debt was DKK 1,019 million, against DKK 346 million at year-end 2010.

Net debt-to-equity was 12% at December 31, 2011, following the acquisition of EMD/Merck Crop BioScience, against 4% at year-end 2010.

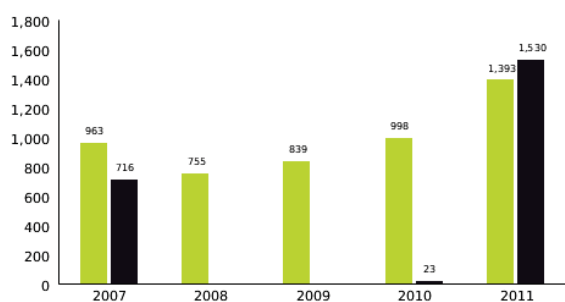
Return on invested capital (ROIC), including goodwill, was 21.3%, compared to 22.2% at the end of 2010. The lower ROIC is due to the acquisition of EMD/Merck Crop BioScience.

### TREASURY STOCK

At December 31, 2011, the holding of treasury stock was 9,915 million B shares, equivalent to 3.1% of the total number of shares issued. During 2011, Novozymes bought back 2,455 million shares – worth approximately DKK 400 million – within the expected DKK 400 million full-year stock buyback program to cover stock-based incentive programs for employees. The buyback program was completed on November 11, 2011.

### FIVE-YEAR CASH FLOW AND ACQUISITIONS OVERVIEW

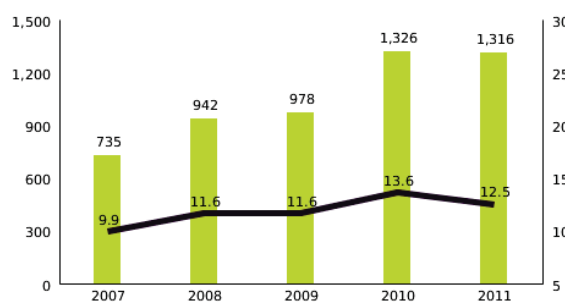
DKK million



■ Free cash flow before acquisitions  
■ Acquisitions

### NET INVESTMENTS\*

DKK million



■ Net investments (DKK million)  
■ Net investments (% of sales)

\* Excluding acquisitions.

## LARGEST INTEGRATION EVER

The acquisition of EMD/Merck Crop BioScience, announced in December 2010 and finalized in February 2011, prompted the largest integration project ever undertaken at Novozymes. The transaction was unusual for Novozymes in that EMD/Merck Crop BioScience was one and a half times the size of our existing bioagriculture business. It also came just 4 months after we acquired the smaller agricultural biologicals producer Turfal in Brazil.

Based in Milwaukee, Wisconsin, USA, and in Pilar, Argentina, EMD/Merck Crop BioScience had a well-established technology and product portfolio, and its presence in the US and Argentina complemented Novozymes' existing operations in Canada and Brazil. Sales & Marketing, R&D, Production, Finance, IT, and service functions all now had to be integrated, creating a new organization with 300 employees at five different sites in North and South America and offices in Europe and Asia.

### Dedicated integration resources

Significant resources were allocated to ensure a successful integration. A number of task forces were set up focusing on specific areas, and a full-time integration director and a dedicated team began working months before the acquisition was finalized to identify the most critical objectives and activities to be handled by each task force.

Once the acquisition was a reality, former EMD/Merck and Novozymes employees worked together to ensure involvement of the whole organization and include best practices from both companies. The integration plans were completed ahead of time, and in June 2011 a new organization was announced.

### Still a way to go

The next step on the journey is to fully integrate the whole, relatively new Novozymes BioAg business unit into all of Novozymes' global business processes. The implementation of business operations software is well under way, and all R&D activities are now coordinated centrally, while Production and Sales & Marketing are adapting to Novozymes' procedures for forecasting, budgeting, and investment planning.

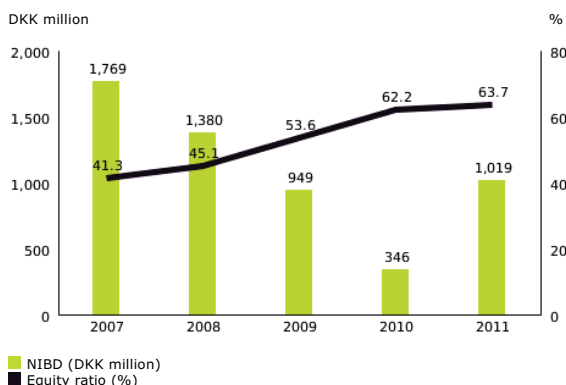
### Platform for growth

The acquisitions have made Novozymes one of the leading players in agricultural biologicals, an interesting niche of the USD 150 billion (~ DKK 825 billion) global market for fertilizers and pesticides. The biologicals market itself is divided into three areas – biofertility, biocontrol, and bioyield enhancement – with a combined value of roughly USD 1 billion (~ DKK 5.5 billion) a year.

Biofertility products help plants absorb more nutrients, while biocontrol products help them fight off pests and diseases, and bioyield enhancement products support plant health. These products enable farmers to optimize the use of fertilizers, increase yields, and save money, while putting less stress on the environment.

Novozymes now has improved geographical coverage, a more comprehensive product portfolio, and a technological platform that bodes well for future growth. The focus going forward is on truly leveraging the new setup while developing a pipeline that can support the business' long-term growth ambitions.

## NET INTEREST-BEARING DEBT (NIBD) AND EQUITY RATIO



## RESOURCE UTILIZATION

We strive continuously to minimize our environmental footprint through a strong focus on energy, CO<sub>2</sub>, and water efficiency.

### ENERGY, CO<sub>2</sub>, AND WATER EFFICIENCY IN NOVOZYMES' PRODUCTION

Compared to 2005, the realized improvement in energy efficiency in 2011 was 34%, which exceeded the target of 32%. This was mainly the result of energy-saving projects implemented in Enzyme Business.

Likewise, we improved our CO<sub>2</sub> efficiency by 47% compared to 2005 and thereby exceeded the target of 41%. Our performance in this area was boosted by the strategic decision to significantly increase our purchases of CO<sub>2</sub>-free electricity from wind power. These purchases are now equivalent to the output of 31 out of 91 turbines at Denmark's flagship offshore wind farm, Horns Rev 2.

Finally, compared to 2005 water efficiency improved by 30%, slightly below the target of 31%. The start-up of a



new production plant in China adversely affected the result. By way of comparison, the water efficiency improvement in 2010 was 29%.

Water was one of the focus areas that we explored further in 2011, mapping risks and opportunities at both production and solution level. When it comes to production, we are working to mitigate water-related risks, with the focus on areas with regional water scarcity risks, such as India and China.

### TRANSPORTATION AND DISTRIBUTION

The transportation of our products to customers is outsourced, and in 2011, we began to look more systematically at the environmental impact of this transport. Since there is no standard for reporting transport emissions, our first priority has been to ensure data quality and establish a calculation practice. We have developed a set of standards for use by transport suppliers in reporting CO<sub>2</sub> emissions from the transport of goods from primary production site to first point of delivery and from transport between sites. In 2011, CO<sub>2</sub> emissions from the transport of goods were estimated at 22,000 tons; transport-related data are available in Note 42.

### BIODIVERSITY

Novozymes has committed to the principles set out in the Convention on Biological Diversity, with a particular focus on the use of genetic resources. As part of our explorative

efforts in 2011, an R&D-led working group established an overview of the increasing expectations of business and the strategic implications of this for Novozymes. The outcome was an R&D management standard outlining requirements in line with the Convention on Biological Diversity.

### ANIMAL TESTING

The use of experimental animals was reduced by 70% from 3,710 animals in 2010 to 1,119 in 2011. The main reason for this reduction was the discontinuation of biopharmaceutical projects.

### ENVIRONMENTAL COMPLIANCE AND COMPLAINTS

Novozymes strives to comply with regulations and minimize the number of complaints. In 2011, 21 breaches of regulatory limits were registered worldwide, compared to 36 in 2010. HCFC emissions were 986 kg in 2011, down from 1,532 kg in 2010, but above the usual maintenance level of around 550 kg, due mainly to a leak at one of our sites in the US during the summer.

We received 18 complaints from neighbors in 2011, the majority related to odor and noise from nearby factories. By way of comparison, we received 21 complaints in 2010 and 33 in 2009.

We always seek to avoid significant spills, such as the release of chemicals into watercourses or soil, and there were no significant spills in 2011.



**Environmental footprint:** We strive to minimize the environmental footprint of our operations and work with suppliers to limit theirs. Our customers save millions of tons of CO<sub>2</sub> every year by using our products.

Novozymes has a pending case in the US where high nitrate levels were found a number of years ago in the groundwater around our site in Franklinton, North Carolina. Subsequent measurements were submitted to the authorities in early 2008, and no conclusion has been reached as the data are still under review by the authorities.

## CLIMATE CHANGE IMPACT

There is increasing commitment to reducing CO<sub>2</sub> emissions, stimulated by regulation and retailers' more stringent requirements, and it is a priority for Novozymes to position our enzyme technology as part of the solution to address climate change. Our target for global reductions in CO<sub>2</sub> emissions based on LCA studies is our most important indicator, ensuring that our solutions meet our customers' and our own high expectations.

We achieved an estimated reduction in CO<sub>2</sub> emissions of 45 million tons through our customers' application of our products in 2011, meeting our target of 45 million tons, which is equivalent to about three-quarters of Denmark's total annual CO<sub>2</sub> emissions.

In 2011, Novozymes developed peer-reviewed environmental life cycle assessments in the animal feed, household care, textile, and leather industries, some in collaboration with customers. In addition, we provided CO<sub>2</sub> data on selected enzymes to customers and partners and advised them on changing their product mix and shifting to more concentrated products with lower environmental impact.

## WORKPLACE DEVELOPMENT

### SATISFACTION AND DEVELOPMENT OPPORTUNITIES

Employee satisfaction and employee perception of development opportunities are the most important indicators of our employees' well-being. Every year, Novozymes' employees have the opportunity to express their opinions in our annual People's Opinion survey. Employees'

satisfaction and motivation as measured by the survey scored 77 in 2011, exceeding both our target of 75 and our 2010 score of 76. When it came to opportunities for professional and personal development, we scored 74 in 2011, again exceeding both our target of 70 and our 2010 score of 73. The survey showed that our employees identify with the new set of values launched last year, and this seems to have had a positive impact on employee satisfaction.

### DIVERSITY MANAGEMENT

Employment at Novozymes is based on merit and is offered without any distinction, exclusion, or preference. We are committed to developing a diverse workforce, fostering innovation and a diverse working culture, which are vital ingredients for a successful global company. In 2011, we focused on our recruitment and appointment processes aiming to increase the diversity in the pool of candidates and successors to senior managerial positions. We track our performance and the effect of our initiatives annually. The status and progress of Novozymes' diversity initiatives are reviewed by the Board of Directors as part of the annual organizational performance process.

### TURNOVER AND ABSENCE RATE

The target for employee turnover is between 4% and 9%, reflecting the present job market and Novozymes' aim to attract and retain employees. With a realized employee turnover of 8.3% for 2011, this target was met. The 2011 target for absence from work was below 3%, and with a rate of absence of 1.9%, this target was also achieved.

### HEALTH AND SAFETY

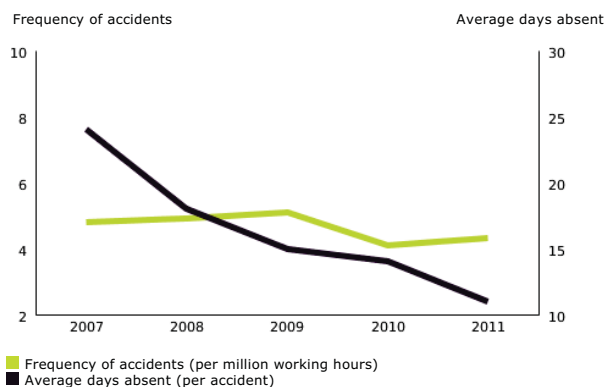
The frequency of occupational accidents in 2011 was 4.3 per million working hours, so the target of a frequency below 4.5 was met. Implementation of the behavior-based safety program "Dare to Care," launched in 2010, continued into 2011 at several sites and had a positive effect in terms of fewer serious accidents. This is reflected in the decrease in the number of average days of absence per accident from 14 in 2010 to 11 in 2011. We await the results of future implementation of "Dare to Care" at newly acquired sites, where the frequency of occupational accidents is currently higher and explains the slight increase in the frequency from 4.1 in 2010.

Total days of absence as a consequence of occupational diseases decreased significantly from 479 in 2010 to 11 in 2011 because occupational diseases were less serious and required less sick leave.

### SOCIAL MINIMUM STANDARDS – COMPLIANCE

In 2011, Novozymes decided to align our social minimum standards with the two human rights principles and four labor standards principles of the UN Global Compact. At the same time, organizational responsibility for human and labor rights at Novozymes was assigned to our regional directors for People & Organization, and a new self-assessment process was implemented, inspired by the UN's Guiding Principles on Business and Human Rights. The

### FREQUENCY OF ACCIDENTS AND AVERAGE DAYS ABSENT



outcome of the 2011 process did not lead to any corrective actions, but most regions have defined focus areas to be addressed in regional or corporate strategies and plans.

## SOCIOECONOMIC IMPACT

In 2011, 58% of Novozymes' generated value was returned to society, for example through wages and pensions to our 5,824 employees, corporate income taxes in the communities, and value generated for our shareholders. The remaining 42% of Novozymes' revenue was spent on purchasing goods and services from local and international suppliers.

### SUPPLIERS

Following the implementation of our supplier performance program, we continue to assess new and existing suppliers in our supplier evaluation system, with target coverage of at least 90% of total spend at all times. In 2011, we finalized all 168 open supplier action plans for noncompliant suppliers through dialogue on mitigating actions or, in a few cases, discontinuing further purchases. We also continued the work on enhancing our suppliers' sustainability performance through clearer supplier requirements to be implemented at the beginning of 2012, along with internal training for purchasers and auditors. In addition, we completed an assessment of the raw materials with the greatest environmental impact in order to identify areas for improvement in raw material sourcing.

## TOTAL TAX CONTRIBUTION

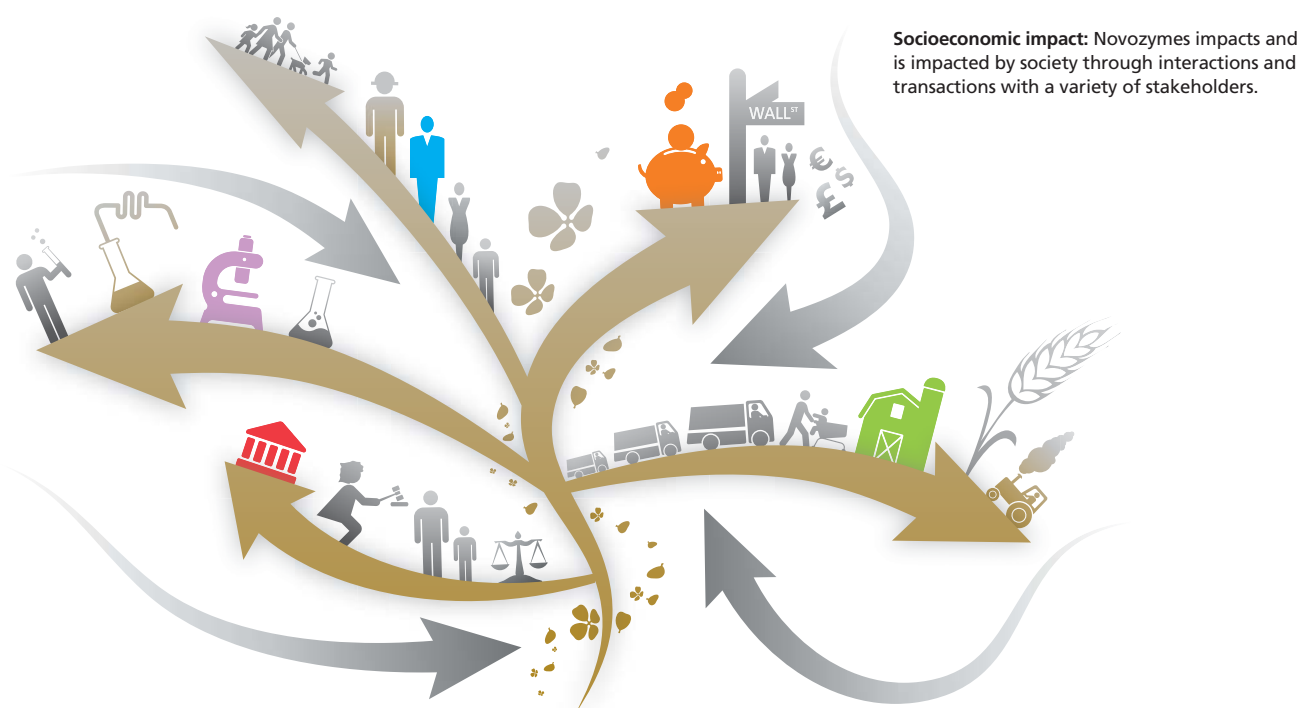
Globally, Novozymes contributes to society through taxes paid and collected. In 2011, the total tax contribution was approx. DKK 1,900 million. Taxes incurred as corporate income taxes, other taxes, and duties came to approx. DKK 925 million. Collected and withheld tax contributions on dividends and wages amounted to approx. DKK 975 million. Novozymes' overall tax strategy and transfer pricing policy support a positive tax contribution to society and governments in the countries where Novozymes operates.

## BUSINESS INTEGRITY

In 2011, Novozymes updated our booklet on business integrity *Bribery – No thanks!* to reflect our desire to comply with best-in-class principles. The updated booklet was used for an internal awareness-raising campaign linked to our new set of values. Workforce training in business integrity through e-learning also continued, and we reached 71% coverage. The booklet is available at [www.novozymes.com](http://www.novozymes.com) under About us.

## SUPPORTING THE MILLENNIUM DEVELOPMENT GOALS

In 2011, we stepped up our efforts to contribute to the UN Millennium Development Goals (MDGs) as one outcome of our explorative focus on socioeconomic impact assessment of our business this year. Our venture in Mozambique (read article under Letter from the CEO) has been designed in a



**Socioeconomic impact:** Novozymes impacts and is impacted by society through interactions and transactions with a variety of stakeholders.

way that contributes broadly to all eight MDGs. For example, the venture helps:

- Eradicate poverty (MDG #1) by moving families from subsistence to commercial incomes (500 families in 2011)
- Reduce child mortality (MDG #4) through reduced indoor pollution
- Improve environmental sustainability (MDG #7) through reforestation
- Bring together a number of partners with a combined interest in business and socioeconomic development in a global partnership for development (MDG #8)

For further information on the venture’s contribution to the MDGs, please see our Communication on Progress at [www.novozymes.com](http://www.novozymes.com).

Through the implementation of our new corporate citizenship initiative, Novozymes contributed, in particular, to improving education (MDG #2) and environmental sustainability (MDG #7) by reaching approx. 9,800 learners, directly and indirectly, of whom approx. 30% were from emerging markets.

## REACHING OUT TO COMMUNITIES AND FUTURE SCIENTISTS

Novozymes launched a new group-wide corporate citizenship strategy, Citizymes, in 2011. The strategy is closely aligned with our core business and focuses on improving scientific literacy.

### Building on our strengths in technology and science

By giving something back to our communities around the world, we retain our license to operate, enhance our ability to attract the brightest scientific talent in the future, and give employees a chance to make a difference, which also has a positive impact on job satisfaction. Novozymes focuses on community activities that increase scientific understanding and awareness of environmental responsibility in our local communities as well as in the next generation of scientists and innovators.

### Supporting the UN Millennium Development Goals

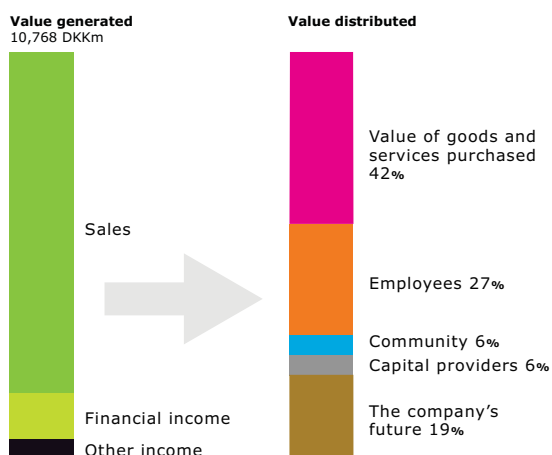
Given Novozymes’ commitment to supporting sustainable development, we aim to contribute to the UN 2015 Millennium Development Goals (MDG) through our corporate citizenship activities. Our strategy specifically targets MDG #2 (universal education) by helping communities access education and improving their scientific literacy, and MDG #7 (environmental sustainability) by raising communities’ awareness of the value and importance of environmental responsibility.

### Global direction, local flexibility

Previously, each of Novozymes’ local sites managed community engagement independently. With the new initiative, we are concentrating our community efforts into broader programs that increase our reach and impact by drawing on our core scientific competencies. We aim to have at least one major corporate citizenship program in each region that meets local stakeholder needs while still supporting the overall strategic focus. Each year, we will measure the number of learners (including students, teachers, and families in our communities) reached through our corporate citizenship activities and follow up on feedback from the communities and employees involved.

Our experience is that local authorities and policymakers appreciate our engagement in educational programs focusing on science, especially in countries with a strong tradition of community relations work. Community initiatives like these are also supported and appreciated by investment groups such as Dow Jones Sustainability Indexes (DJSI). This was reflected in our improved score for corporate citizenship from DJSI in 2011 – a result that may also help us retain our Gold Class rating in SAM’s Sustainability Yearbook.

### DISTRIBUTION OF NOVOZYMES’ VALUE GENERATED



**Biotech education in Brazil**

In Brazil, Novozymes employees have been training science teachers at secondary schools for several years and have even developed an updated science curriculum. Working with the municipal education department in Araucária, our employees coach teachers in new ways of teaching science, such as lab exercises, in order to inspire children to learn more about science – in particular biotechnology and its environmental benefits. Now a permanent fixture due to its great success, the program covered more than 2,000 learners including children and teachers at 12 schools in 2011, and the objective for the coming years is to further expand the program.

**SUSTAINABILITY LEADERSHIP**

Analysts and rating agencies continuously assess companies’ overall sustainability performance, and we use the most relevant ratings to benchmark ourselves against sustainability leaders. In particular, the rating from Dow Jones Sustainability Indexes and the underlying evaluation completed by Sustainability Asset Management (SAM) are the yardsticks for our target of obtaining a Gold Class rating from SAM in its Sustainability Yearbook. Based on our 2010 performance, we obtained a Gold Class rating in SAM’s Sustainability Yearbook 2011 and thereby achieved our target. Moreover, we reconfirmed our position as biotech sector leader in the Dow Jones Sustainability Indexes based on the rating of our 2011 performance.

Novozymes featured in the Carbon Disclosure Project’s annual Nordic Leadership Index for the second time in 2011, rising into the top 10 in a field of more than 260 listed companies. Our score indicates good internal data management and understanding of climate-related risks and opportunities affecting us.

**GLOBAL AND REGIONAL ENGAGEMENTS**

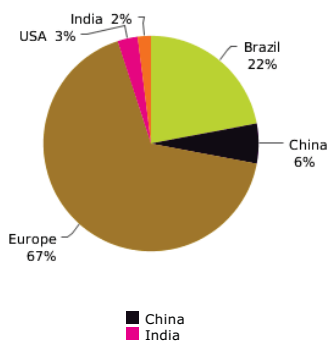
In 2011, Novozymes engaged in a series of advocacy activities and task forces based around implementation of the UN’s new climate strategy on access to energy, notably in the context of the Rio+20 conference on sustainable development in June 2012. These included:

- The ICC Green Economy Task Force, and Energy and Environment Committee
- The UN Global Compact Sustainable Energy for All initiative
- The UN Global Compact Caring for Climate Working Group
- The World Business Council for Sustainable Development’s Changing Pace initiative

In addition, we joined local Global Compact networks in the US, Brazil, China, and India.

The UNDP Nordic Office and the Nordic Network launched a mentor program in which Novozymes is to mentor Air Greenland. The purpose of the program is to give mentees inspiration and guidance on how to effectively integrate the Global Compact’s 10 principles in their daily practices and produce a Communication on Progress, and to test and inspire the mentor.

**CITIZYMES: LEARNERS REACHED BY REGION**



Legend: Brazil (light green), Europe (brown), USA (orange), China (black), India (pink)



## NOVOZYMES IN UN GLOBAL COMPACT LEAD

The UN launched a new platform for corporate sustainability leadership in January 2011 called Global Compact LEAD. Novozymes has been a signatory to the UN Global Compact since 2001 and has now become a LEAD participant along with 53 other companies. Being part of LEAD will help Novozymes drive the world toward sustainability.

### Strategic platform for driving sustainability

LEAD provides an important platform for sharing knowledge with other companies committed to sustainability. The participants have pledged to work toward implementing sustainability by achieving higher levels of performance, impact, and collective action between companies. For example, we will be able to present our insights and solutions to key stakeholders before and during the upcoming Rio+20 conference on sustainable development in 2012, as well as in the task forces focusing on the implementation of the UN's new climate strategy on access to energy and energy efficiency.

### Influencing regional sustainability agendas

In line with the LEAD objective of demonstrating local leadership, Novozymes has put more internal resources in place regionally and become much more active locally in recent years. We have long been a member of the Global Compact Nordic Network, which was one of the first local networks established, and in 2011 we also joined local Global Compact networks in the US, India, Brazil, and China. Via these networks, Novozymes is better positioned to influence the local sustainability agenda in collaboration with our peers by reaching out to stakeholders such as public authorities, NGOs, and customers.

### Sustainability integration

We gain inspiration from other companies through our participation in networks and working groups on themes that are high on our agenda. This is an important part of the trend-spotting process that precedes our strategic development and target-setting work.

Based on our experience in integrating sustainability into business strategy, Novozymes participated during the year in the LEAD initiative to define best practices for the role and responsibilities of boards in overseeing corporate sustainability and integrating sustainable business practices.

### Communication on Progress

Novozymes reports annually on progress in our implementation of the Global Compact's 10 principles in a Communication on Progress (COP), which is published on [www.novozymes.com](http://www.novozymes.com) under Sustainability, and also feeds relevant information into The Novozymes Report. The COP addresses our efforts on specific leadership, implementation, and performance criteria, and has been designed to meet the requirements of the new Advanced level and Blueprint for Corporate Sustainability Leadership launched in 2010. As a natural consequence of our involvement in the LEAD initiative, we have extended our UN Global Compact reporting to cover our support of broader UN goals and engagements.



# NOVOZYMES' STOCK

Novozymes' stock performed well in 2011, gaining 14%. A 1-to-5 split was carried out to make the stock more liquid and accessible to private investors.

Novozymes' overall financial ambition is to provide our shareholders with competitive returns. Shareholder value is created through share price appreciation, dividend payments, and stock buybacks.

Novozymes' stock is listed on NASDAQ OMX Copenhagen and included in the OMX Copenhagen 20 index (OMXC20). The stock is listed under ticker code NZYM B and ISIN DK0060336014. Novozymes is registered with the Danish Business Authority under 10 00 71 27.

## STOCK SPLIT

To make our B shares more liquid and more accessible to private investors, Novozymes carried out a 1-to-5 stock split with effect from November 28, 2011. The nominal value of Novozymes' B shares listed on NASDAQ OMX Copenhagen changed from DKK 10 to DKK 2. The split also applied to the nontraded A shares. The common stock remains at DKK 650 million, but is now divided into 325 million instead of 65 million shares.

## SHARE PERFORMANCE

Novozymes' stock (DKK)*	2011	2010
Share price, year-end	177.3	155.4
Total market value, year-end (billion)**	57.6	50.5
Earnings per share, diluted	5.71	5.05
Dividend per share	1.9***	1.6

\* All numbers restated to reflect the 1-to-5 stock split as of November 28, 2011.

\*\* All A and B shares multiplied by the price of the B share.

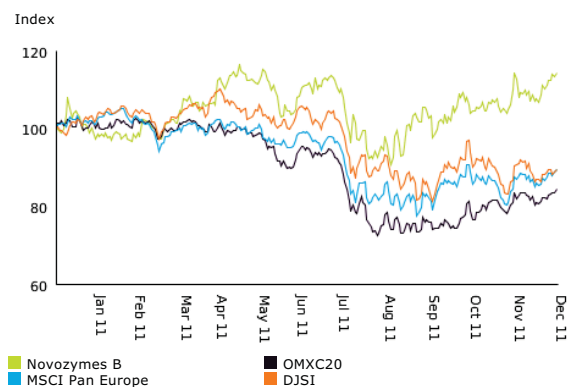
\*\*\* Proposed.

The average daily trading volume of Novozymes' stock in 2011 was 522,607 shares, or DKK 85 million, making it again the ninth most actively traded company on NASDAQ OMX Copenhagen. At year-end, the total market value of Novozymes' B shares was DKK 48.1 billion and the implied value of the nontraded A shares was DKK 9.5 billion.

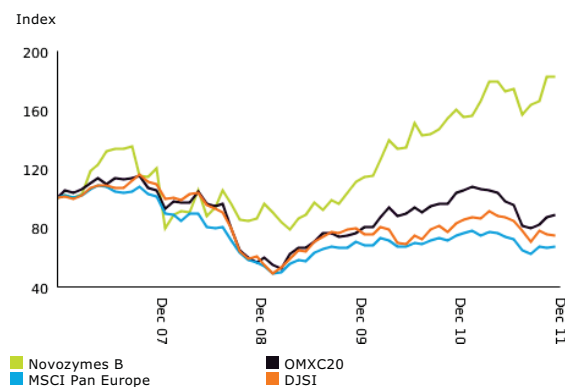
Novozymes' share price increased by 14% during the year. In comparison, the OMXC20 fell 15%, the MSCI Pan Europe Index fell 10%, and the Dow Jones Sustainability World Index fell 10%.

Over the past 5 years, Novozymes' stock has generated an average annual return to shareholders of 16% (18% including dividends). This can be compared to a 5-year average return of (2)% for the OMXC20, (4)% for the MSCI Pan Europe Index, and (5)% for the Dow Jones Sustainability World Index.

## 2011 INDEXED SHARE PRICE DEVELOPMENT



## FIVE-YEAR INDEXED SHARE PRICE DEVELOPMENT



## ADJUSTMENTS TO THE CAPITAL STRUCTURE

Despite several acquisitions, stock buyback programs, and an increased dividend payout ratio, Novozymes' capital base has strengthened markedly since our stock exchange listing in November 2000. Given the expectation of a stable cash flow improvement over the next few years, it was decided in 2011 to initiate a new stock buyback program and to gradually increase the dividend payout ratio. The new initiatives will still allow Novozymes to maintain our financial flexibility when it comes to investment opportunities and long-term focus.

It is planned that the dividend payout ratio will be increased gradually over the next 2–3 years to around 35% of net profit, compared to the historic level of around 30%.

A new stock buyback program will be initiated in 2012, and the common stock will be reduced accordingly by canceling shares bought back within the program. The cancellation of shares will take place annually subject to approval at the Annual Shareholders' Meeting. In accordance with this, Novozymes has decided to buy back shares worth up to DKK 2 billion over a 2-year period starting in 2012. The buyback program is contingent upon no major acquisitions being made.

To ensure there is no negative impact on the liquidity of Novozymes' stock, our principal shareholder, Novo A/S, has agreed to keep its relative holding of B shares at the current level (25.5% of common stock) following Novozymes' cancellation of shares as a result of the stock buyback program.

## DIVIDENDS

The Board of Directors proposes that the Annual Shareholders' Meeting approve a dividend of DKK 1.9 per share for the 2011 financial year. This will result in an expected total dividend payment of approximately DKK 599 million.

Distributions	2011	2010	2009	2008	2007
Dividends (DKK million)	599*	504	358	326	309
Stock buybacks (DKK million)	400	0	0	0	500
<b>Total (DKK million)</b>	<b>999*</b>	<b>504</b>	<b>358</b>	<b>326</b>	<b>809</b>
Net profit (DKK million)	1,828	1,614	1,194	1,062	1,042
Payout ratio	32.8%*	31.2%	30.0%	30.7%	29.7%
Number of shares outstanding, year-end (million)**	315	315	311	310	309
Dividend per share (DKK)**	1.9*	1.6	1.15	1.05	1.0

\* Proposed.

\*\* Restated to reflect the 1-to-5 stock split as of November 28, 2011.

## DIVIDEND DATES 2012

Resolution adopted at the Annual Shareholders' Meeting	February 29
Last day of trading with right to dividend for 2011	February 29
First day of trading without right to dividend for 2011	March 1
Disbursement of dividend	March 6

## EQUITY ANALYSTS

The following companies have analysts covering Novozymes' stock:

- ABG Sundal Collier
- Alm. Brand Markets
- Carnegie
- Cheuvreux
- Credit Suisse
- Danske Markets Equities
- Deutsche Bank
- DnB NOR Markets
- Goldman Sachs
- Handelsbanken Capital Markets
- Jefferies & Company
- J.P. Morgan Securities
- Jyske Bank
- Morgan Stanley
- Nordea Markets
- Nykredit Markets
- SEB Enskilda Equities
- Standard & Poor's
- Sydbank
- UBS

## SUSTAINABILITY RATINGS

Providing information on sustainability performance to analysts, rating agencies, and asset managers is an important element of Novozymes' interaction with shareholders. Novozymes continuously seeks to improve our sustainability reporting and processes, and values this interaction highly. In 2011, Novozymes was:

- Reconfirmed as a member of the Dow Jones Sustainability World Index and the Dow Jones Sustainability STOXX Index, named sector leader for the 10th time, and awarded a Gold Class rating for 2010 performance in SAM's Sustainability Yearbook 2011
- Ranked 10th in the Carbon Disclosure Project's Nordic Carbon Disclosure Leadership Index 2011 with a score of 85 out of 100
- Re-awarded PRIME status by Oekom Research for being among the top 3 sustainability leaders in the Pharmaceuticals & Biotechnology industry
- Reconfirmed as one of The Global 100 Most Sustainable Corporations in the World
- Reconfirmed as a member of the ET Global 300 Carbon Index

- Reconfirmed as a member company of the FTSE4Good Index
- Reconfirmed as a member of the Ethibel EXCELLENCE Investment Register

### SHAREHOLDERS

Novozymes' common stock consists of two types: A shares and B shares, both with a nominal value of DKK 2 per share. All A stock is held by Novo A/S, and an A share carries 10 times as many votes as a B share.

	A stock	B stock	Total
<b>Common stock (DKK)</b>	107,487,200	542,512,800	650,000,000
<b>Number of shares</b>	53,743,600	271,256,400	325,000,000
<b>Number of votes</b>	1,074,872,000	542,512,800	1,617,384,800
<b>Voting rights (%)</b>	66.5	33.5	100

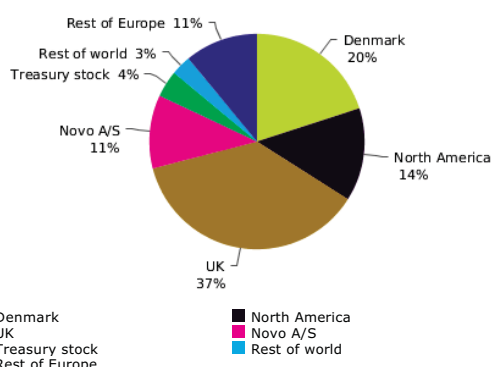
At the end of 2011, Novo A/S held 25.5% of the total common stock and, through its holding of the A stock and a proportion of the B stock (29,131,400 shares), controlled 70.1% of the votes. Novo A/S is wholly owned by the Novo Nordisk Foundation, and Novozymes is therefore included in the consolidated financial statements of the Novo Nordisk Foundation. Novo A/S is domiciled in Hellerup, Denmark.

At year-end, Novozymes had roughly 49,000 shareholders of whom 99% were private shareholders in Denmark. Twenty institutional investors, including Novo A/S, owned approximately 60% of the B shares. Around 65% of the B shares are held outside Denmark.

Novozymes held 3.7% of the B stock, equivalent to 3.1% of the total common stock.

No shareholders, except Novo A/S, held more than 5% of Novozymes' common stock on December 31, 2011.

### SHAREHOLDER DISTRIBUTION OF B COMMON STOCK



### FINANCIAL CALENDAR

Group financial statement for 2011	January 19, 2012
Annual Shareholders' Meeting	February 29, 2012
Group financial statement for the first quarter of 2012	April 25, 2012
Group financial statement for the first half of 2012	August 16, 2012
Group financial statement for the first nine months of 2012	October 25, 2012
Group financial statement for 2012	January 21, 2013

### CONTACT INVESTOR RELATIONS

Visit our Investor site at [www.novozymes.com](http://www.novozymes.com) for investor relations guidelines, presentations, tools and downloads, Group financial statements, and other information for both private and institutional shareholders.

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# OUTLOOK

THE NOVOZYMES REPORT 2011



# NOT BUSINESS AS USUAL

**We remain focused on executing our strategy and developing our core business through innovation and sustainability, but it is not a matter of business as usual. We continue to challenge ourselves and to challenge convention, as we are convinced this is the best way to create value both today and tomorrow.**

The human race reached a new milestone in 2011: There are now 7 billion of us! This is putting pressure on natural resources, many of which – including food, water, and energy – are already scarce or will be if we keep exploiting them unsustainably. With expected annual population growth of about 80 million people, it is hard to believe that we can carry on the way we do. We need change, not business as usual.

## **SUSTAINABLE SOLUTIONS HERE TODAY**

We need to use existing technologies to produce more with less, which is exactly what Novozymes' solutions make possible. Biotechnology enables us to decouple growth from the use of natural resources, as our solutions save energy and raw materials, and reduce waste. By being innovative and delivering valuable solutions based on industrial insight, we can help our customers change the world while simultaneously growing our business profitably.

For example, biomass is one of the world's largest renewable resources and has the potential to significantly supplement petrochemicals. Novozymes' technology can convert biomass into sugar that can be used instead of oil as a platform in the production of fuels and chemical building blocks in everything from sneakers and textiles to computers and packaging. A viable, environmentally friendly alternative to oil is no longer just a dream – advanced biofuels are now a reality with commercial-scale facilities coming on line, providing us with a sustainable solution to one of today's most critical resource issues.

## **RADICAL INNOVATION FOR TOMORROW**

Bioinnovation is demanding in itself, but as both a business and individuals we also need to challenge ourselves in other areas. In 2011, we looked at how we address social responsibility and announced how we had embarked on a food–energy venture in Mozambique where we will use biotechnology to help unlock the enormous potential of agriculture in the developing world. It is expected to be a scalable and replicable project that provides a return on our investment, and goes to show that social development is not necessarily dependent on government funding. The

world needs radical innovation to change, and this is one way we can help build a better world while developing our business.

## **A GREENER WORLD**

Novozymes is working for a bio-based society where resources and energy are used efficiently, pollution is reduced, and nature is preserved. We are committed to ensuring healthy returns on our investments, striking the right balance between better business, cleaner environment, and better lives – regardless of the economic climate.

This is also why Novozymes has now committed to hosting a global sustainability summit for the household care industry on a biennial basis. We want to catalyze change and innovation to make it possible for consumers to do their laundry with a reduced impact on the environment and still get their clothes clean – without extra costs. This is possible only by rethinking the entire value chain and sharing a common vision of a radically reduced footprint within the industry. Bringing together manufacturers, ingredient suppliers, and retailers to discuss industry trends, technical solutions, and consumer needs is a way to facilitate a shift toward more sustainable products. At the summit in December 2011, commitments were made to work toward greener detergent products through trade associations and technical collaborations.

We know that Novozymes holds some of the answers to the world's most pressing problems, but we also realize that we are only part of the solution. We must all work together to challenge convention and find a way forward. Above all, we need to rethink, not do business as usual!



Steen Riisgaard  
President & CEO



## **PIONEERING FOOD–ENERGY VENTURE IN AFRICA**

A growing population is putting pressure on natural resources, and millions of people already lack access to energy, water, food, and basic health care. Novozymes sees opportunities for using biotechnology to catalyze the development of agriculture and the food and biofuel industries in developing countries here and now. This will create new bio-based markets benefiting local communities and the environment as well as potential new business opportunities for Novozymes in the longer run.

### **Charcoal causes ill-health and deforestation**

Hundreds of millions of women in the developing world cook food for their families using charcoal-burning stoves. Indoor air pollution causes an estimated 2 million deaths per year and sickens millions more – mostly infants and small children. In addition to the impact on global health, nearly a third of Africa's 7 million km<sup>2</sup> of forest has already been destroyed for charcoal, stripping the continent of vital biodiversity and sending billions of tons of greenhouse gases into the atmosphere.

As announced in 2011, Novozymes has invested in a project in Mozambique via a joint venture, CleanStar Mozambique (CSM). The idea is to develop sustainable agriculture to increase food production and provide raw materials for the production of ethanol as a replacement for charcoal as cooking fuel in urban households.

### **Replicable business model**

CSM is helping smallholder farmers in the Sofala province implement an environmentally restorative agroforestry system that will produce a diverse mix of farm and forestry produce. The company purchases farmers' surplus production, thereby significantly increasing their incomes. CSM will process these agricultural products into a range of food products as well as an ethanol-based cooking fuel that will be sold primarily in urban markets, such as the capital Maputo.

By 2014, the venture expects to involve 3,000 smallholders cultivating over 6,000 hectares of their own land and supply 20% of Maputo households with a clean and cheaper alternative to charcoal, thereby protecting 4,000 hectares of indigenous forests from destruction each year.

The business model is innovative in that it does not take a position in an existing value chain, but builds an entirely new and sustainable value chain from farmer to retail. It addresses some of the key problems facing sub-Saharan Africa: land degradation, food and nutrition security, and energy sustainability. Furthermore, the model is expected to have commercial potential as it is both scalable and replicable.

### **Innovative and complementary partnership**

The venture benefits from its partners' complementary contributions: CleanStar brings expertise in agroforestry and social venture development, while Novozymes has enzymatic and microbial solutions for numerous industries, including food, agriculture, and biofuel. The two have also partnered with a number of other companies, most notably the process design and construction company ICM, which is providing the ethanol cooking fuel production facility.

### **Financing agreement with Bank of America Merrill Lynch**

CSM and Bank of America Merrill Lynch concluded a multimillion Certified Emission Reduction (CER) financing agreement in November 2011 to maximize the financial value of the project's carbon emission reductions. Under the agreement, the bank will purchase and market millions of CERs (each representing a ton of CO<sub>2</sub> saved), all generated in Mozambique and other developing countries in sub-Saharan Africa through the replacement of charcoal with clean cooking fuel. The finance and revenues received by CSM will be used to subsidize the upfront cost and ongoing warranty for the clean-burning stoves, technology that would otherwise be too expensive for low-income African consumers.

# STRATEGY AND LONG-TERM TARGETS

**Novozymes envisions a future where our biological solutions create the necessary balance between better business, cleaner environment, and better lives.**

Novozymes is a business-to-business company providing sustainable biological solutions. We compete by understanding customers' business needs, turning insights into cost-efficient and innovative biological solutions. We aim to drive the world toward sustainability together with our customers by making better use of the world's resources to meet needs for food, feed, fuel, and other consumables.

Our technological foundation is biotechnology, enzymes, and microorganisms. Wherever we choose to operate, our aim is to be the market leader. We operate with a triple bottom line and are thus committed to continuously improving our financial, environmental, and social performance.

Our strategic agenda is three-fold: drive innovation, expand opportunities, and improve productivity.

## DRIVE INNOVATION

Novozymes aims to deliver growth by bringing sustainable and innovative solutions to the market together with our customers. As the world's premier industrial enzyme producer with the greatest breadth and reach, we drive the industry forward by rethinking how and where enzymes can be applied. Our solutions address the need to improve industrial processes and products, making them more cost-efficient and sustainable, and enabling our customers to produce more with less. We regard sustainability as an integral part of our business and a significant driver of business opportunities and long-term customer relationships. We are committed to research and development, in which we invest around 14% of annual sales and employ more than 20% of our global workforce, and we are one of the world's most active patent filers in our field with a portfolio of close to 7,000 patents granted or pending.



**Business strategy:** Novozymes' strategic agenda is three-fold: We aim to deliver growth through innovation, to expand opportunities and create new and profitable business areas, and to improve productivity by constantly making better use of our own and nature's resources.

## EXPAND OPPORTUNITIES

Novozymes aims to build on our foundation in enzyme technology and explore biological business opportunities in other areas as well. Biological solutions such as microorganisms and proteins other than enzymes can also address the need for more sustainable, safe, and cost-efficient solutions, improve industrial processes, and reduce the consumption of raw materials, water, and energy. We lead the way in selected fields where Novozymes holds a competitive advantage due to our technological platform and organizational capabilities, and aim to turn a portfolio of opportunities into significant business areas that can sustain the company's growth and returns over time.

## IMPROVE PRODUCTIVITY

Novozymes aims to deliver sustainable returns on our innovations by constantly improving the use of both our own and nature's resources throughout our business and especially in our production processes. We use sophisticated technologies to improve the efficiency of our fermentation production processes, the strains that produce our enzymes, and the performance of the enzymes themselves. This enables us to increase output from existing facilities and reduce consumption of raw materials, water, and energy, making for a flexible production setup that improves our margins, returns, and environmental footprint.

## STRATEGIC UPDATE

Overall, there are no changes to the strategic direction outlined in 2009 and further described in The Novozymes Report 2010. Novozymes continues to focus on sustainable growth through innovation, market presence, and operational excellence.

## INNOVATION

Novozymes' main competitive advantage is related to our innovation efforts. Since 2000, Novozymes has invested more than DKK 10 billion in R&D and has launched roughly 100 new products. The aim with our innovation capabilities is to continue to explore the opportunities our technology holds, not only bringing new and sustainable market-expanding products and solutions to the market, but also improving the existing product portfolio. Our broad and diversified market approach is built around the same technology platform. This allows us to leverage competencies and innovation skills across industries and geographies, and we expect to continue to invest roughly 14% of sales in R&D, resulting in not only more innovative products, but also improved productivity in Novozymes' own facilities.

Regarding Novozymes' innovation efforts in the area of converting cellulose to fermentable sugars, we continue to see exciting developments. Last year, we believed the first large-scale commercial cellulosic ethanol plants would be up and running by 2012/2013. This has now been confirmed, as our partners are building plants around the world, with

the first one ready in 2012 in Italy. These first plants will give the proof of concept that could accelerate the building of further plants, allowing the world to meet the increasing demand for more sustainable liquid fuels. We are also seeing other exciting developments when it comes to our solutions being used to enable cost-efficient conversion of starch and cellulose to sugars, and further developing these sugars into bio-based chemical compounds. Novozymes already has collaborations in place in this area, but would expect more to come as industrial players search for alternatives to today's petrochemical-derived solutions. Novozymes will enable even more cost-efficient conversion of cellulose to sugars in 2012 with the launch of the next generation of our Cellic® CTec product range.

## MARKET PRESENCE

Novozymes is focusing not only on our innovative efforts, but also on building a strong market presence across industries and geographies. Although Novozymes already has a strong global presence, part of the additional DKK 150 million investment in R&D and business-building activities disclosed in The Novozymes Report 2010 was directed toward building an even stronger presence, especially in emerging markets. Our innovative solutions do not sell themselves, and an active approach to building close customer relationships is part of Novozymes' continued success within both Enzyme Business and BioBusiness. One example is the acquisition of EMD/Merck Crop Bioscience early in 2011, where we built a stronger position in the exciting BioAg industry. The bulk of our activities in the BioAg industry are currently related to pulse crops in North and South America, but we aim to expand into other crops and other parts of the world. To enable this, we need a presence in the markets where we want to expand, and we need to build relationships with customers to understand and develop the right technologies for their specific needs.

## OPERATIONAL EXCELLENCE

Operational excellence covers every aspect of Novozymes' operations. Our ability to make continuous productivity improvements allows us to improve profitability and returns, as we can delay investments in new capacity. This is a unique and key feature of Novozymes' operations and is expected to continue, but it requires investments in R&D for this purpose. Operational excellence also incorporates systems, structures, and processes. Our organization around R&D and sales structures allows us to be present and understand local needs and requirements, while at the same time leveraging our global knowledge base. Our global financial systems enable swift and stringent reporting, which reduces the risk of errors, and the establishment of centralized financial hubs provides efficient support for a growing company.

By continuously focusing on innovation, market presence, and operational excellence, Novozymes is able to increase returns to shareholders. In 2011, Novozymes not only improved sales, profitability, and returns, but was also able

to communicate an increased dividend payout ratio (from around 30% to around 35% over the next 2–3 years) and the initiation of a new share buyback program (DKK 2 billion over the next 2 years).

### INVESTMENTS

Novozymes has invested relatively heavily in recent years. We have built for future growth in both Enzyme Business and BioBusiness. Higher realized growth levels and the long-term growth expectation of more than 10% communicated in 2009 required more enzyme production capacity, and the decision to become a strong player in the area of hyaluronic acid required a dedicated cGMP production facility. As these relatively large investment programs come to an end in 2012 with the finalization of the enzyme production facility in the US, we expect an investment level of not more than 8% relative to revenue to be sufficient to cater for annual revenue growth of around 10%.

### ACQUISITIONS

Part of Novozymes' strategy is to acquire companies and technologies where we see a strategic fit in terms of either technology or market access. We continuously optimize our product and technology portfolio to make sure we have the right set of tools and offerings. In 2011, we acquired EMD/Merck Crop BioScience to position and develop Novozymes as a strong player in the exciting BioAg arena. We also divested part of our Biopharma operation as we no longer saw a need for the capacity and technology at the facility in Lund, Sweden. We will continue to explore exciting technology and market access acquisitions in 2012 and beyond, and our strong balance sheet puts us in a position to act should we find anything suitable, no matter the health of the financial markets.

## BIOPHARMA READY FOR GROWTH

Novozymes has made a number of changes to better position ourselves for future growth in the biopharma industry. In autumn 2010, Novozymes decided to discontinue our antimicrobial peptide (AMP) portfolio. This process was completed in 2011 when Novozymes found a good developer for the arenicin project in Adenium Biotech and decided to include plectasin in our exploratory work on developing AMPs for industrial use.

The decision to discontinue these projects triggered a review of the role of our Swedish operation. A divestment of the Swedish plant and the cell culture ingredient business was found to be the best option for the long-term prospects of the unit, as well as making the remaining biopharma business more focused. Novozymes accepted an offer from US-based Repligen Corporation in October, and the deal was finalized in December 2011.

Headquartered in Massachusetts, Repligen is a biopharmaceutical company listed on NASDAQ with annual sales of approximately USD 30 million. Novozymes considers Repligen a strong owner of the business with its dedicated focus on biomanufacturing and commitment to bioprocessing.

### Focus on medical devices as well as drug delivery and formulation

The changes leave Novozymes with a stronger foundation in biopharma where we believe that our competencies add significant value in terms of profitable growth. We are focusing on improving medical devices as well as drug delivery and formulation, with a streamlined product portfolio consisting of our products and technologies within albumin and hyaluronic acid (HA).

2011 brought considerable progress for both technologies. Novozymes opened a new facility in China supplying the world's first recombinant HA for medical devices as well as drug delivery and formulation, and we signed several new agreements for recombinant albumin for medical devices and drug delivery. Novozymes also ramped up the commercialization of our second-generation albumin and albumin fusion technologies, which have potential in the development of new and improved drugs in a number of therapeutic areas, as they can extend the half-life of drugs and so significantly reduce dosing frequency and increase efficacy.

Novozymes continues to see strong interest in these products and technologies from pharmaceutical companies, among others, and we are confident about the long-term value creation of our biopharma business.

## LONG-TERM TARGETS

Our long-term targets reflect Novozymes' integrated business approach. Besides our ambitions for sales growth and financial returns, the environmental and social areas of particular importance to our business are resource efficiency, environmental footprint, and sustainability leadership.

This year, we have added a new target related to our values (Touch the World) to sharpen focus on the importance of living them throughout the organization.

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### NOVOZYMES' LONG-TERM TARGETS

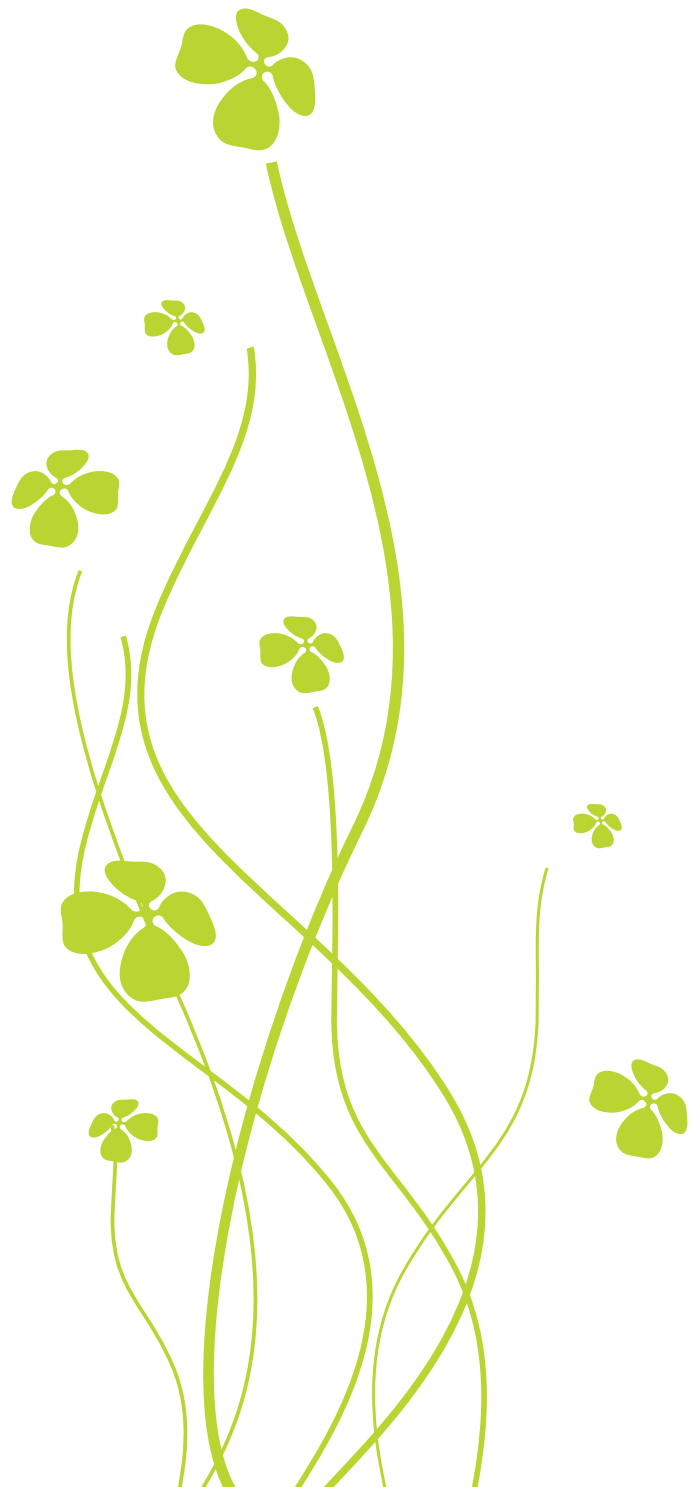
#### Financial targets:

- Organic sales growth of more than 10% p.a.\*
- EBIT margin of more than 20%
- Return on invested capital of more than 22%

\* Excluding sales of enzymes for cellulosic ethanol.

#### Sustainability targets:

- Enable a 75 million ton reduction in CO<sub>2</sub> emissions in 2015 through our customers' application of our products
  - Improve energy efficiency by 50% in 2015 compared to 2005
  - Improve CO<sub>2</sub> efficiency by 50% in 2015 compared to 2005
  - Increase energy supply from renewable and CO<sub>2</sub>-neutral sources to 50% in 2020
  - Improve water efficiency by 40% in 2015 compared to 2005
  - Be recognized as a global leader in sustainability
  - Be a preferred employer globally
  - Live Touch the World throughout the organization
- 



# EXPECTATIONS FOR 2012

Sales are expected to grow by 7–11% in 2012, and operating profit by 9–12%. The expectations for 2012 reflect uncertainty about the global economy, expressed by relatively wide intervals for the sales and earnings growth guidance. We expect to further improve our resource efficiency in production.

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## EXPECTATIONS FOR 2012

### Financial targets:

- Sales growth of 7–11% in DKK
- Sales growth of 3–7% in local currency (LCY)
- Organic sales growth of 4–8%
- EBIT growth of 9–12%
- EBIT margin of 22–23%
- Net profit growth of 5–8%
- Investments of around DKK 1,200 million
- Free cash flow before acquisitions of around DKK 1,500 million
- ROIC of around 20%

### Sustainability targets:

- Enable a 47 million ton reduction in CO<sub>2</sub> emissions through our customers' application of our products
  - Improve energy efficiency by 38% compared to 2005
  - Improve CO<sub>2</sub> efficiency by 50% compared to 2005
  - Improve water efficiency by 33% compared to 2005
  - Score at least 75 for "satisfaction and motivation" in our employee survey
  - Score at least 74 for "opportunities for professional and personal development" in our employee survey
  - Score at least 80 for "my colleagues live Touch the World" in our employee survey
  - Keep the frequency of occupational accidents below 4.0 per million working hours
  - Keep employee absence below 3%
  - Keep employee turnover between 4% and 9%
  - Obtain Gold Class rating by SAM in the Sustainability Yearbook 2012
- 

### SALES EXPECTATIONS

The full-year 2012 guidance reflects the uncertainty about the global economy. It is difficult to predict at what pace global demand might deteriorate in the event of further negative economic sentiment or signals. Although Novozymes has proven relatively resilient in recessionary economies (last shown in 2009) thanks to the characteristics of some of the markets our products and technologies serve and the advantages they offer, our sales are also partly dependent on consumption and GDP growth. The full-year organic sales growth guidance of 4–8% addresses the current level of uncertainty.

Adjusting the 2012 sales growth expectation for the roughly 1 %-point negative impact of divestments and acquisitions during 2011, the full-year LCY sales growth expectation is 3–7%. Based on exchange rates at January 18, 2012, sales growth in DKK is expected at 7–11%.

Within Enzyme Business, Household Care Enzymes are expected to be the strongest contributor to full-year sales growth. Feed Enzymes, included in the Feed & Other Technical Enzymes area, are also expected to be a relatively strong contributor to full-year sales growth. The full-year sales outlook is based on the expectation that the US biofuel industry will produce roughly 14.2 billion gallons of ethanol in 2012, up by 2–3% compared to 2011. Full-year Bioenergy Enzymes sales should also benefit from the introduction of new and more efficient products and should be able to outpace the underlying growth in ethanol volumes.

BioBusiness sales are expected to grow in double digits organically, with positive contributions from Microorganisms and Biopharma. Novozymes BioAg sales are weather sensitive, as seen in the 2011 US Midwest flooding and late planting season, which impacted Novozymes' BioAg sales negatively, but should be able to deliver healthy growth under normal weather conditions. The other Microorganisms industries should also develop well. The divestment of Novozymes Biopharma's operation in Lund, Sweden, will have a negative sales impact of roughly DKK 90 million in 2012, which will impact both LCY and DKK sales growth negatively. This has been included in the guidance.

### EARNINGS EXPECTATIONS

EBIT growth is expected at 9–12%. Compared to 2011, there are positive effects from the absence of the IFRS adjustment of acquired inventories at EMD/Merck Crop BioScience, slightly more beneficial currency exchange rates, the divestment of Novozymes Biopharma's slightly loss-making operation in Lund, Sweden, and continued productivity improvements. Pulling the other way are higher



raw material prices, full staffing costs and low capacity utilization at the HA facility in China, and higher staffing costs at the new enzyme facility in Nebraska, USA, together with continued investments in R&D and business-building activities to support our long-term growth ambition. The projects within the additional DKK 150 million investment in R&D and business-building activities described in The Novozymes Report 2010 were all initiated in 2011 and have full-year effect in 2012.

As a result of the above, the 2012 expectation for the EBIT margin is 22–23%.

Net profit is expected to grow by 5–8%. USD exposure for 2011 was hedged at 5.85 DKK/USD. USD exposure for 2012 has been hedged at 5.70 DKK/USD, and 75% of expected 2013 DKK/USD exposure has been hedged at 5.60.

### INVESTMENT AND CASH FLOW EXPECTATIONS

As expected previously, the relative investment level should start to decline. For 2012, we expect around DKK 1.2 billion in investments. Besides maintenance CAPEX, the main part of the investments relates to the finalization of the Nebraska enzyme facility. Part of the expected investments in the Nebraska enzyme facility that were planned to take place in 2011 has been included in the expected CAPEX figure for 2012.

Free cash flow before acquisitions is expected at around DKK 1.5 billion, mainly as a result of higher net profit and the lower CAPEX.

Return on invested capital is expected at around 20%, slightly lower than in 2011 due to the acquisition of EMD/Merck Crop BioScience in 2011 having its full impact in 2012.

### EXCHANGE RATES AT YEAR-END

The outlook is based on exchange rates for the company's key currencies remaining at the closing rates on January 18, 2012, for the full year.

(DKK)	EUR	USD	JPY	CNY
Average exchange rate 2010	745	562	6.42	83.08
Average exchange rate 2011	745	536	6.73	82.94
Closing rate January 18, 2012	744	580	7.55	91.82
Estimated average exchange rate 2012*	744	580	7.55	91.82
Change in estimated exchange rate 2012 compared to average exchange rate 2011	0%	8%	12%	11%

\* Estimated average exchange rate is calculated as the average exchange rate YTD combined with the closing rate ROY.

Note: Other things being equal, a 5% movement in the USD is expected to have an annual impact on EBIT of DKK 60–80 million.

### UTILIZATION OF RESOURCES AND CLIMATE CHANGE IMPACT

We have chosen 2005 as the baseline year for our resource efficiency targets. The targets for 2012 for improving resource efficiency are 38% for energy, 33% for water, and 50% for CO<sub>2</sub>. The CO<sub>2</sub> target is based on emissions from Novozymes' own production sites and from energy suppliers.

Furthermore, we want to emphasize the potential of our technology to reduce the environmental footprint during a product's life cycle by setting a target of enabling a 47 million ton reduction in CO<sub>2</sub> emissions through our customers' application of our products.

### WORKPLACE DEVELOPMENT

Our goal is to have satisfied and motivated employees at Novozymes. We address this through targets for employee satisfaction and employee development. The target for "satisfaction and motivation" is a score of at least 75, and the target for "opportunities for professional and personal development" is a score of at least 74 in the employee survey. In 2012, we have added a new target for our employees' identification with our new set of corporate values, Touch the World, as a way to follow up on the launch of these values in 2010 and further implementation efforts in 2011. The target is to score at least 80 for "My colleagues live Touch the World" in our employee survey.

In addition to these targets, we aim to keep the frequency of occupational accidents below 4.0 per million working hours in 2012 and the rate of absence from work below 3%. The target for employee turnover is set at a range that reflects the present job market and Novozymes' aims with regard to attraction and retention of employees. We see it as preferable to have a turnover above 4% and below 9% in 2012.

### SUSTAINABILITY LEADERSHIP

Our target of a Gold Class rating from SAM in the Sustainability Yearbook 2012 reflects the importance we attach to benchmarking Novozymes against our peers in relevant areas. Although we have chosen Dow Jones Sustainability Indexes and SAM's rating as yardsticks, a number of alternative ratings are just as valuable.

Novozymes expects to launch 6–8 new products in 2012.

## ADVANCED BIOFUELS ON THE BRINK OF COMMERCIALIZATION

Construction began in 2011 on the first commercial plants for the production of biofuels from agricultural residues, and the industry continued to advance through process improvements and government support. Grants and loan guarantees in the US, a new 5-year plan in China, and industry initiatives in Europe and Brazil point toward commercial-scale facilities becoming operational on all four continents within the next couple of years.

This is what Novozymes has been working for in close concert with our partners for a number of years, and we are now on the brink of commercialization.

### Milestones in 2011

In the US, the Environmental Protection Agency approved E15 gasoline (15% ethanol) for vehicle model year 2001 onward. The previous “blend wall” allowing only 10% ethanol to be blended in gasoline had threatened to prevent further growth in biofuel production and compliance with the Renewable Fuel Standard. While commercial challenges remain, this landmark decision offers a clear way forward for increased use of biofuel in the US.

Meanwhile, the US Departments of Energy and Agriculture continued to support advanced biofuels by providing funding and loan guarantees for the first commercial plants. Novozymes’ partner POET as well as other companies received loan guarantees under these programs during the year. In addition, the Department of Defense announced that it will invest up to USD 510 million over the next 3 years in the production of advanced “drop-in” aviation and marine biofuels for military and commercial transportation.

In Italy, Novozymes’ partner Mossi & Ghisolfi Group began work on what is expected to be the world’s first commercial-scale plant for advanced biofuels. The facility is due to be fully operational by mid-2012, producing roughly 50 million liters a year from energy crops and wheat straw.

China announced considerable support for advanced biofuels in its 5-year plan for 2011–2015. Acknowledging that advanced biofuels are in their infancy, the government will provide support for industrial players to commence construction of the first commercial facilities over the next 5 years. Novozymes’ Chinese partners COFCO and Sinopec plan to bring an advanced biofuel plant with a capacity of 50 million liters on line within the next few years.

Novozymes launched the first commercially viable enzyme for the production of biofuel from agricultural waste early in 2010. With the first commercial plants now becoming operational, and all the industrial and political initiatives being launched around the world, we look forward to learning how the technology scales, driving further improvements and commercial opportunities.





# MANAGEMENT

THE NOVOZYMES REPORT 2011



# MANAGEMENT



**From the left:** Lars Bo Kjøppler, Mathias Uhlén, Lena Olving, Steen Riisgaard, Thomas Nagy, Peder Holk Nielsen, Kurt Anker Nielsen, Ulla Morin, Per Falholt, Henrik Gürtler, Paul Petter Aas, Thomas Videbæk, Benny D. Loft, Jørgen Buhl Rasmussen, Agnete Raaschou-Nielsen, Søren Henrik Jepsen.

## Board of Directors

### **HENRIK GÜRTLER\***

Born 1953. CEO, Novo A/S. Chairman of the Board since 2000. Elected for one year at a time.

#### **Board positions**

##### **Chairman:**

Copenhagen Airports A/S  
COWI A/S

##### **Member:**

Novo Nordisk A/S

#### **Special competencies**

In-depth knowledge of Novozymes' business and expertise in managing and working in an international biotechnology company

### **KURT ANKER NIELSEN\***

Born 1945. Vice Chairman of the Board. Chairman of the Audit Committee. Member of the Board since 2000. Elected for one year at a time.

#### **Board positions**

##### **Chairman:**

Dalhoff Larsen & Horneman A/S  
Reliance A/S

##### **Member:**

The Novo Nordisk Foundation

#### **Member and chairman of the audit committee:**

Novo Nordisk A/S  
Vestas Wind Systems A/S  
Veloxis Pharmaceuticals A/S

#### **Special competencies**

Expertise in financial and accounting matters, and in-depth knowledge of Novozymes' business

\* These board members are not regarded as independent in the sense of the definition contained in the Danish Recommendations on Corporate Governance.

### AGNETE RAASCHOU-NIELSEN

Born 1957. Member of the Board since 2011. Elected for one year at a time.

#### Board positions

##### Chairman:

Brdr. Hartmann A/S  
Pension Fund for Danish Lawyers and Economists

##### Vice Chairman:

Danske Invest

##### Member:

Danske Invest Management A/S  
Dalhoff Larsen & Horneman A/S  
Arkil Holding A/S  
Danish Energy Technology Development and Demonstration Program (EUDP)

##### Member of the audit committee:

Dalhoff Larsen & Horneman A/S

#### Special competencies

Business development and acquisitions, macroeconomic expertise, and particular expertise in intellectual property rights

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### JØRGEN BUHL RASMUSSEN

Born 1955. President and CEO, Carlsberg A/S. Member of the Board since 2011. Elected for one year at a time.

#### Board positions

##### Chairman:

JSC Baltika Breweries

##### Member:

Carlsberg Breweries A/S  
Confederation of Danish Industry's Permanent Committee on Business Policies

#### Special competencies

Acquisitions, international business and management, specifically in sales, marketing, and branding

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### LARS BO KØPPLER

Born 1962. Technician. Employee representative. Member of the Board since 2010. Elected for four years at a time.

### LENA OLVING

Born 1956. Deputy CEO and COO, Saab AB (Sweden). Member of the Board since 2011. Elected for one year at a time.

#### Board positions

##### Member and member of the audit committee:

SJ AB

#### Special competencies

International experience in supply chain, process optimization, and production, including financial and accounting expertise

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### MATHIAS UHLÉN

Born 1954. Professor, the Royal Institute of Technology (Kungliga Tekniska Högskolan), Stockholm (Sweden) and the Technical University of Denmark (Danmarks Tekniske Universitet, DTU). Member of the Board since 2007. Elected for one year at a time.

#### Board positions

##### Chairman:

Antibodypedia AB  
Atlas Antibodies AB

##### Vice Chairman:

Affibody AB

##### Member:

KTH Holding AB  
Swetree Technologies AB  
Norddiag ASA  
Bure Equity AB

#### Special competencies

Broad experience in research and biotechnology

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### PAUL PETTER AAS

Born 1946. Senior Vice President, Yara International ASA (Norway). Member of the Board since 2000. Elected for one year at a time.

#### Special competencies

Extensive international management experience

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### SØREN HENRIK JEPSEN

Born 1947. Regulatory Affairs Manager. Employee representative. Member of the Board since 2005. Elected for four years at a time.

### ULLA MORIN

Born 1954. Laboratory Technician. Employee representative. Member of the Board since 2001. Elected for four years at a time.



# Executive Management

## STEEN RIISGAARD

Born 1951. President and CEO.

### Board positions

#### Chairman:

WWF (World Wide Fund for Nature) Denmark

#### Vice Chairman:

Egmont International Holding A/S

Rockwool International A/S

#### Member:

CAT Science Park A/S

ALK-Abelló A/S

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## BENNY D. LOFT

Born 1965. Executive Vice President and CFO.

### Board positions

#### Member:

The Blue Planet

Xellia Pharmaceuticals AS

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## PEDER HOLK NIELSEN

Born 1956. Executive Vice President, Enzyme Business.

### Board positions

#### Member:

Hempel A/S

LEO Pharma A/S

## PER FALHOLT

Born 1958. Executive Vice President, Research & Development and CSO.

### Board positions

#### Member:

DHI Group

ARTs Biologics A/S

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## THOMAS NAGY

Born 1963. Executive Vice President, Stakeholder Relations and COS.

### Board positions

#### Member:

Danish-American Business Forum

American Chamber of Commerce in Denmark

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## THOMAS VIDEBÆK

Born 1960. Executive Vice President, BioBusiness.





# CORPORATE GOVERNANCE

**Novozymes aims to ensure that the Board of Directors always has the best possible mix of competencies, and therefore three new members with new areas of expertise and experience were elected in 2011. The relationship between the Board of Directors and Executive Management was once again considered very satisfactory.**

Novozymes' management systems have been developed over several years and are constantly adjusted to reflect changes in legal requirements, new business developments, and stakeholder expectations. A cornerstone of these management systems is Novozymes' corporate governance setup.

Corporate governance is the name commonly given to the frameworks and guidelines for business management, including the overall structures and principles that regulate the interaction between a company's management bodies, shareholders, and other stakeholders. As every company is unique, there is no exact standard for "good corporate governance." However, a number of valid principles have been developed and stated in recommendations, guidelines, or law. Novozymes' goal is to have management systems in place that ensure openness and transparency at all times, providing stakeholders with relevant insight into the business – and, of course, effective management.

In accordance with Danish legislation, Novozymes has a two-tier management system comprising the Board of Directors and Executive Management, with no individual a member of both. The division of responsibility between the Board of Directors and Executive Management is clearly laid down and described in the Rules of procedure for the Board of Directors and Rules of procedure for Executive Management, available at [www.novozymes.com](http://www.novozymes.com).

## CHARTERS AND RECOMMENDATIONS

In laying down the management principles for Novozymes, the Board of Directors has followed the Recommendations on Corporate Governance that form part of the disclosure requirements applicable to companies listed on NASDAQ OMX Copenhagen.

The recommendations require companies to explain any noncompliance. Novozymes follows 72 of 79 recommendations, the exceptions being:

- Remuneration and nomination committees have not been set up. Instead, these responsibilities are laid down in the Charter for the Chairmanship. The Chairmanship comprises the Chairman and Vice-Chairman of the Board (Recommendations 5.10.7 & 5.10.8)
- Information on the remuneration of Executive Management is provided at an aggregate rather than an individual level. Novozymes considers this information to be private and confidential. We believe that information at an individual level is of limited value to shareholders and that the information provided is adequate to evaluate the compensation of Executive Management. Information on the maximum level of individual remuneration is nevertheless provided – see Note 4 to the consolidated financial statements (rec. 6.2.3)
- The remuneration policy for Executive Management contains no specific clause on the repayment of variable remuneration components paid on the basis of misstated information as Novozymes considers the rules in Danish law to be sufficient in such cases (rec. 6.1.8)
- The current Executive Management has the right to termination payments amounting to a maximum of 3 years' fixed base salary and pension contributions. This maximum does not currently exceed the recommended maximum of 2 years' total remuneration. Novozymes has decided not to change existing contracts, but future contracts will provide for a maximum of 2 years' fixed base salary (rec. 6.1.9)
- Due to the limitations imposed by the articles of association of the Novo Nordisk Foundation and Novozymes' ownership structure, the Board of Directors reserves the right in certain circumstances to reject takeover bids without consulting shareholders (rec. 1.4.1 & 1.4.2)

A detailed review of Novozymes' position on all of the recommendations can be found under Corporate governance at [www.novozymes.com](http://www.novozymes.com).

Novozymes also acts within the parameters of *Touch the World* – a document setting out our values and commitments – and we have committed to principles derived from the UN Global Compact and UN Convention on Biological Diversity.

## CHANGES SINCE LAST YEAR

Lena Olving, Agnete Raaschou-Nielsen, and Jørgen Buhl Rasmussen joined the Board of Directors in 2011, while Walther Thygesen and Jerker Hartwall did not seek re-election.

The composition of the Board of Directors must be such that the combined competencies of its members enable it always

to inspire, guide, and oversee the company's development, and diligently address and resolve the issues and problems faced by the company at any time. The Board should also represent a diversity of experience, background, gender, and origin. When selecting the new members, priority was therefore given to finding individuals whose particular skills provide a strong bridge between innovation and the marketplace, as this is essential for Novozymes.

Lena Olving and Agnete Raaschou-Nielsen have been appointed members of the Audit Committee. The Board of Directors considers that these two new members of the Audit Committee fulfill the statutory requirements for accounting expertise and independence. The Audit Committee is chaired by Kurt Anker Nielsen.

### SELF-ASSESSMENT OF THE BOARD OF DIRECTORS

The Board's main responsibilities are to:

- Ensure the best possible day-to-day management of the company and the right organizational structure
- Supervise financial and sustainability performance, and Executive Management's day-to-day running of the company
- Participate in the overall management and strategic development of the company

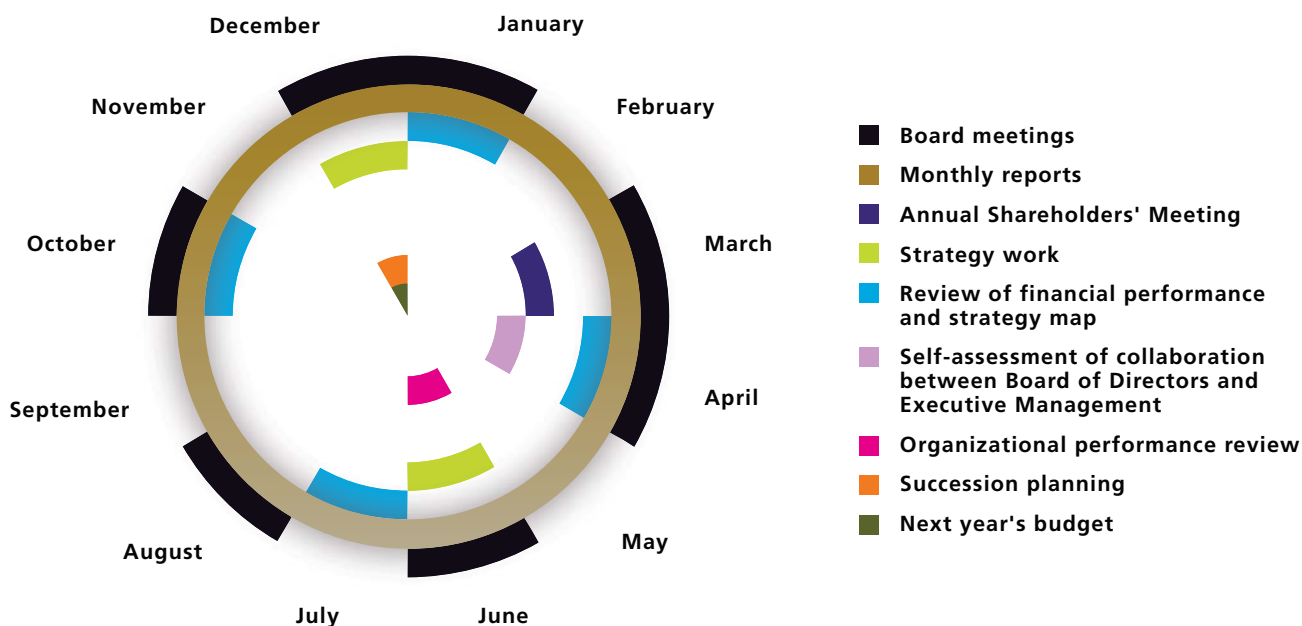
For an overview of the tasks performed to fulfill these responsibilities, see the diagram *A year with the Board of Directors*.

The Board of Directors held seven meetings in 2011. Four were attended by all board members, and the remaining three by all but one member.

In order to ensure that Novozymes has well-functioning management systems in place at all times, the Board of Directors and Executive Management assess annually whether their main responsibilities have been fulfilled. The performance of the Board of Directors and Executive Management and the quality of collaboration between these two bodies are also discussed and assessed.

The assessment in 2011 was once again positive, with only minor areas for improvement identified. Overall, there was broad satisfaction with the planning, content, and implementation of the meetings. The general impression was that presentations and discussions at the meetings were of high quality, and that Executive Management was very responsive to input from the Board. There was agreement that the succession process for the new board members had been well prepared and executed, and there was great satisfaction with the increased diversity in the Board. The Board and Executive Management contemplated an increase in one-on-one meetings between individual

### A YEAR WITH THE BOARD OF DIRECTORS



members of Executive Management and the Board of Directors when projects or other circumstances so require.

One of the responsibilities of the Board of Directors is to assess each year whether the ownership structure with A and B common stock is optimal. The Board of Directors maintains that this is the best way to safeguard Novozymes' long-term development and thus to benefit the company's shareholders and other stakeholders.

In addition, the Audit Committee performs an annual assessment of its own performance, and the external auditors are asked to evaluate whether its performance fulfilled the requirements of the Audit Committee's charter. The 2011 assessment was very positive and resulted in only minor suggestions for improvement.

Each year, the Audit Committee evaluates the need for an internal audit function at Novozymes. Based on its positive assessment of the company's internal control environment, the Audit Committee has advised the Board of Directors that the establishment of an internal audit function is not necessary.



# RISK MANAGEMENT

**Novozymes' management systems are set up to seek growth opportunities, while at the same time reducing risk and ensuring compliance with rules and regulations in the environmental, social, and financial areas.**

At the top of Novozymes' management system, Touch the World sets out the company's vision, company idea, commitment, and values. It outlines our philosophy and guides us in how we operate and behave as a responsible corporate citizen. By acting in accordance with these principles, we encourage the right behavior and thereby reduce the risk of misconduct. To ensure that the company lives up to the values in Touch the World, an organizational performance process is conducted annually to assess the impact of each business unit's work to support and uphold the principles in Touch the World. Furthermore, Novozymes has set a target for 2012 to measure our ability to live Touch the World throughout the organization.

Our business integrity principles are an example of how the desired behavior is encouraged in the organization. The principles will continue to evolve and adapt to a changing world, and in 2011 they were updated to ensure they remain at the forefront of best practice and to ensure compliance with the UK Bribery Act. Our business integrity principles can be found at [www.novozymes.com](http://www.novozymes.com).

Ensuring the right behavior internally is risk mitigating in itself, but as risks are often related to external factors, the process of identifying and managing risk is integrated into Novozymes' management systems at all levels. We define risks as "events or tendencies that can prevent the company from achieving its overall targets – including financial, environmental, and social targets – or negatively affect our image or our future results and activities." Novozymes strives to identify risks as early as possible and, once they have been identified, to act and follow up on them.

Risks can also be related to internal procedures, such as errors leading to the misstatement of information, malfunctioning of products, etc. Novozymes strives to minimize these procedural risks through the extensive use of quality management systems and ISO certifications. These systems include general policies and standards, as well as detailed control and action requirements covering both global procedures and specific requirements dependent on location, business area, and function.

To ensure compliance with the requirements of quality management systems, a large number of internal quality audits are performed. The results of these audits are distributed to relevant management levels.



**Stakeholder engagement:** Novozymes engages with stakeholders to stay in touch with their expectations and the needs of society. Dialogue is important to manage risks and opportunities.

### TIMELY AND ACCURATE REPORTING

Novozymes attaches great importance to timely, transparent, and accurate reporting, as this is considered key to being a trustworthy company.

Novozymes' risk management and internal controls relating to financial reporting are designed to facilitate:

- Presentation of management accounts that allow the Group's performance to be measured, evaluated, and monitored
- Presentation of financial statements that provide a true and fair view without material misstatement, and comply with International Financial Reporting Standards, as adopted by the EU, and other additional disclosure requirements for the annual reports of listed companies

Novozymes' internal controls and risk management systems are updated on an ongoing basis and have been designed with a view to discovering and eliminating errors and defects in the financial statements and procedures.

However, as there is always a risk of misuse of assets, unexpected losses, etc., the internal controls and risk management systems can only provide reasonable and not absolute assurance that all material errors and defects are discovered and eliminated.

The environmental and social data presented in The Novozymes Report are also covered by internal controls and the risk management systems.

A more detailed description of Novozymes' risk management and internal controls concerning the financial reporting process can be found in the statutory report on corporate governance fulfilling the requirements in Section 107b of the Danish Financial Statements Act.

The financial reporting process and the internal controls supporting it are monitored by the Audit Committee. As

part of this monitoring, all cases of fraud and concerns raised either through the whistleblower system or directly by internal or external personnel are reported to the Audit Committee. Four cases of fraud were reported in 2011. All cases led to the dismissal of employees, but none were reported to the police.

### FULFILLING SUSTAINABILITY REPORTING REQUIREMENTS

Under Section 99a of the Danish Financial Statements Act, it is mandatory for large companies to report on corporate responsibility. As a member of the UN Global Compact, Novozymes prepares a Communication on Progress, which is published at [www.novozymes.com](http://www.novozymes.com) under Sustainability, and aims to fulfill both the requirements for reporting on corporate responsibility and the Global Compact's advanced reporting criteria. In addition, The Novozymes Report contains integrated financial, environmental, and social reporting.

### RISKS, OPPORTUNITIES, AND STAKEHOLDER ENGAGEMENT

While Novozymes aims to do business in accordance with our values, we also have to stay in touch with the needs of society. One way of identifying risks, opportunities, and new trends, while at the same time living up to Novozymes' ambition of being open and honest, is to engage with our stakeholders. We give high priority to understanding and living up to our stakeholders' expectations, as we wish to maintain a good reputation.

In our dialogue with stakeholders we also promote our points of view, our solutions, etc. We want to ensure that this is done in a respectful way that does not create a risk of harming Novozymes' reputation. Novozymes has therefore established principles for ethical ways to influence our

### Annual process for sustainability trend-spotting and target-setting



stakeholders. In other words, we have a management standard defining good business practice for dealing with authorities, policymakers, and political parties.

To fulfill our commitment to society, Novozymes must always be up-to-date on the sustainability agenda relevant to our stakeholders and society at large. Through numerous annual meetings with our stakeholders, such as investors, politicians, customers, neighbors, and NGOs, we become aware of relevant issues and trends that provide valuable input for our strategic development – and have done so for many years. This helps capture market opportunities, discover risks, spur innovation, and consequently maintain our role as a leader in sustainability.

Our Sustainability Development Board (SDB), consisting of vice presidents from all key business functions, is responsible for developing our sustainable development strategy and targets. To provide qualified support for strategic decision-making and pursue an ambitious sustainability strategy, the SDB is presented with systematic surveys identifying and assessing trends that have a material business impact and are relevant to Novozymes' stakeholders. The SDB uses these surveys to select key trends, assessing their relevance and importance to Novozymes' business strategies. The SDB reports directly to Novozymes' Executive Management, that evaluates and approves the sustainability targets and strategy before the Board of Directors' final approval.

## **ENTERPRISE RISK MANAGEMENT SETUP**

### **LONG-TERM SCENARIOS**

Executive Management conducts an annual evaluation of opportunities and barriers for future growth. This evaluation is based on reports on long-term scenarios for each of the business areas. As the scenarios are used as input for strategic decisions, the reports are supplemented with in-depth descriptions, sensitivity analyses, and, for expansion projects and larger investment proposals, an estimate of the net present value of the investment.

Part of this scenario work involves identifying potential bottlenecks for future growth, such as the need to expand production capacity and the availability of resources such as water. Some of the scenarios presented to Executive Management spring from risks and opportunities identified by the enterprise risk management setup.

### **RISK ASSESSMENTS**

Novozymes frequently performs risk assessments in different parts of the organization, some of them together with external partners such as insurance companies. We also conduct assessments of our social and environmental impact at production sites, which are verified against third-party risk surveys and recent trends in sustainability risk assessment.

As part of these processes, targets are set to improve performance within the assessed areas. If risks or

noncompliance are discovered, our systems ensure that further action is taken, as these shortfalls are included in management reviews at different levels depending on severity.

In June 2011, the UN Human Rights Council endorsed the Guiding Principles on Business and Human Rights. Based on our human rights work, Novozymes is well prepared to fulfill these guidelines. This commitment is supported by an annual self-assessment process that documents the main issues in different regional contexts, the level of compliance with our minimum standards internally, and any shortfalls, including potential adverse impacts. A similar process is in place for screening suppliers.

### **ENTERPRISE RISK MANAGEMENT SETUP**

As well as the activities mentioned above to identify risks, Novozymes has a formal process to continually map, assess, and mitigate risks. All business units and vice presidents systematically report new risks and any changes to previously defined risks. This process, which is headed by the Vice President of Finance, ensures that top management has a high level of risk awareness, with involvement and ownership throughout the organization.

Reported risks are collated and mapped by Corporate Financial Planning & Analysis on the basis of probability and possible consequences. Risks are assessed and classified on the basis of both financial and reputational impact, and the reporting covers both financial and nonfinancial risks.

The aim of risk management at Novozymes is to ensure proactive management of key risks, so that efforts to reduce both probability and unwanted consequences will be made where possible.

Every six months, risks are reported to Corporate Financial Planning & Analysis. These are then assessed, and a shortlist of approximately 30 risks judged to be the most significant is reported to Executive Management, and any required corrections or actions are decided and implemented. Twice a year, the most significant risks are also presented to and discussed with the Board of Directors.

This systematic and analytical approach to risk management enables Novozymes to achieve greater transparency and gives a stronger basis for making decisions about investing resources. In addition, it provides Executive Management with the opportunity to discuss risks and undertake the necessary actions in relation to the Group's risk profile.



# RISK FACTORS

Novozymes is exposed to a wide range of risk factors. We strive to identify and mitigate risks that could affect our financial, environmental, or social performance as early as possible.

This section describes a number of critical risks along with measures that Novozymes has taken to reduce them. The list is not in any order of priority and is not exhaustive.

Financial risks are presented in Note 37 to the consolidated financial statements.

## SALES-RELATED RISKS

### MARKETS, CUSTOMERS, AND SALES CHANNELS

Novozymes sells products worldwide and is subject to the financial and political risks this naturally entails. Growth in individual markets is therefore influenced by the local economic situation and local legislation. However, many of Novozymes' products are used in everyday household commodities across tiers and geographical markets, and are as such relatively non-cyclical.

Novozymes works together with our agents, distributors, and other business partners to ensure that they know and support Novozymes' business integrity rules when selling our products.

### CUSTOMER CONCENTRATION

A relatively small number of customers account for a high proportion of Novozymes' sales in certain product areas, which means that Novozymes is also affected by trends in these customers' markets. Novozymes works closely with our major customers to limit risks, for example by means of joint development projects and joint production planning, including the integration of IT systems.

### INNOVATION

Novozymes strives to maintain our position as market leader by continually launching new and improved, high-quality products that meet customers' needs. Novozymes' projected sales are not dependent on single large product launches, as we constantly have several new products in the pipeline. This places high demands on the Group's research and development function, requiring it to keep pace with customer needs. Inability to support these needs could increase the risk of a negative impact on Novozymes' sales growth targets. Novozymes allocates around 14% of sales to research and development to ensure sufficient resources for future innovation.

### ENZYMES PRODUCED USING GMOS

Novozymes produces a large number of enzymes using genetically modified organisms (GMOs) in closed conditions. Without this technology, it would be necessary to use larger quantities of raw materials, water, and energy, and in many cases commercial production of an enzyme would not be viable. The use of gene technology is the subject of ongoing debate around the world, mainly concerning genetically modified crops or foods containing GMOs. Novozymes' use of gene technology has only featured in the debate to a limited degree, as the Group's end products do not contain GMOs. However, it is possible that Novozymes' production and sales to the food and feed industries in particular may be affected by the public debate on gene technology and the impact this may have on consumer demand and government regulations.

Read more about Novozymes' use of gene technology at [www.novozymes.com](http://www.novozymes.com).

### SUPPLY CHAIN MANAGEMENT

Novozymes attaches importance to integrating sustainability and risk management into the selection and evaluation of key suppliers. An advanced supplier performance management system is used to identify risks and opportunities in our global purchasing processes.

Sustainability is a performance parameter in the system and is evaluated alongside commercial and quality parameters. Instead of relying only on supplier self-evaluations, the supplier evaluation process is supplemented with media research, dialogue, and the critical insight of Novozymes' purchasers. The system helps rank and compare suppliers according to risk and opportunity and provides an overview of the global supplier pool. The system is also designed to help the purchasing function identify the suppliers who typically pose the biggest risks. Suppliers with critical issues are subject to further questions, action plans, or an audit.

As maintaining optimal production is critical for Novozymes, there is a strong focus on the reliability of deliveries from suppliers. To safeguard supplies, cooperation agreements have been entered into with a number of key suppliers. These agreements also help to reduce sensitivity to fluctuations in the market price of raw materials and energy.

### COMPETITION

Historically, Novozymes has experienced constant price pressure in our markets. Competition from producers based in low-cost countries will always be a challenge. One of the ways in which we are trying to counter this challenge is by using our technology to continuously optimize production, thereby reducing costs per unit produced so that production

remains at the forefront and competitive. Another way to counter the competition is to stay ahead in product innovations and continually launch new and improved products.

### PATENT STRATEGY

Novozymes' technology is the basis of our business, and we pursue an active patent strategy by protecting new discoveries as early as possible. This prevents new products, processes, etc., from being copied. With almost 7,000 patents granted or pending, Novozymes has an extensive patent portfolio that we actively safeguard to prevent and stop infringement by competitors.

### ENVIRONMENTAL AND SOCIAL RISKS

Novozymes' fundamental values include environmental and social responsibility. These are key to the way in which Novozymes conducts business and are significant to all activities. These values are underpinned by a number of targets for environmental and social responsibility.

### REPUTATION

Novozymes' reputation is an important factor throughout the business, from our interaction and partnerships with customers to our relations with authorities and recruitment of new employees. Novozymes aims to maintain a good reputation by means of openness and transparency in both internal and external communications. Work is also carried out on an ongoing basis to reduce the risk of situations arising that could damage Novozymes' reputation. For example, we continually train our employees in our business integrity principles. Relevant legislation must be complied with at all times, and Novozymes is committed to ensuring high standards in everything we do and to conducting our business operations in a responsible way.

Having a positive impact on our surrounding environment is important to Novozymes. We therefore endeavor to do business in such a way that our environmental impact is part of the solution to current environmental problems. Novozymes' targets of achieving significant reductions in CO<sub>2</sub> emissions and water and energy consumption demonstrate our commitment to this ambition.

### ANIMAL TESTING

Novozymes uses animal testing in connection with the development and approval of products where this is demanded by public authorities. The use of animal testing is the subject of ongoing public debate and as such constitutes a risk to Novozymes' reputation and business. The current product portfolio involves relatively few animal tests, but this may change as a result of the development of new business areas.

Novozymes strives continuously to minimize the number of animal tests by further refining the methods used and employing alternatives wherever possible.

### BUSINESS PARTNERS AND ACQUISITIONS

In Novozymes' relations with business partners, the company seeks to reduce the risk of being associated with environmental and social failings such as violations of human rights and labor standards that could impact negatively on Novozymes' reputation.

On entering into agreements with new business partners or acquiring new companies or activities, Novozymes therefore takes environmental and social issues into account on par with the financial considerations.

### OTHER RISKS

#### ENERGY CONSUMPTION AND PRICES

Our production requires relatively large amounts of energy, and fluctuations in energy prices will therefore affect the cost of goods sold. The risk of a negative impact from rising energy prices is managed by continuously optimizing the production process, for example by using gene technology, and by partially hedging energy prices for a future period. In the long term, this risk is offset by the positive impact on sales when energy prices go up, as it becomes more profitable for our customers to replace oil-based ingredients with enzymes and to use energy-saving enzymes in their production.

#### RAW MATERIAL CONSUMPTION AND PRICES

A significant proportion of Novozymes' raw materials is derived from agricultural produce, and fluctuations in prices for these commodities will therefore affect the cost of goods sold. Novozymes seeks to reduce the risk of a negative impact on costs by optimizing the production process, for example by using gene technology, and by ensuring the greatest possible flexibility in the use of raw materials. Raw materials are in many cases purchased on 12-month contracts, mitigating sudden price spikes.

#### GLOBAL ORGANIZATION AND TAXES

Novozymes operates in many markets via sales companies and distributors, while production takes place in a small number of countries. This leads to transactions between Group companies. Novozymes follows the OECD principles in setting internal transfer prices for these transactions, but this is a complicated area and entails a tax risk, partly because the area is subject to political judgment in each individual country. Novozymes regularly enters into dialogue with the tax authorities to reduce this risk, and we have entered into advance pricing agreements with the tax authorities in the countries where internal transactions are most significant. For Novozymes, such agreements create predictability in relation to taxation and reduce the risk of Novozymes becoming part of the ongoing transfer pricing debate around the world. A major part of internal transactions in the Group is covered by advance pricing agreements.

## INSURANCE

The risk of personal injury, material damage, and other events beyond our control, as well as other losses that Novozymes may cause, is covered by an extensive insurance program to the extent that this is feasible and possible. Cover in different areas is subject to a premium based on Novozymes' claims history. The current price of the policies and the cover provided may be affected by external circumstances, such as natural disasters and similar events.





**ACCOUNTS**  
THE NOVOZYMES REPORT 2011





## Consolidated income statement

Note		2011 DKK million	2010 DKK million
1, 2	Revenue	10,510	9,724
3, 6	Cost of goods sold	4,602	4,312
	<b>Gross profit</b>	<b>5,908</b>	<b>5,412</b>
3, 6	Sales and distribution costs	1,376	1,242
3, 6	Research and development costs	1,464	1,360
3, 4, 5, 6	Administrative costs	778	762
7	Other operating income, net	50	69
	<b>Operating profit / EBIT</b>	<b>2,340</b>	<b>2,117</b>
8	Financial income	208	113
9	Financial costs	133	107
	<b>Profit before tax</b>	<b>2,415</b>	<b>2,123</b>
10	Tax	587	509
	<b>Net profit</b>	<b>1,828</b>	<b>1,614</b>
	Attributable to:		
	Shareholders in the parent company	1,826	1,613
	Minority interests	2	1
		1,828	1,614
	Proposed dividend per share	DKK 1.90	DKK 1.60
20	Earnings per share	DKK 5.79	DKK 5.15
20	Earnings per share, diluted	DKK 5.71	DKK 5.05



## Consolidated statement of comprehensive income

Note	2011 DKK million	2010 DKK million
<b>Net profit</b>	<b>1,828</b>	<b>1,614</b>
<b>Currency translation adjustments</b>		
Subsidiaries and minority interests	116	465
Deferred tax	(6)	(23)
<b>Currency translation adjustments, total</b>	<b>110</b>	<b>442</b>
<b>Cash flow hedges</b>		
Fair value adjustments	(58)	(39)
Reclassification to Financial income/costs	(130)	(28)
Deferred tax	6	13
<b>Cash flow hedges, total</b>	<b>(182)</b>	<b>(54)</b>
<b>Other comprehensive income</b>	<b>(72)</b>	<b>388</b>
<b>Comprehensive income for the year</b>	<b>1,756</b>	<b>2,002</b>
Attributable to:		
Shareholders in the parent company	1,753	2,000
Minority interests	3	2
	1,756	2,002

## Consolidated balance sheet

Note		Dec. 31, 2011	Dec. 31, 2010
		DKK million	DKK million
<b>ASSETS</b>			
11	Intangible assets	2,221	1,070
13	Property, plant and equipment	6,557	5,866
14	Deferred tax assets	275	71
15	Other financial assets	-	50
	<b>Non-current assets, total</b>	<b>9,053</b>	<b>7,057</b>
16	Inventories	1,741	1,640
17	Trade receivables	1,971	1,772
18	Tax receivables	167	232
19	Other receivables	195	249
15	Other financial assets	48	178
	Cash at bank and in hand	667	1,465
	<b>Current assets, total</b>	<b>4,789</b>	<b>5,536</b>
	<b>Assets, total</b>	<b>13,842</b>	<b>12,593</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>			
20	Common stock	650	650
20	Treasury stock	(1,714)	(1,479)
	Other reserves	465	540
	Retained earnings	9,408	8,113
21	Minority interests	15	12
	<b>Shareholders' equity, total</b>	<b>8,824</b>	<b>7,836</b>
14	Deferred tax liabilities	905	493
22	Provisions	152	182
23	Other financial liabilities	1,604	1,574
	<b>Non-current liabilities, total</b>	<b>2,661</b>	<b>2,249</b>
23	Other financial liabilities	258	291
22	Provisions	98	50
	Trade payables	745	764
18	Tax payables	37	86
24	Other payables	1,219	1,317
	<b>Current liabilities, total</b>	<b>2,357</b>	<b>2,508</b>
	<b>Liabilities, total</b>	<b>5,018</b>	<b>4,757</b>
	<b>Liabilities and shareholders' equity, total</b>	<b>13,842</b>	<b>12,593</b>

### Consolidated statement of shareholders' equity

	Attributable to shareholders in the company						Total DKK million
	Common stock DKK million	Treasury stock DKK million	Currency translation adjustments DKK million	Cash flow hedges DKK million	Retained earnings DKK million	Minority interests DKK million	
<b>Shareholders' equity at January 1, 2011</b>	650	(1,479)	391	149	8,113	12	7,836
Net profit for the year					1,828		1,828
Other comprehensive income for the year			107	(182)		3	(72)
Purchase of treasury stock		(400)					(400)
Sale of treasury stock		165					165
Dividend					(504)		(504)
Stock-based payment					83		83
Tax related to equity items					(112)		(112)
<b>Changes in shareholders' equity</b>	-	(235)	107	(182)	1,295	3	988
<b>Shareholders' equity at December 31, 2011</b>	650	(1,714)	498	(33)	9,408	15	8,824
<b>Shareholders' equity at January 1, 2010</b>	650	(1,624)	(49)	203	6,651	10	5,841
Net profit for the year					1,614		1,614
Other comprehensive income for the year			440	(54)		2	388
Sale of treasury stock		145					145
Dividend					(359)		(359)
Stock-based payment					60		60
Tax related to equity items					147		147
<b>Changes in shareholders' equity</b>	-	145	440	(54)	1,462	2	1,995
<b>Shareholders' equity at December 31, 2010</b>	650	(1,479)	391	149	8,113	12	7,836

The proposed dividend of DKK 599 million for 2011 is included in Retained earnings.

Reference is made to Note 20 concerning treasury stock and average number of shares.

## Consolidated statement of cash flows and financial resources

Note	2011 DKK million	2010 DKK million
<b>Net profit</b>	<b>1,828</b>	<b>1,614</b>
33 Reversal of non-cash items	1,649	1,340
Corporation tax paid	(518)	(609)
Interest received	16	24
Interest paid	(72)	(87)
<b>Cash flow before change in working capital</b>	<b>2,903</b>	<b>2,282</b>
<b>Change in working capital:</b>		
(Increase)/decrease in receivables	(34)	(239)
(Increase)/decrease in inventories	(62)	(13)
Increase/(decrease) in trade payables and other payables	(88)	267
Currency translation adjustments	(10)	27
<b>Cash flow from operating activities</b>	<b>2,709</b>	<b>2,324</b>
<b>Investments:</b>		
11 Purchase of intangible assets	(34)	(3)
Sale of property, plant and equipment	8	3
13 Purchase of property, plant and equipment	(1,290)	(1,326)
34 Net acquisition of activities and companies	(1,426)	(23)
<b>Cash flow from investing activities</b>	<b>(2,742)</b>	<b>(1,349)</b>
<b>Free cash flow</b>	<b>(33)</b>	<b>975</b>
<b>Financing:</b>		
Borrowings	550	20
Repayments of borrowings	(562)	(448)
20 Sale/(purchase) of treasury stock, net	(235)	145
Refundable income tax	95	(95)
Dividend paid	(504)	(359)
<b>Cash flow from financing activities</b>	<b>(656)</b>	<b>(737)</b>
<b>Net cash flow</b>	<b>(689)</b>	<b>238</b>
Unrealized gain/(loss) on currencies and financial assets included in cash and cash equivalents	(11)	24
<b>Net change in cash and cash equivalents</b>	<b>(700)</b>	<b>262</b>
Cash and cash equivalents at January 1	1,324	1,062
35 <b>Cash and cash equivalents at December 31</b>	<b>624</b>	<b>1,324</b>
36 Undrawn committed credit facilities	3,743	3,745
<b>Financial resources at December 31</b>	<b>4,367</b>	<b>5,069</b>

## Environmental and social data

Note		2011	2010	
<b>ENVIRONMENTAL PERFORMANCE</b>				
<b>Resource utilization</b>				
<b>Consumption of resources</b>				
38	Water	1,000 m <sup>3</sup>	6,073	5,746
39	Energy	1,000 GJ	3,929	3,904
	Raw materials	1,000 tons	421	413
	Packaging	1,000 tons	15	13
<b>Efficiency improvement compared to 2005</b>				
	Water	%	30	29
	Energy	%	34	30
	CO <sub>2</sub>	%	47	38
<b>Wastewater</b>				
40	Volume	1,000 m <sup>3</sup>	4,308	3,935
<b>Biomass</b>				
	Volume, NovoGro®	1,000 m <sup>3</sup>	295	291
	Volume, NovoGro® 30	1,000 m <sup>3</sup>	140	139
	Volume, compost	1,000 m <sup>3</sup>	44	48
<b>Waste</b>				
41	Waste	Tons	11,704	10,240
	Percentage of total waste recycled	%	41.1	42.8
<b>Emissions to air</b>				
42	Ozone-depleting substances, HCFCs	Kg	986	1,532
	CO <sub>2</sub> *	1,000 tons	390	410
<b>Environmental impact potentials</b>				
43	Global warming	1,000 tons CO <sub>2</sub> -eqv.	392	414
44	Ozone layer depletion	Kg CFC <sub>11</sub> -eqv.	105	265
<b>Environmental compliance, etc.</b>				
	Breaches of regulatory limits, groundwater	No.	26	28
	Breaches of regulatory limits, other	No.	21	36
	Unintended releases of GMOs	No.	0	0
	Significant spills	No.	0	0
	Neighbor complaints	No.	18	21
<b>Animals for testing</b>				
	Enzyme Business	No.	580	590
	BioBusiness	No.	539	3,120
<b>Climate change impact</b>				
<b>Impact of application of Novozymes products</b>				
	Estimated CO <sub>2</sub> reductions from customers' application of Novozymes products in their products or processes	Million tons	45	40

\* 2010 data do not include Scope 3 emissions. See corresponding note for details.



Note			2011	2010
<b>SOCIAL PERFORMANCE</b>				
<b>Workplace development</b>				
<b>Employee statistics</b>				
45	Employees, total	No.	5,824	5,432
45, 46	Women	%	35.3	36.0
	Men	%	64.7	64.0
47	Rate of employee turnover	%	8.3	7.5
	Average age	Years	39.9	39.9
	Seniority	Years	8.9	9.1
48	Rate of absence	%	1.9	2.1
	Expatriates	No.	90	80
<b>Training costs</b>				
	Average spent per employee	DKK	5,907	6,060
	Costs as percentage of total employee costs	%	1.2	1.2
<b>Health and safety</b>				
	Fatalities	No.	0	0
49	Accidents with absence	No.	40	35
	Of which life-threatening accidents	No.	0	0
	Of which accidents requiring professional first aid	No.	20	27
50, 51	Occupational diseases	No.	11	14
	Frequency of occupational accidents	Per million working hours	4.3	4.1
	Frequency of occupational accidents requiring professional first aid	Per million working hours	2.1	3.1
	Frequency of occupational diseases	Per million working hours	1.2	1.6
<b>Socioeconomic impact</b>				
<b>Processes and technology</b>				
	New products	No.	6	8
	Active patent families	No.	1,137	1,047
<b>Training and compliance</b>				
	Supplier performance management	%	91	90
	Completion of business integrity training	%	71	72
52	Fraud cases	No.	4	6
<b>Corporate citizenship</b>				
	Regional flagship projects	No.	7	n.a.
	Learners reached	No.	9,791	n.a.

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## ACCOUNTING POLICIES FOR CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements of the Novozymes Group have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the EU and additional Danish requirements on the presentation of accounts. Novozymes has prepared its consolidated financial statements in accordance with all the IFRS standards in force. The fiscal year for the group is January 1 – December 31, 2011. The consolidated financial statements have been prepared on a going concern basis and under the historical cost convention, with the exception of the following items, which are recognized at fair value:

- Available-for-sale financial assets
- Derivatives

Some of the information required pursuant to IFRS is contained in the sections *Report* and *Management*. The rest can be found in the following sections.

The Novozymes Report does not contain the financial statements for the parent company, Novozymes A/S. The financial statements for the parent company can be found online under *Financial statements for Novozymes A/S* at [www.report2011.novozymes.com](http://www.report2011.novozymes.com). Together, The Novozymes Report and the financial statements for the parent company, Novozymes A/S, form the Annual Report that will be sent to the Danish Business Authority.

## IMPACT OF NEW ACCOUNTING STANDARDS

In 2011, the following standard and amendments with relevance for Novozymes were brought into effect and implemented:

- Revised IAS 24 "Related Party Disclosures"
- Amendments to IFRS 7 "Disclosures – Transfers of Financial Assets"
- Amendments to IFRIC 14 "Prepayment of a Minimum Funding Requirement"
- IFRIC 19 "Extinguishing Financial Liabilities with Equity Instruments"

The implementation of these has not led to further specifications in the Notes or to changes in recognition and measurement.

Standards and amendments issued by IASB with effective date after December 31, 2011, or not adopted by the EU and therefore not implemented, comprise:

- IFRS 9 "Financial Instruments"
- IFRS 10 "Consolidated Financial Statements"
- IFRS 11 "Joint Arrangements"
- IFRS 12 "Disclosures of Interests in Other Entities"
- IFRS 13 "Fair Value Measurement"
- Revised IAS 28 "Investments in Associates and Joint Ventures"
- Amendments to IAS 1 "Presentation of Items of Other Comprehensive Income"
- Amendments to IAS 19 "Employee Benefits"

Implementation of these will lead to further specifications in the Notes and reclassifications but no material changes in recognition and measurement.

## SIGNIFICANT ACCOUNTING POLICIES

### CONSOLIDATION

The consolidated financial statements comprise the financial statements of Novozymes A/S (the parent company) and all the companies in which the Group owns more than 50% of the voting rights or otherwise has control or similar de facto control (subsidiaries), as well as joint ventures. The consolidated financial statements are based on the financial statements for the parent company and subsidiaries, and are prepared by combining items of a uniform nature and subsequently eliminating intercompany transactions, internal stockholdings and balances, and

unrealized intercompany profits and losses. All the financial statements used for consolidation are prepared in accordance with the Group's accounting policies.

The Group's holdings in joint ventures regarded as jointly controlled entities are consolidated using the proportionate consolidation method by including its proportional share of their assets, liabilities, revenue, and costs line by line.

### BUSINESS COMBINATIONS

On acquisition of new companies, the assets, liabilities, and contingent liabilities of each new company are recognized at fair value at the time of acquisition. Goodwill is adjusted for changes in the purchase price after acquisition and changes in the fair value of the acquired identifiable assets, liabilities, and contingent liabilities since the acquisition date until 12 months afterward. Newly acquired companies are recognized as from the date of acquisition, and no adjustment is made to comparative figures.

In acquisitions where less than 100% of a company is acquired, the Group can choose between goodwill recognized at its full fair value or solely at the Group's percentage owned of goodwill (partial goodwill). The goodwill recognized at the time of acquisition will not be changed in connection with later acquisitions of minority interest, irrespective of whether full or partial goodwill is chosen.

### TRANSLATION OF FOREIGN CURRENCIES

The consolidated financial statements are presented in Danish kroner (DKK). Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the transaction date. Monetary items denominated in foreign currencies are translated into the functional currency at the exchange rates prevailing at the balance sheet date. Financial statements of foreign subsidiaries are translated into Danish kroner at the exchange rates prevailing at the balance sheet date for assets and liabilities, and at average exchange rates for income statement items.

Goodwill arising on the acquisition of new companies is treated as an asset belonging to the new foreign subsidiaries and translated into Danish kroner at the exchange rates prevailing at the balance sheet date.

Realized and unrealized foreign exchange gains and losses are recognized under Financial income or Financial costs, with the exception of unrealized gains and losses relating to hedging of future cash flows, which are recognized in Other comprehensive income. The following exchange rate differences are also recognized in Other comprehensive income, translated at the exchange rates prevailing at the balance sheet date:

- Translation of foreign subsidiaries' net assets at the beginning of the year
- Translation of foreign subsidiaries' income statements from average exchange rates to the exchange rates prevailing at the balance sheet date
- Translation of long-term intercompany balances, which are considered to be an addition to net assets in subsidiaries
- Fair value adjustment of financial liabilities that qualify for hedging of net assets in foreign subsidiaries

### STOCK-BASED PAYMENT

The Group's employees are covered by stock option programs comprising equity-settled and cash-settled programs.

The fair value of the employee services received in exchange for the grant of stock options is computed using the value of the granted stock options.

The fair value of stock-based payment on the grant date is recognized as an employee cost over the period in which the stock options are vested. In measuring the fair value, account is taken of the number of employees expected to gain entitlement to the options as well as the number of options the employees are expected to gain. This estimate is adjusted at the end of each period such that only the number of options to which employees are entitled, or expected to be entitled, is recognized.

The value of equity-settled programs is offset against Shareholders' equity. The value of cash-settled programs, which are offset against Other payables, is adjusted to fair value at the end of each period, and the subsequent adjustment in fair value is recognized in the income statement under Financial income or Financial costs.

#### GOVERNMENT GRANTS

Government grants received relating to research and development costs are recognized under Other operating income, net, based on the percentage completion of the projects. Grants received relating to investments in property, plant and equipment are offset against the cost price of the eligible assets.

#### SEGMENT INFORMATION

The consolidated financial statements provide information on the Group's operating segments in a manner that is consistent with the internal reporting to the Board of Directors and Executive Management. In addition, information is provided on geographical allocation.

#### LEASES

Operating lease costs are recognized in the income statement on a straight-line basis over the period of the lease. Liabilities relating to non-cancelable contracts are specified in the Notes.

#### KEY FIGURES

Key figures are prepared in accordance with the "Recommendations and Key Figures 2010" of the Danish Society of Financial Analysts.

#### REVENUE

Revenue covers sales of goods and services for the year less goods returned, and volume and cash discounts. Sales are recognized at the time of risk transfer relating to the goods sold, provided that the revenue can be measured on a reliable basis and is expected to be received.

The Group has entered into few agreements where the other contracting party undertakes sales to third parties and the profit is distributed between the Group and the other contracting party on the basis of a predetermined formula. Sales are recognized using information on the other contracting party's realized sales, and a liability is recognized for the distribution of the profit, which is calculated and settled with final effect once a year.

The Group has entered into commission agreements where agents undertake sales to third parties in return for commission on realized sales. These sales are recognized when they are realized. A liability is recognized when it is permitted for goods to be returned and this is likely.

#### RESEARCH AND DEVELOPMENT COSTS

Research costs are expensed as incurred. Development costs pertaining to ongoing optimization of production processes for existing products, or to development of new products, where lack of approval by the authorities, approval by customers, and other uncertainties mean the development costs do not fulfill the criteria for recognition in the balance sheet, are expensed as incurred.

#### OTHER OPERATING INCOME, NET

Other operating income, net, comprises grants from public authorities

and customers for research projects and collaborations, and income, net, of a secondary nature in relation to the main activities in the Group. This item also includes non-recurring income items, net, in respect of damages, outlicensing, etc.

#### TAX

Corporation tax, comprising the current tax liability, change in deferred tax for the year, and possible adjustments relating to previous years, is recognized in the income statement, except to the extent that it relates to items recognized either in Other comprehensive income or directly in Shareholders' equity. Deferred tax is measured using the balance sheet liability method and comprises all temporary differences between the accounting and tax values of assets and liabilities. No deferred tax is recognized for goodwill, unless amortization of goodwill for tax purposes is allowed. Deferred tax is measured and recognized to cover retaxation of losses in jointly taxed foreign subsidiaries if this is expected to be realized on the divestment of stock or when recapture of tax losses becomes applicable. The tax value of tax-loss carry-forwards is included in the calculation of deferred tax to the extent that the tax losses can be expected to be utilized in the future.

Deferred tax is measured according to current tax rules and at the tax rate expected to be in force on elimination of the temporary differences. Changes in deferred tax due to tax rate changes are recognized in the income statement, except to the extent that they relate to items recognized either in Other comprehensive income or directly in Shareholders' equity.

Novozymes A/S and its Danish subsidiaries are jointly taxed with the Danish companies in the Novo A/S Group. The tax for the individual companies is allocated in full on the basis of the expected taxable income.

#### INTANGIBLE ASSETS

Intangible assets other than goodwill are measured at cost less accumulated amortization and impairment losses. Goodwill is not subject to amortization.

Costs associated with large IT projects for the development of software for internal use are capitalized if they are incurred with a view to developing new and improved systems.

Amortization is based on the straight-line method over the expected useful lives of the assets, as follows:

- Completed IT development projects are amortized over the useful life. Booked IT development assets are amortized over 3–5 years
- Acquired patents, trademarks, licenses, and know-how are amortized over their useful lives. Patents and trademarks are amortized over their useful lives, normally identical to the patent period, and licenses are amortized over the agreement period. Booked patents, trademarks, licenses, and know-how are amortized over 7–15 years

Some assets are amortized over a shorter period.

#### PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is measured at cost less accumulated depreciation and impairment losses. Borrowing costs in respect of construction of major assets are capitalized.

Depreciation is based on the straight-line method over the expected useful lives of the assets, as follows:

- Buildings: 12–50 years
- Plant: 5–16 years
- Other equipment: 3–16 years

The assets' residual value and useful life are reviewed on an annual basis and adjusted if necessary at each balance sheet date.

## IMPAIRMENT OF INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

### *Goodwill*

Goodwill is tested for impairment annually or whenever there is an indication that the asset may be impaired.

For the purpose of impairment testing, assets are grouped at the lowest levels for which there are separately identifiable cash flows, termed as cash-generating units. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is first allocated to reduce the carrying amount of goodwill and then pro rata on the basis of the carrying amount of the other assets. The recoverable amount is the higher of an asset's fair value less expected costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from an asset or the cash-generating unit to which the asset belongs. As a rule of thumb the recoverable amount is calculated as the present value of expected future net cash flows.

If the recoverable amount for the cash-generating unit again exceeds the carrying amount, the recognized impairment losses for goodwill are not reversed subsequently.

### *Property, plant and equipment and finite-lived intangible assets*

The Group regularly reviews the carrying amounts of its property, plant and equipment and finite-lived intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent, if any, of the impairment loss.

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount is reduced to the recoverable amount.

Impairment losses are reversed only to the extent of changes in the assumptions and estimates underlying the impairment calculation.

## INVENTORIES

Inventories are measured at cost determined on a first-in first-out basis or net realizable value where this is lower.

The cost of Work in progress and Finished goods comprises direct production costs such as raw materials and consumables, energy, and labor directly attributable to production, and indirect production costs such as employee costs, and maintenance and depreciation of plant, etc.

If the expected selling price less any completion costs and costs to execute sales (net realizable value) of inventories is lower than the cost, the inventories are written down to net realizable value.

## FINANCIAL ASSETS AND LIABILITIES

The Novozymes Group categorizes financial assets and liabilities as follows: Financial assets/liabilities at fair value through profit or loss, Loans and receivables, Hedge accounting, Available-for-sale financial assets, and Financial liabilities.

Financial assets/liabilities measured at fair value through profit or loss is the part of derivatives that cannot be designated as hedge accounting, e.g., accrued interest on currency swaps and time value of currency options. Loans and receivables are non-derivatives with fixed or determinable payments that are not listed on an active market. Loans and receivables are entered in the balance sheet under the following items: Trade receivables, Other receivables, and Cash at bank and in hand. The items are measured at amortized cost or net realizable value equivalent to nominal value less allowances for doubtful receivables, whichever is lower.

Hedge accounting consists of positive and negative fair values of derivatives, which are itemized in the balance sheet under Other financial assets and Other financial liabilities respectively.

Derivatives used to hedge assets and liabilities are measured at fair value on the balance sheet date, and value adjustments are recognized as Financial income or Financial costs.

Derivatives used to hedge future cash flows are measured at fair value on the balance sheet date, and value adjustments are recognized in Other comprehensive income.

Derivatives used to hedge net investments in foreign subsidiaries are measured at fair value, and value adjustments are recognized in Other comprehensive income.

Income and costs relating to cash flow hedges and hedging of net investments in subsidiaries are transferred from Other comprehensive income on realization of the hedged item and are recognized as Financial income or Financial costs.

Derivatives are recognized on the settlement date, while other financial instruments are recognized on the transaction date.

Available-for-sale financial assets are the remaining category of financial assets not included above. Available-for-sale financial assets are itemized in the balance sheet as Other financial assets and are measured at fair value (share price) on the balance sheet date. Unrealized fair value adjustments are recognized in Other comprehensive income. Value adjustments are transferred from Other comprehensive income to Financial income or Financial costs when realized. Write-offs are recognized as Financial costs.

Financial liabilities are entered in the balance sheet under the following items: Other financial liabilities, Trade payables, and Other payables.

## SHAREHOLDERS' EQUITY

### *Treasury stock*

The cost price and proceeds from the sale of treasury stock are recognized directly in Shareholders' equity as a separate item. Among other things, the company's holding of treasury stock is used to hedge employees' exercise of granted stock options.

### *Dividend*

The dividend proposed for the financial year is included in Retained earnings until approved at the Annual Shareholders' Meeting.

## PROVISIONS

Provisions are recognized where a legal or constructive obligation has been incurred as a result of past events, and it is probable it will lead to an outflow of financial resources. Provisions are measured at the present value of the expected expenditure required to settle the obligation.

Costs relating to defined contribution plans are recognized in the income statement in the financial year to which they relate.

## PREPAYMENTS AND DEFERRED INCOME

Prepaid expenses under Other receivables comprise expenses paid relating to subsequent financial years such as rent, insurance premiums, subscription fees, and interest.

Deferred income under Other payables comprises payments received relating to income in subsequent years, such as revenue and interest.

Prepayments and deferred income are measured at amortized cost.

## STATEMENT OF CASH FLOWS AND FINANCIAL RESOURCES

The Statement of cash flows and financial resources for the Group, which is compiled using the indirect method, shows cash flows from operating, investing, and financing activities, and the Group's cash and cash equivalents at the beginning and end of the year.

Cash flow from operating activities comprises net profit adjusted for non-cash items, paid financial items, corporate tax paid, and change in working capital. Cash flow from investing activities comprises payments



relating to the acquisition and sale of companies and minority stock, intangible assets, and property, plant and equipment.

Cash flow from financing activities comprises proceeds from borrowings, repayment of principal on interest-bearing debt, payment of dividends, proceeds from stock issues, and the purchase and sale of treasury stock and other securities.

Cash and cash equivalents comprises cash at bank and in hand less current bank loans due on demand. Financial resources comprises cash and cash equivalents plus undrawn committed credit facilities.



## ACCOUNTING POLICIES FOR ENVIRONMENTAL AND SOCIAL DATA

The accounting policies for environmental and social data are unchanged from last year. The environmental and social data in the Annual Report are based on data for the parent company and for all subsidiaries, combining items of a uniform nature compiled using the same methods, unless specifically stated otherwise below. The selection of parameters to report on is based on an evaluation of what Novozymes considers to be responsible, relevant, and of value for our stakeholders when measuring sustainability performance. We also believe these data to be of greatest relevance to our key stakeholders.

Recognition of newly acquired or divested sites and subsidiaries follows the same principles as for the financial reporting.

Information on Novozymes' use of the GRI indicators can be found in the online report under *Supplementary reporting*.

Environmental and social data are an integrated part of The Novozymes Report and are covered by the statutory audit performed by the auditor elected by the Annual Shareholders' Meeting.

### ENVIRONMENT

The environmental data cover those activities that, based on an overall environmental assessment, could have a significant impact on the environment. The environmental assessment is performed on an annual basis, ensuring that at least 97% of the total Novozymes quantity of the measured environmental parameter is included. Sites with activities considered not to have a significant impact are not included. Such sites comprise sales offices, R&D labs, and sites with limited blending and storage of products.

Resource consumption from construction work in relation to new production plants is not included, unless the resource consumption (water and energy) is registered by meters that measure resource consumption at Novozymes' premises. Resource consumption from production trials at new facilities is included.

### WATER

Water includes drinking water, industrial water, and externally supplied steam.

Drinking water is water of drinking water quality.

Industrial water is water that is not of drinking water quality, but which is suitable for certain industrial processes, for example for use in cooling towers. Industrial water can come from lakes or from own wells.

The reported quantities are stated on the basis of the metered intake of water to Novozymes, and include both quantities consumed in the production process and in other areas. The reported quantities of steam are converted to volume of running water and are therefore subject to calculation.

### ENERGY

The energy consumption includes quantities consumed both in the production process and in other areas.

Internally generated energy is measured as fuel consumption converted to energy on the basis of the lower combustion value and weight by volume, except in the US where legal requirements for reporting of CO<sub>2</sub> state that the higher combustion value is to be applied. Fuel consumption comprises all types of fuel used to produce electricity, heat, and steam on site. Fuel consumption does not include fuel for transportation.

Externally generated energy is the input to Novozymes of externally generated electricity, heat, and steam.

### CO<sub>2</sub>

Reported CO<sub>2</sub> emissions are calculated on the basis of internally and externally generated energy, and outbound transport of products.

CO<sub>2</sub> from internally generated energy is calculated on the basis of the amount of fuel consumed, using local emission factors.

CO<sub>2</sub> from externally generated energy is calculated using annually determined local emission factors from power plants or their organizations.

If emission factors are not available, annually determined emission factors from Danish authorities and suppliers are used.

Transport-related CO<sub>2</sub> emissions are calculated on the basis of principles described in the Greenhouse Gas (GHG) Protocol, and comprise CO<sub>2</sub> emissions related to transport from production sites to first delivery point where Novozymes pays for the freight. Emission data are either derived directly from suppliers or calculated on the basis of distance and emission factors from the GHG Protocol. Calculation is based on fuel consumption, distance, and weight. The fuel-based approach is applied wherever possible.

### EFFICIENCY INDEXES

The three efficiency improvement indicators (for water, energy, and CO<sub>2</sub>) measure the weighted sum of the efficiency improvement for the business segment Enzyme Business and the production sites in the business segment BioBusiness, whereby the resource consumption for each business segment determines its weight in the calculation. The efficiency improvement within each business segment is calculated as the relative improvement in efficiency rate compared to the corresponding efficiency rate calculated for the base year (2005).

Within each business segment, the efficiency rates are calculated as total consumption within the business segment divided by either the volume of finished goods produced (the Enzyme Business indexes) or total sales (the BioBusiness indexes) in the corresponding period.

The production volume is adjusted to reflect the concentration of enzymes in the products. Sales figures are adjusted to eliminate the effect of exchange rate changes for the years covered by the calculation.

Unless otherwise specified (see comment on acquisitions and divestments below), the water, energy, and CO<sub>2</sub> quantities applied in the index calculation equal those reported separately. Volume and turnover data applied in the denominator pertain to the same sites. For sites acquired in 2005 or later, the base line index is calculated based on the data reported in the first full year of operating as a Novozymes site. Divested sites are removed from the index for the full period. Transport-related CO<sub>2</sub> emissions are not included in the index.

### RAW MATERIALS AND PACKAGING

Raw materials comprises materials used directly or indirectly in the production process. Packaging comprises all products made of any material of any nature to be used for the containment, protection, handling, delivery, and preservation of goods from the producer to the user or consumer.

### WASTEWATER

Wastewater is measured as the volume discharged by Novozymes.

### BIOMASS

Biomass is measured or calculated on the basis of volume or weight produced and transported from Novozymes as liquid fertilizer (NovoGro®) or converted to a fertilizer product with a higher dry matter content (NovoGro® 30 or compost).

### WASTE

Waste is the registered volume of waste broken down into hazardous

and nonhazardous waste, and by disposal method. Disposal methods include landfill, incineration, recycling, and other. The amount recycled is the quantity sent to a certified service provider for recycling.

#### EMISSIONS TO AIR OF OZONE-DEPLETING SUBSTANCES

Emissions to air of ozone-depleting substances is measured as consumption of CFCs, HCFCs, and halons.

#### ENVIRONMENTAL IMPACT POTENTIALS

The environmental impact potentials for global warming and ozone layer depletion are calculated on the basis of "Udvikling af Miljøvenlige Industriprodukter" (UMIP), published by the Institute for Product Development at the Technical University of Denmark.

#### ENVIRONMENTAL COMPLIANCE

Breaches of regulatory limits is measured as the number of incidents considered to be in nonconformity to environmental permits or requirements under environmental law.

Unintended releases of GMOs is spills of fermentation liquid to recipients that, based on criteria such as amount, type of recipient, and public authority specifications, are considered to have an impact on the environment.

Minor GMO spills not considered to have an impact on the environment are not included in this figure.

Significant spills is measured as the number of spills of chemicals, oil, etc. into water, air, or soil, and includes both on-site and transport-related spills. Significance is assessed both on the basis of extent of the spill and impact on the environment.

Minor spills not considered to have an impact on the environment are not included in this figure.

Neighbor complaints is the number of registered environmental complaints, primarily odor and noise related.

#### ANIMALS FOR TESTING

Animals for testing covers the number of animals used for all commenced internal and external testing undertaken for Novozymes. Animals for testing used both by Novozymes and by external test companies during tests ordered by Novozymes are included in the figures.

#### IMPACT OF APPLICATION OF NOVOZYMES' PRODUCTS

Estimated reduction in CO<sub>2</sub> emissions as a consequence of customers' application of Novozymes products is based on an annually updated Life Cycle Assessment (LCA) of Novozymes' products. The LCAs are updated by Novozymes and subject to assumptions and estimates.

#### SOCIAL AND SOCIOECONOMIC PERFORMANCE NUMBER OF EMPLOYEES

The number of employees is calculated as the actual number of employees at year-end, excluding employees on unpaid or parental leave, temporary hires, student interns, and PhD students.

In calculating the number of full-time employees, employees with a working-time ratio of 95% or over are stated as full-time employees.

#### JOB CATEGORIES

Senior management comprises the CEO, executive vice presidents, vice presidents, and directors. Management comprises middle managers and specialists. Professional comprises employees with academic backgrounds as well as team leaders. Administrative comprises administrative personnel. Skilled workers, laboratory technicians, and other technicians comprises skilled workers, laboratory technicians, and other technicians. Process operators comprises operators and unskilled workers.

#### EMPLOYEE TURNOVER

The rate of employee turnover is calculated as the employee turnover divided by the average number of permanent employees in the financial year.

Employee turnover is measured as the number of permanent employees who left the Group during the financial year (excluding employees at divested entities transferred to the acquiring company).

The average number of permanent employees is calculated as the average of the number of permanent employees at the end of each quarter.

#### GROWTH IN NUMBER OF EMPLOYEES, ORGANIC

The organic growth in number of employees is measured as the number of employees at year-end less the number of employees at the beginning of the year, then subtracting the number of employees gained via acquisitions and adding the number of employees at sites divested during the year.

#### GROWTH IN NUMBER OF EMPLOYEES, ACQUISITIONS

The growth in number of employees via acquisitions is measured as the number of employees gained via acquisition of new companies.

#### AGE AND SENIORITY

Age and seniority are calculated as the average age and seniority in whole years per employee.

#### ABSENCE

Absence is stated as time lost due to the employee's own illness, including pregnancy-related sick leave and occupational accidents and diseases. The rate of absence is calculated as the number of registered days of absence as a percentage of the total number of normal working days in one year, less holidays and public holidays.

#### EXPATRIATION

Expatriation refers to Novozymes employees being temporarily assigned to undertake tasks outside their home country for a period of more than 6 months.

#### TRAINING COSTS

Training costs is the costs of seminars and internal and external training courses, translated into Danish kroner at the average exchange rates. Training costs is also shown as a percentage of total employee costs.

#### OCCUPATIONAL ACCIDENTS

Occupational accidents with absence is defined as the number of reported work-related accidents involving at least one day's absence after the day on which the accident occurred.

#### OCCUPATIONAL DISEASES

Occupational diseases is defined as the number of new reported cases of work-related diseases. In accordance with Danish legislation, employees working in noisy areas must be tested for hearing disorders. Identified cases are reported as occupational diseases even though it may not be possible to establish whether the disorder is related to working at Novozymes.

#### CONSEQUENCES OF OCCUPATIONAL ACCIDENTS AND OCCUPATIONAL DISEASES

The consequences of occupational accidents with absence and occupational diseases are measured by recording the work situation once the outcome of the incident has stabilized, for example whether the employee has returned to his or her original job, and the total number of (calendar) days of absence.

#### **FREQUENCIES OF OCCUPATIONAL ACCIDENTS AND OCCUPATIONAL DISEASES**

The frequencies of occupational accidents with absence and occupational diseases are stated per million working hours.

#### **NUMBER OF NEW PRODUCTS**

The number of new products with new or improved characteristics launched during the year.

#### **NUMBER OF ACTIVE PATENT FAMILIES**

The number of inventions for which there are one or more active patent applications or active patents at year-end.

#### **SUPPLIER PERFORMANCE MANAGEMENT**

This indicator is a weighted average of three indicators that measure the rate of suppliers covered in the supplier evaluation system, the rate of development of action plans for suppliers not in compliance with Novozymes' responsible purchasing standards, and the completion rate of said supplier action plans.

#### **COMPLETION OF BUSINESS INTEGRITY TRAINING**

The completion rate for the number of employees who have been subject to business integrity training within the last 24 months.

#### **FRAUD**

The number of fraud cases reported to the Audit Committee in the reporting year. Internal procedure states that all fraud cases that are discovered are to be reported to the Audit Committee.

#### **REGIONAL FLAGSHIP PROJECTS**

Regional flagship projects are corporate citizenship/community engagement projects currently in progress where, within the scope of scientific understanding and environmental awareness, Novozymes engages with a community by providing competencies, for example through transfer of knowledge to help meet the community's needs.

#### **LEARNERS REACHED**

The total number of indirect and direct learners that Novozymes reaches via our corporate citizenship activities within the scope of scientific understanding and environmental awareness.

## ACCOUNTING ESTIMATES AND JUDGMENTS

In accordance with generally accepted accounting principles, calculation of the carrying amount of certain assets and liabilities requires estimates and judgments to be made concerning future events. Estimates and judgments are based on historical experiences and other factors that Management considers reasonable and relevant. These assumptions may be incomplete or inaccurate, and unexpected events may occur, as a result of which the estimates and judgments made are subject to a certain degree of intrinsic uncertainty.

## BUSINESS COMBINATIONS

The cost of acquisitions is allocated to the companies' assets, and liabilities, with any residual value recognized as goodwill. The allocation is based on fair value at the acquisition date. The most significant assets acquired generally comprise goodwill, patents, licenses, trademarks, property, plant and equipment, receivables and inventories. No active market exists for the majority of acquired assets and liabilities, in particular in respect of acquired intangible assets. Accordingly, management makes estimates of the fair value of acquired assets and liabilities. It results in a calculation of a fair value based on future cash flows for the assets. The projection of these cash flows is subject to management estimates and may therefore be associated with uncertainty. Further information on acquisitions can be found in Note 32.

## IMPAIRMENT TESTING

Annual impairment testing of goodwill is based on the value in use of the individual cash-generating unit, using the discounted cash flow method. The calculation is based on budgets approved by Management. Cash flows after the budget period are extrapolated using individual growth rates. The discount rate used for the calculation does not include possible impacts of future risks, as these are included in future cash flows. The cash flows and growth rates take account of previous experiences, and represent Management's best estimate of future developments. In combination with the discount rate, however, these judgments may have a significant impact on the calculated values. This year's impairment testing has not given rise to any write-downs. Further information can be found in Note 12. The total carrying amount of goodwill at the end of 2011 was DKK 835 million (2010: DKK 513 million).

## INVENTORIES

Inventories are measured at cost including indirect production costs. The costs are assessed on an ongoing basis to ensure optimal measurement of expected raw material consumption, payroll costs, capacity utilization, and other relevant factors. Changes in the parameters may have an impact on the value of inventories. If the net realizable value of the inventories is lower than cost, the inventories are written down to net realizable value. Inventories are continuously assessed for indications of impairment on the basis of an individual valuation of the product or product group and the products' expected sales. The carrying amount of inventories was DKK 1,741 million at the end of 2011 (2010: DKK 1,640 million).

## DEFERRED TAX ASSETS AND LIABILITIES

Deferred tax assets and liabilities are recognized in the financial statements. Determining the value of these assets and liabilities also requires a judgment by Management. The value of deferred tax assets takes account of Management's expectations of future taxable income and whether this is sufficient to utilize the temporary differences and cover unused tax losses. The carrying amounts of deferred tax assets and liabilities were DKK 275 million and DKK 905 million respectively at the end of 2011 (2010: DKK 71 million and DKK 493 million).

## ALLOWANCES FOR DOUBTFUL TRADE RECEIVABLES

Allowances for doubtful trade receivables are based on a country-

specific credit rating by external rating agencies. However, the allowances also reflect Management's judgment and review of the individual receivables based on individual customer creditworthiness and current economic trends. If customers' financial situations change in the future, this may give rise to additional indications of impairment in future accounting periods. The carrying amount of allowances for doubtful trade receivables was DKK 164 million at the end of 2011 (2010: DKK 133 million).

## PROVISIONS AND CONTINGENT LIABILITIES

Management assesses the need for provisions and contingent liabilities on an ongoing basis. This assessment takes account of the likelihood of Novozymes being obliged to expend financial resources and the amount at which the liabilities are expected to be settled. As these assessments are based on estimates of the future, they are subject to a high level of uncertainty and may give rise to changes in amounts in future accounting periods. Further information can be found in Note 22. The carrying amount of provisions was DKK 250 million at the end of 2011 (2010: DKK 232 million).

## STOCK OPTIONS

Calculation of stock option programs is based on the Black–Scholes model. The input variables for this model include assumptions about the stock option's expected volatility and term to maturity. These input variables are based on estimates and impact the recognized employee costs and employee liabilities. The calculation also includes an estimate of the number of employees expected to utilize the stock options in the future. This estimate is based on the expected rate of employee turnover. Further information on stock options can be found in Note 25.

See also Note 37 on Financial risk factors.



### Note 1 - Operating segment information

Novozymes' operating segments reflect the way the activities are organized and controlled. Most of the production facilities are common to Enzyme Business as a whole, which is why the activities are considered to be integrated. Therefore, Enzyme Business cannot be subdivided into further activities; see also Company profile. Gross profit is the primary parameter used when Management evaluates the performance of the segments.

Cost of goods sold is allocated directly. The functions for Sales and distribution, Research and development, and Administrative are considered as working for both segments, and their costs are therefore allocated to the Corporate function. Sales between the individual segments are deducted from the revenue of the selling company and amount to DKK 16 million in 2011 (2010: DKK 16 million).

Income statement	2011				2010			
	Enzyme Business DKK million	BioBusiness DKK million	Corporate DKK million	Total DKK million	Enzyme Business DKK million	BioBusiness DKK million	Corporate DKK million	Total DKK million
Revenue	9,489	1,021	-	10,510	9,109	615	-	9,724
Cost of goods sold	3,921	681	-	4,602	3,771	541	-	4,312
<b>Gross profit</b>	<b>5,568</b>	<b>340</b>	<b>-</b>	<b>5,908</b>	<b>5,338</b>	<b>74</b>	<b>-</b>	<b>5,412</b>
Sales and distribution costs			1,376	1,376			1,242	1,242
Research and development costs			1,464	1,464			1,360	1,360
Administrative costs			778	778			762	762
Other operating income, net			50	50			69	69
<b>Operating profit (EBIT)</b>				<b>2,340</b>				<b>2,117</b>
<b>Capital expenditure</b>								
Intangible assets	29	2	3	34	3	33	-	36
Property, plant and equipment	962	210	118	1,290	950	264	126	1,340
<b>Capital expenditure, total</b>	<b>991</b>	<b>212</b>	<b>121</b>	<b>1,324</b>	<b>953</b>	<b>297</b>	<b>126</b>	<b>1,376</b>
<b>Depreciation and amortization</b>								
Intangible assets	37	45	106	188	38	16	66	120
Property, plant and equipment	371	74	123	568	336	31	128	495
<b>Depreciation and amortization, total</b>	<b>408</b>	<b>119</b>	<b>229</b>	<b>756</b>	<b>374</b>	<b>47</b>	<b>194</b>	<b>615</b>
<b>Write-downs and impairment losses</b>								
Intangible assets	-	30	-	30	-	50	-	50
Property, plant and equipment	-	-	-	-	14	-	-	14
<b>Write-downs and impairment losses, total</b>	<b>-</b>	<b>30</b>	<b>-</b>	<b>30</b>	<b>14</b>	<b>50</b>	<b>-</b>	<b>64</b>
<b>Operating assets</b>								
Inventories	1,603	138	-	1,741	1,482	158	-	1,640
Trade receivables	1,859	112	-	1,971	1,660	112	-	1,772

Geographical allocation	2011	2010
	DKK million	DKK million
<b>Revenue</b>		
Denmark	112	117
Rest of Europe, Middle East, and Africa	3,707	3,447
North America	3,691	3,580
Asia Pacific	1,958	1,827
Latin America	1,042	753
<b>Revenue, total</b>	<b>10,510</b>	<b>9,724</b>
<b>Intangible assets and Property, plant and equipment</b>		
Denmark	4,010	3,027
Rest of Europe, Middle East, and Africa	74	248
North America	2,288	1,681
Asia Pacific	1,967	1,849
Latin America	439	131
<b>Intangible assets and Property, plant and equipment, total</b>	<b>8,778</b>	<b>6,936</b>
<b>Capital expenditure</b>		
Denmark	358	389
Rest of Europe, Middle East, and Africa	39	30
North America	648	468
Asia Pacific	250	426
Latin America	29	63
<b>Capital expenditure, total</b>	<b>1,324</b>	<b>1,376</b>

The Group operates in four geographical regions: Europe/MEA, North America, Asia Pacific, and Latin America.

The geographical allocation is made on the basis of the Group's revenue, intangible assets, property, plant and equipment, and capital expenditure. The geographical distribution of revenue is based on the country in which the customer is domiciled. With a number of strategic customers, central deliveries are made to specified locations, and the final recipient is unknown. The stated geographical distribution of revenue may therefore vary significantly from year to year if the delivery destination for these strategic customers changes.

## Note 2 - Revenue

	2011	2010
	DKK million	DKK million
Household Care Enzymes	3,325	3,151
Food & Beverages Enzymes	3,033	2,850
Bioenergy Enzymes	1,782	1,846
Feed & Other Technical Enzymes	1,349	1,262
Microorganisms	767	429
Biopharma	254	186
<b>Revenue, total</b>	<b>10,510</b>	<b>9,724</b>

Sales to the five largest customers as a percentage of revenue

	28%	28%
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## Note 3 - Employee costs

	2011	2010
	DKK million	DKK million
Wages and salaries	2,246	2,108
Pensions	209	196
Other social security costs	172	156
Other employee costs	139	119
Stock-based payment	111	88
<b>Employee costs, total</b>	<b>2,877</b>	<b>2,667</b>
Recognized in the income statement under the following items:		
Cost of goods sold	1,043	978
Sales and distribution costs	622	549
Research and development costs	766	738
Administrative costs	445	401
	<b>2,876</b>	<b>2,666</b>
Recognized in the assets as:		
Change in employee costs recognized in inventories	1	1
<b>Employee costs, total</b>	<b>2,877</b>	<b>2,667</b>
Geographical distribution:		
Denmark	1,627	1,558
Rest of Europe, Middle East, and Africa	243	212
North America	601	530
Asia Pacific	292	289
Latin America	114	78
<b>Employee costs, total</b>	<b>2,877</b>	<b>2,667</b>
Average number of employees in the Group	5,751	5,357
Average number of employees in R&D department	1,204	1,051
Number of employees outside Denmark as a percentage of total number of employees	57%	56%

Reference is made to Note 45 concerning the geographical distribution of employees.

**Note 4 - Management remuneration****Executive Management**

	2011	2010
	DKK million	DKK million
<b>Remuneration excluding stock-based payment</b>		
Salaries	22	19
Cash bonuses	7	7
Pensions	6	6
<b>Remuneration excluding stock-based payment, total</b>	<b>35</b>	<b>32</b>

The remuneration comprises a fixed base salary (base salary and pension contribution), a cash bonus, and a stock-based program. No member of Executive Management has a fixed base salary exceeding DKK 6 million. The variable part of the total remuneration (cash bonus and stock-based program) is relatively large compared to the fixed base salary and is dependent on achievement of individual targets and the company's targets for financial, social, and environmental results. The maximum cash bonus is equivalent to 5 months' fixed base salary. General guidelines for remuneration of Executive Management are approved by the Annual Shareholders' Meeting, and more detailed information is available at [www.novozymes.com](http://www.novozymes.com).

Members of Executive Management have contracts of employment containing standard conditions for executive officers of Danish listed companies, including the periods of notice that both parties are required to give and competition clauses. If the executive officer's contract of employment is terminated by the company without there having been misconduct on the part of the executive officer, the executive officer has the right to compensation, which, depending on the circumstances, may amount to a maximum of 3 years' base salary and pension contributions.

	Stock options				Shares	
	Options at January 1, 2011*	Additions during the year	Exercised during the year	Options at Dec. 31, 2011	Market value in DKK million	Number
<b>Stock options and shares of stock</b>						
Steen Riisgaard	788,110	-	(78,000)	710,110	61.9	58,575
Per Falholt	474,005	-	(163,670)	310,335	28.8	-
Benny D. Loft	480,905	-	(170,570)	310,335	28.8	2,260
Peder Holk Nielsen	518,405	-	(208,070)	310,335	28.8	-
Thomas Nagy	328,135	-	-	328,135	30.6	500
Thomas Videbæk	328,135	-	(25,270)	302,865	28.1	-
<b>Stock options and shares of stock, total</b>	<b>2,917,695</b>	<b>-</b>	<b>(645,580)</b>	<b>2,272,115</b>	<b>207</b>	<b>61,335</b>

\* Adjustment in balance at beginning of year due to limitation of previous year's stock option program.

A new long-term stock-based incentive program for Executive Management was established in 2011. The incentive program is a 3-year stock-based program and covers the period 2011–2013, with shares to be released in January 2014. The program is based on achievement of cumulative economic profit in the 3-year period. Using economic profit as the target for the program will ensure that Novozymes' Executive Management focuses on delivering on the company's long-term expectations of annual sales growth of more than 10% in the period, an EBIT margin of more than 20% in the period, and a ROIC that is higher than 22% at the end of the period. A total of 699,300 shares have been granted. This is based on the expected economic profit and dividend and will be adjusted on an annual basis. The fair value on grant date was DKK 108 million, which will be expensed over the 3-year period, assuming that the cumulated economic profit target will be met. This assumption is unchanged, and thus DKK 36 million was expensed in 2011. A further DKK 15 million (2010: DKK 20 million) has been recognized regarding stock option programs from previous years that have not yet fully vested.

## Board of Directors and Audit Committee

Remuneration	Board of Directors	Audit Committee	2011 DKK thousand	Board of Directors	Audit Committee	2010 DKK thousand
Henrik Gürtler	1,250	-	1,250	833	-	833
Kurt Anker Nielsen	833	417	1,250	500	333	833
Paul Petter Aas	417	-	417	333	-	333
Jerker Hartwall*	69	35	104	333	167	500
Søren Henrik Jepsen	417	-	417	333	-	333
Lars Bo Køppler**	417	-	417	28	-	28
Ulla Morin	417	-	417	333	-	333
Michael Munksø**	-	-	-	305	-	305
Lena Olving*	347	174	521	-	-	-
Agnete Raaschou-Nielsen*	347	174	521	-	-	-
Jørgen Buhl Rasmussen*	347	-	347	-	-	-
Walther Thygesen*	69	35	104	333	167	500
Mathias Uhlén	417	-	417	333	-	333
<b>Remuneration, total</b>	<b>5,347</b>	<b>835</b>	<b>6,182</b>	<b>3,664</b>	<b>667</b>	<b>4,331</b>

\* Jerker Hartwall and Walter Thygesen left the Board of Directors in 2011. Agnete Raaschou-Nielsen, Lena Olving, and Jørgen Buhl Rasmussen joined the Board on March 1, 2011.

\*\* Michael Munksø left the Board of Directors and was replaced by Lars Bo Køppler as of December 1, 2010.

Directors' remuneration does not include minor social security contributions paid by Novozymes.

Shares of stock	Shares at January 1, 2011	Additions during the year	Sold during the year	Shares at Dec. 31, 2011	Market value in DKK million
Henrik Gürtler	-	-	-	-	-
Kurt Anker Nielsen	49,845	-	-	49,845	8.8
Paul Petter Aas	-	-	-	-	-
Søren Henrik Jepsen	2,200	130	(2,050)	280	-
Lars Bo Køppler	-	-	-	-	-
Ulla Morin	2,080	-	-	2,080	0.4
Lena Olving	-	-	-	-	-
Agnete Raaschou-Nielsen	-	430	-	430	0.1
Jørgen Buhl Rasmussen	-	-	-	-	-
Mathias Uhlén	-	-	-	-	-
<b>Shares of stock, total</b>	<b>54,125</b>	<b>560</b>	<b>(2,050)</b>	<b>52,635</b>	<b>9.3</b>

The employee-elected board members also hold stock options in Novozymes A/S, granted in connection with stock option allocations in previous years covering all employees at Novozymes on the relevant dates.

### Note 5 - Fees to statutory auditor

	2011	2010
	DKK million	DKK million
Statutory audit	8	8
Other assurance engagements	0	0
Tax advisory services	6	6
Other services	2	2
<b>Fees to statutory auditor, total</b>	<b>16</b>	<b>16</b>

### Note 6 - Depreciation, amortization, and impairment losses

	2011	2010
	DKK million	DKK million
Recognized in the income statement under the following items:		
Cost of goods sold	445	381
Sales and distribution costs	24	22
Research and development costs	75	88
Administrative costs	24	18
<b>Depreciation and impairment losses, property, plant and equipment, total</b>	<b>568</b>	<b>509</b>

Recognized in the income statement under the following items:		
Cost of goods sold	112	104
Sales and distribution costs	10	14
Research and development costs	92	46
Administrative costs	4	6

**Amortization and impairment losses, intangible assets, total**

**218**      **170**

**Depreciation, amortization, and impairment losses, total**

**786**      **679**

Of which impairment losses on buildings in 2011 are DKK 0 million (2010: DKK 14 million, included in Cost of goods sold).

Of which impairment losses on know-how in 2011 are DKK 30 million (2010: DKK 50 million), included in Cost of goods sold.

### Note 7 - Other operating income, net

	2011	2010
	DKK million	DKK million
Income and grants concerning research projects/collaborations	49	66
Other operating income, net	23	3
Loss on sale of activities	(22)	-
<b>Other operating income, net, total</b>	<b>50</b>	<b>69</b>

### Note 8 - Financial income

	2011	2010
	DKK million	DKK million
Interest income	18	45
Exchange gains on derivatives, net	161	31
Other foreign exchange gains, net	29	37
<b>Financial income, total</b>	<b>208</b>	<b>113</b>

### Note 9 - Financial costs

	2011	2010
	DKK million	DKK million
Interest costs	110	94
Other financial costs	20	20
Stock-based payment and value adjustment of securities	19	19
Capitalized interest costs (interest rate used 3.9% p.a. (2010: 3.9%))	(16)	(26)
<b>Financial costs, total</b>	<b>133</b>	<b>107</b>

### Note 10 - Tax

	2011	2010
	DKK million	DKK million
Tax payable on net profit	487	415
Change in deferred tax	69	81
Adjustment for previous years	31	13
<b>Tax in the income statement</b>	<b>587</b>	<b>509</b>

#### Calculation of effective tax rate:

Corporation tax rate in Denmark	25.0%	25.0%
Non-deductible expenses, net	0.6%	1.4%
Difference in foreign tax rates	(0.7)%	0.5%
Other adjustments	(0.6)%	(2.9)%
<b>Effective tax rate</b>	<b>24.3%</b>	<b>24.0%</b>

**Note 11 - Intangible assets**

	Completed IT development projects* DKK million	Acquired patents, trademarks, licenses, and know-how DKK million	Goodwill DKK million	IT development projects in progress* DKK million	Total DKK million
Cost at January 1, 2011	269	1,048	529	11	1,857
Currency translation adjustments	1	(9)	(28)	-	(36)
Purchase of activities and companies	-	1,047	360	-	1,407
Additions during the year	-	-	-	34	34
Disposals during the year	-	(190)	(26)	-	(216)
<b>Cost at December 31, 2011</b>	<b>270</b>	<b>1,896</b>	<b>835</b>	<b>45</b>	<b>3,046</b>
Amortization and impairment losses at January 1, 2011	236	535	16	-	787
Currency translation adjustments	1	(2)	-	-	(1)
Amortization for the year	10	178	-	-	188
Write-downs and impairment losses for the year	-	30	-	-	30
Disposals for the year	-	(163)	(16)	-	(179)
<b>Amortization and impairment losses at December 31, 2011</b>	<b>247</b>	<b>578</b>	<b>-</b>	<b>-</b>	<b>825</b>
<b>Carrying amount at December 31, 2011</b>	<b>23</b>	<b>1,318</b>	<b>835</b>	<b>45</b>	<b>2,221</b>
Cost at January 1, 2010	232	992	456	45	1,725
Currency translation adjustments	-	34	62	-	96
Additions during the year	-	22	11	3	36
Transfer (to)/from other items	37	-	-	(37)	-
<b>Cost at December 31, 2010</b>	<b>269</b>	<b>1,048</b>	<b>529</b>	<b>11</b>	<b>1,857</b>
Amortization and impairment losses at January 1, 2010	225	363	13	-	601
Currency translation adjustments	-	13	3	-	16
Amortization for the year	11	109	-	-	120
Write-downs and impairment losses for the year	-	50	-	-	50
<b>Amortization and impairment losses at December 31, 2010</b>	<b>236</b>	<b>535</b>	<b>16</b>	<b>-</b>	<b>787</b>
<b>Carrying amount at December 31, 2010</b>	<b>33</b>	<b>513</b>	<b>513</b>	<b>11</b>	<b>1,070</b>

\* Assets developed internally.

Write-downs and impairment losses of DKK 30 million (2010: DKK 50 million) were recognized in 2011, based on a specific assessment of know-how assets.



## Note 12 - Impairment test of goodwill

The carrying amount of goodwill was tested for impairment at December 31, 2011. Goodwill relates to three cash-generating units broken down by business area: Enzyme Business, Microorganisms, and Biopharma. The impairment test did not reveal any need to write down the carrying amounts for impairment (2010: DKK 0 million). Refer to the Company profile for a description of the individual business areas.

The impairment tests compared the discounted cash flow of the individual cash-generating units to the carrying amounts of the units. Cash flow is based on budgets and business plans for the period 2012–2026, which have been risk-adjusted to reflect the uncertainty in the long term business plans.

The value of goodwill for Enzyme Business amounts to DKK 177 million (2010: DKK 205 million), and the expected profit within this business area in 2012 significantly exceeds the value of goodwill. The assumptions for the calculation of expected profit/discounted cash flow for Enzyme Business are based on expectations of the Group's development as described in Outlook.

Material assumptions used in calculating the discounted cash flow for the two other cash-generating units are based on an assessment of the individual unit as follows:

<b>2011</b>	<b>Microorganisms</b>	<b>Biopharma</b>
Goodwill	484	174
Expected sales growth	6–9%	10–15%
Sales growth, terminal value	2.0%	0.7%

<b>2010</b>	<b>Microorganisms</b>	<b>Biopharma</b>
Goodwill	128	180
Expected sales growth	7.6%	10–15%
Sales growth, terminal value	3.0%	0.7%

In 2011, a lower discount rate before tax of 5.1% was used for all business areas compared to 2010 (5.6%), primarily because the risk-free interest rate decreased during 2011. The test for impairment in 2011 included a sensitivity analysis based on a discount rate on par with 2010. A test on this basis would not give rise to impairment losses.

## Note 13 - Property, plant and equipment

	Land and buildings DKK million	Plant and machinery DKK million	Other equipment DKK million	Assets under con- struction and prepayments DKK million	Total DKK million
Cost at January 1, 2011	3,665	5,470	1,153	1,700	11,988
Currency translation adjustments	45	86	16	66	213
Acquisition of activities and companies	44	10	3	-	57
Additions during the year	29	215	88	958	1,290
Disposals during the year	(60)	(369)	(227)	-	(656)
Transfer (to)/from other items	288	867	70	(1,225)	-
<b>Cost at December 31, 2011</b>	<b>4,011</b>	<b>6,279</b>	<b>1,103</b>	<b>1,499</b>	<b>12,892</b>
Depreciation and impairment losses at January 1, 2011	1,612	3,741	769	-	6,122
Currency translation adjustments	19	62	13	-	94
Depreciation for the year	184	290	94	-	568
Disposals during the year	(51)	(217)	(181)	-	(449)
<b>Depreciation and impairment losses at December 31, 2011</b>	<b>1,764</b>	<b>3,876</b>	<b>695</b>	<b>-</b>	<b>6,335</b>
<b>Carrying amount at December 31, 2011</b>	<b>2,247</b>	<b>2,403</b>	<b>408</b>	<b>1,499</b>	<b>6,557</b>
Cost at January 1, 2010	3,438	5,123	1,063	906	10,530
Currency translation adjustments	147	203	49	52	451
Additions during the year	38	116	68	1,118	1,340
Disposals during the year	(17)	(220)	(96)	-	(333)
Transfer (to)/from other items	59	248	69	(376)	-
<b>Cost at December 31, 2010</b>	<b>3,665</b>	<b>5,470</b>	<b>1,153</b>	<b>1,700</b>	<b>11,988</b>
Depreciation and impairment losses at January 1, 2010	1,415	3,574	737	-	5,726
Currency translation adjustments	56	112	28	-	196
Depreciation for the year	134	271	90	-	495
Write-downs and impairment losses for the year	14	-	-	-	14
Disposals during the year	(7)	(216)	(86)	-	(309)
<b>Depreciation and impairment losses at December 31, 2010</b>	<b>1,612</b>	<b>3,741</b>	<b>769</b>	<b>-</b>	<b>6,122</b>
<b>Carrying amount at December 31, 2010</b>	<b>2,053</b>	<b>1,729</b>	<b>384</b>	<b>1,700</b>	<b>5,866</b>

Obligations to third parties relating to capital expenditure are DKK 326 million at December 31, 2011 (2010: DKK 347 million).

Interest of DKK 16 million (2010: DKK 26 million) is included in purchases of property, plant and equipment above and under investing activities in the statement of cash flows and financial resources.

**Note 14 - Deferred tax**

	2011 DKK million	2010 DKK million
Deferred tax at January 1	(422)	(632)
Currency translation adjustments	6	4
Acquisition of activities and companies	(28)	-
Tax related to the income statement	(26)	145
Tax on shareholders' equity items	(160)	61
<b>Deferred tax at December 31</b>	<b>(630)</b>	<b>(422)</b>
Deferred tax assets	275	71
Deferred tax liabilities	(905)	(493)
<b>Deferred tax at December 31</b>	<b>(630)</b>	<b>(422)</b>

	Deferred tax assets DKK million	Deferred tax liabilities DKK million	Total DKK million
Intangible assets and property, plant and equipment	75	(1,018)	(943)
Deferred tax relating to inventories	277	(145)	132
Tax-loss carry-forwards and balance re recapture of tax losses	36	-	36
Stock options	115	-	115
Liabilities, etc.	246	(216)	30
	<b>749</b>	<b>(1,379)</b>	<b>(630)</b>
Offsetting items	(474)	474	-
<b>Deferred tax at December 31, 2011</b>	<b>275</b>	<b>(905)</b>	<b>(630)</b>

Due after more than 12 months	(592)
Unrecognized share of tax-loss carry-forwards, etc.	38

	Deferred tax assets DKK million	Deferred tax liabilities DKK million	Total DKK million
Intangible assets and property, plant and equipment	162	(735)	(573)
Deferred tax relating to inventories	315	(313)	2
Tax-loss carry-forwards and balance re recapture of tax losses	18	(18)	-
Stock options	260	-	260
Liabilities, etc.	283	(394)	(111)
	<b>1,038</b>	<b>(1,460)</b>	<b>(422)</b>
Offsetting items	(967)	967	-
<b>Deferred tax at December 31, 2010</b>	<b>71</b>	<b>(493)</b>	<b>(422)</b>

Due after more than 12 months	(396)
Unrecognized share of tax-loss carry-forwards, etc.	79

Tax-loss carry-forwards are recognized in deferred tax assets to the extent that the losses are expected to be realized in the form of future taxable profits.

### Note 15 - Other financial assets

	2011 DKK million	2010 DKK million
Available-for-sale financial assets	-	96
Derivatives	48	132
<b>Other financial assets at December 31</b>	<b>48</b>	<b>228</b>
Non-current assets	-	50
Current assets	48	178

In 2010 available-for-sale financial assets comprised a minor investment in stockholdings and a temporary investment.

### Note 16 - Inventories

	2011 DKK million	2010 DKK million
Raw materials and consumables	268	216
Work in progress	361	402
Finished goods	1,112	1,022
<b>Inventories at December 31</b>	<b>1,741</b>	<b>1,640</b>

Cost of materials, included under Cost of goods sold, is DKK 2,546 million (2010: DKK 2,217 million).

Expensed write-downs on inventories	72	50
Reversal of write-downs on inventories	50	48

Some of the reversal of write-downs can be attributed to written-down inventories being reused in production.

### Note 17 - Trade receivables

	2011 DKK million	2010 DKK million
Trade receivables	2,082	1,860
Allowances for doubtful trade receivables	(164)	(133)
	<b>1,918</b>	<b>1,727</b>
Amounts owed by related companies	53	45
<b>Trade receivables at December 31</b>	<b>1,971</b>	<b>1,772</b>

	2011 DKK million	2010 DKK million
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Changes in allowances for doubtful trade receivables:		
At January 1	133	125
Allowances during the year	74	64
Write-offs during the year	(12)	(18)
Reversed allowances	(31)	(38)
<b>Allowances at December 31</b>	<b>164</b>	<b>133</b>

The cost is included in Sales and distribution costs.

Allocation of overdue net receivables (not written off) by maturity period is as follows:

Up to 30 days	209	155
Between 30 days and 90 days	32	32
Between 91 days and 365 days	1	3
<b>Overdue net receivables at December 31</b>	<b>242</b>	<b>190</b>

### Note 18 - Tax receivables and payables

	2011 DKK million	2010 DKK million
At January 1	146	113
Currency translation adjustments	-	2
Acquisition of activities and companies	(21)	-
Tax related to the income statement	(561)	(654)
Tax on other comprehensive income	-	(1)
Tax on shareholders' equity items	48	77
Tax paid for the current year, net	518	609
<b>Tax receivables/(payables) at December 31</b>	<b>130</b>	<b>146</b>
Tax receivables	167	232
Tax payables	(37)	(86)
<b>Tax receivables/(payables) at December 31</b>	<b>130</b>	<b>146</b>

Of which due after more than 12 months	-	-
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### Note 19 - Other receivables

	2011 DKK million	2010 DKK million
Deposits	19	32
Prepaid expenses	87	64
Other receivables	89	153
<b>Other receivables at December 31</b>	<b>195</b>	<b>249</b>

Other receivables primarily fall due within 1 year from the balance sheet date.

## Note 20 - Common stock

	2011 DKK million	2010 DKK million
<b>Common stock</b>		
<b>Nominal value</b>		
A common stock	107	107
B common stock	543	543
<b>Common stock at December 31</b>	<b>650</b>	<b>650</b>

	2011 No.	2010 No.
<b>Shares of common stock</b>		
A shares of DKK 2*	53,743,600	53,743,600
B shares of DKK 2*	271,256,400	271,256,400
<b>Shares of common stock at December 31</b>	<b>325,000,000</b>	<b>325,000,000</b>

\* Restated in 2011 to reflect 1-to-5 stock split of the company's A and B shares. The nominal value was changed from DKK 10 to DKK 2.

Each A share gives an entitlement to 20 votes, while each B share gives an entitlement to 2 votes.

	2011 No.	2010 No.
<b>Shares of common stock in circulation</b>		
Shares of stock at January 1	314,707,510	310,876,225
Purchase of treasury stock	(2,455,000)	-
Sale of treasury stock	2,832,060	3,831,285
<b>Shares of common stock in circulation at December 31</b>	<b>315,084,570</b>	<b>314,707,510</b>

	2011 DKK million	2010 DKK million
<b>Treasury stock - B stock</b>		
<b>Carrying amount</b>		
Carrying amount at January 1	1,479	1,624
Additions during the year	400	-
Disposals during the year	(165)	(145)
<b>Carrying amount at December 31</b>	<b>1,714</b>	<b>1,479</b>

	2011 DKK million	2010 DKK million
<b>Nominal value</b>		
Nominal value at January 1	21	28
Additions during the year	5	-
Disposals during the year	(6)	(7)
<b>Nominal value at December 31</b>	<b>20</b>	<b>21</b>

	2011 No.	2010 No.
<b>Shares of treasury stock</b>		
Shares of stock at January 1	10,292,490	14,123,775
Additions during the year	2,455,000	-
Disposals during the year	(2,832,060)	(3,831,285)
<b>Shares of stock at December 31</b>	<b>9,915,430</b>	<b>10,292,490</b>

	2011 %	2010 %
<b>Percentage of common stock</b>		
Percentage of common stock at January 1	3.2%	4.3%
Additions during the year	0.8%	0.0%
Disposals during the year	(0.9%)	(1.1%)
<b>Percentage of common stock at December 31</b>	<b>3.1%</b>	<b>3.2%</b>

	2011 DKK million	2010 DKK million
<b>Profit basis for earnings per share</b>	<b>1,828</b>	<b>1,614</b>

	2011 No.	2010 No.
<b>Average number of shares:</b>		
Average shares of stock	315,156,775	313,177,970
Adjustment for stock options	4,799,444	6,200,540
<b>Average number of diluted shares</b>	<b>319,956,219</b>	<b>319,378,510</b>

## Note 21 - Minority interests

	2011 DKK million	2010 DKK million
Minority interests at January 1	12	10
Share of net profit	2	1
Currency translation adjustments	1	1
<b>Minority interests at December 31</b>	<b>15</b>	<b>12</b>

## Note 22 - Provisions

	2011 DKK million	2010 DKK million
Provisions at January 1	232	168
Currency translation adjustments	(2)	8
Acquisition of activities and companies	15	-
Additions during the year	37	71
Reversals during the year	(20)	(1)
Utilization during the year	(12)	(14)
<b>Provisions at December 31</b>	<b>250</b>	<b>232</b>
Current	98	50
Non-current	152	182

Provisions includes items relating to liabilities for restoring rental premises to their original condition on moving out, contingent considerations, pending litigation, environmental cases, and long-term employee benefits.

Restoration concerns expected future costs relating to removal of plant and installations and restoration, etc., in connection with moving out of rental premises. The costs are expected to be incurred on termination of the leases in a minimum of 2 years/maximum of 15 years.

The contingent consideration relates to acquisitions in previous years and is expected to be settled on an ongoing basis over a period of up to 6 years, but with the majority being paid before the end of 2013.

Environmental liabilities relate to expected costs to ensure that Novozymes' production sites do not have a negative environmental impact. Provision has been made for the estimated costs relating to established circumstances, and these costs are expected to be incurred either when concrete measures are implemented or when the sites are vacated.

Novozymes is involved in a number of ongoing legal disputes, and provision is made for the estimated costs of these based on the current evaluation of the outcomes. The cases are mainly expected to be finalized in 2012 and 2013.

In addition, provisions also covers a number of minor obligations, including other long-term employee benefits, liability for returned goods, etc. These obligations are expected to be incurred over a longer period.

### Note 23 - Other financial liabilities

	2011 DKK million	2010 DKK million
Credit institutions	1,666	1,792
Derivatives	176	54
Other financial liabilities	20	19
<b>Other financial liabilities at December 31</b>	<b>1,862</b>	<b>1,865</b>

Non-current	1,604	1,574
Current	258	291

The credit institutions are payable within the following periods from the balance sheet date:

Less than 1 year	152	271
Between 1 and 2 years	562	5
Between 2 and 3 years	5	562
Between 3 and 4 years	488	5
Between 4 and 5 years	5	490
After 5 years	454	459
<b>Credit institutions at December 31</b>	<b>1,666</b>	<b>1,792</b>

The debt is denominated in the following currencies:

CNY	46	89
DKK	600	618
EUR	961	966
INR	59	119
<b>Credit institutions at December 31</b>	<b>1,666</b>	<b>1,792</b>

Debt to credit institutions runs to 2012–2029 at interest rates between 1.6% and 11.4%.

The interest rates on the above variable loans will be adjusted in 2012.

The carrying amount of credit institutions corresponds to the fair value.

### Note 24 - Other payables

	2011 DKK million	2010 DKK million
Employee costs payable	536	537
Taxes and duties payable	-	10
Accruals and deferred income	92	108
Stock-based payment	32	31
Other payables	559	631
<b>Other payables at December 31</b>	<b>1,219</b>	<b>1,317</b>



**Note 25 - Stock-based payment**

Novozymes has established stock option programs for Executive Management, other managers, and other employees. The purpose of the stock option programs has been to ensure common goals for management, employees, and shareholders. Allocation of options has been, and remains, dependent on profit, value-creation, and sustainability targets being achieved.

For the period 2007–2010 annual stock option programs were established conferring the right to purchase one share per stock option at a nominal price of DKK 2. Allocations were made on the basis of the individual employee's base salary and achievement of a series of business targets – both financial and nonfinancial – set by the Board of Directors for each year. The stock options have a vesting period of 4 years, followed by an exercise period of 5 years. In order to exercise the options, the employee must still be employed on the exercise date. This does not apply to persons who have retired, taken a voluntary early retirement pension, or been given notice.

Executive Management has previously also been allocated stock options with a maturity period of between 6 and 8 years. For other managers and other employees, the stock options have previously been allocated with a maturity of 8 years.

A long-term stock-based incentive program for Executive Management has been established in 2011. Further information can be found in Note 4. In addition, Novozymes has established a stock-based incentive program for vice presidents and directors, covering the period 2011–2013, with restricted stock offered each year. The program is based on fulfillment of specified financial and nonfinancial targets. A total of 202,395 shares have been granted in 2011. The fair value on the grant date was DKK 31 million, which will be expensed over a 4-year period.

The above-mentioned stock option programs are primarily equity settled, and no liability is recognized for these. In the case of allocations in countries where ownership of foreign stock is not permitted, the value of stock options is settled in cash, and a liability of DKK 32 million has been recognized for this in 2011 (2010: DKK 31 million). The intrinsic value of cash-settled programs in 2011 was DKK 13 million (2010: DKK 22 million).

DKK 83 million has been recognized in the income statement for equity-settled programs in 2011 (2010: DKK 60 million). The value of stock options allocated in 2011 was DKK 1 million.

A stock purchase plan under the gross salary deduction scheme has been established for Danish employees in 2011, with employees buying shares at the official trading price. Total employee costs of DKK 24 million (2010: DKK 25 million) recognized for this plan in 2011 are included in Note 3 - Employee costs. A total of 130,030 shares have been transferred to employees.

	Total	Number of options that can be exercised	Exercise price per option in DKK	Share price at exercise in DKK	Remaining term to maturity (years)
<b>Stock options in Novozymes A/S</b>					
<b>Outstanding at January 1, 2011</b>	<b>12,376,360</b>	<b>3,778,750</b>	<b>75*</b>		<b>5**</b>
Additions during the year	28,095				
Options exercised in 2011	(2,941,345)		58*	166*	
Terminations in 2011	(173,090)				
<b>Outstanding at December 31, 2011</b>	<b>9,290,020</b>	<b>3,467,455</b>	<b>80*</b>		<b>4**</b>
<b>Outstanding at January 1, 2010</b>	<b>16,674,490</b>	<b>6,057,370</b>	<b>65*</b>		<b>5**</b>
Additions during the year	20,580				
Options exercised in 2010	(3,978,170)		38*	129*	
Terminations in 2010	(340,540)				
<b>Outstanding at December 31, 2010</b>	<b>12,376,360</b>	<b>3,778,750</b>	<b>75*</b>		<b>5**</b>

\* The exercise price is a weighted average of several option programs.

\*\* Remaining term to maturity is stated as a weighted average of the outstanding options.

Stock options in Novozymes A/S	Total	Number of options that can be exercised	Exercise price per option in DKK	Remaining term to maturity (years)	Fair value in DKK million
Outstanding program 2003	776,830	776,830	30	-	113
Outstanding program 2006	939,045	939,045	69	3	100
Outstanding program 2006	3,575	3,575	80	3	-
Outstanding program 2007	1,681,785	1,681,785	99	4	129
Outstanding program 2007	98,440	-	117	6	6
Outstanding program 2007	25,945	25,945	119	4	2
Outstanding program 2008	3,495,385	-	78	5	341
Outstanding program 2008	64,880	40,275	83	6	6
Outstanding program 2008	40,275	-	81	5	4
Outstanding program 2009	2,098,765	-	89	6	179
Outstanding program 2009	16,420	-	106	6	1
Outstanding program 2010	23,025	-	135	7	1
Outstanding program 2011	25,650	-	159	8	1
<b>Outstanding at December 31, 2011</b>	<b>9,290,020</b>	<b>3,467,455</b>	<b>80*</b>	<b>4**</b>	<b>883</b>

\* The exercise price is a weighted average of several option programs.

\*\* Remaining term to maturity is stated as a weighted average of the outstanding options.

Fair value is calculated on the basis of the Black-Scholes model for valuation of options. The historical volatility over the last year is used when calculating the value of the options at year-end. The risk-free interest is based on Danish government bonds with a maturity equivalent to the option's expected remaining term to maturity. The expected maturity is fixed at 1 year after the expiry of the binding period, or the option's expiry date if this is within 1 year.

The following assumptions are used when calculating the fair value at the end of the period:

	2011	2010
Dividend per share, DKK	1.90	1.60
Volatility, %	21.6	25.1
Average risk-free interest, %	0.1	1
Share price, DKK	177	155

The fair value of other stock-based payment is based on the prevailing market prices and interest rates current on the grant date.

**Note 26 - Foreign currencies in the balance sheet****Hedging of assets and liabilities in foreign currency (transaction risk)**

The table below shows the Group's assets and liabilities in foreign currencies at December 31, 2011, calculated as the total of each Group company's assets and liabilities in a currency other than its own. The table also shows the derivatives used to hedge these assets and liabilities.

DKK million	Currency exposure	Derivatives	Net currency exposure	Exchange rate at Dec. 31, 2011 (for 100 units)
AUD	(67)	68	1	584.31
CAD	(21)	26	5	562.56
EUR	616	(1,215)	(599)	743.42
GBP	(183)	201	18	890.00
MXN	21	(14)	7	41.18
SEK	(110)	96	(14)	83.42
USD	1,973	(2,299)	(326)	574.56
Other	(39)	-	(39)	
	<b>2,190</b>	<b>(3,137)</b>	<b>(947)</b>	

Transaction risk is the possibility of gains/losses on transactions that are open on the balance sheet date as a result of subsequent exchange rate changes. Gains/losses are recognized in the income statement.

**Hedging of investments in foreign subsidiaries (translation risk)**

DKK million	Net investment in foreign subsidiaries	Derivatives	Net assets with translation risk	Exchange rate at Dec. 31, 2011 (for 100 units)
ARS	314	-	314	133.26
AUD	108	-	108	584.31
BRL	195	-	195	307.72
CAD	182	-	182	562.56
CHF	299	-	299	611.57
CNY	1,702	-	1,702	91.12
EUR	64	-	64	743.42
GBP	202	-	202	890.00
INR	198	-	198	10.82
SEK	191	-	191	83.42
USD	382	-	382	574.56
Other	97	-	97	
	<b>3,934</b>	<b>-</b>	<b>3,934</b>	

Translation risk is the possibility of gains/losses arising from translation of net assets in subsidiaries as a result of subsequent exchange rate changes. Gains/losses are recognized in the statement of comprehensive income.

**Note 27 - Derivatives - Hedge accounting, etc.****Cash flow hedges, etc**

The table below shows the derivatives that the Group has contracted to hedge currency exposure, interest rate exposure, or price exposure on future cash flows. The total fair value adjustment at year-end is entered directly in Shareholders' equity and will be taken to the income statement as the financial contracts are realized, with the exception of currency translation and accrued interest on currency swaps used for interest hedging, as these do not qualify as cash flow hedges and are therefore entered directly in the income statement.

DKK million	2011		2010	
	Contract amount based on agreed rates	Fair value Dec. 31	Contract amount based on agreed rates	Fair value Dec. 31
<b>Forward exchange contracts (sales)</b>				
USD	2,573	(55)	2,834	115
	<b>2,573</b>	<b>(55)</b>	<b>2,834</b>	<b>115</b>
<b>Interest rate swaps</b>				
DKK/DKK - pays fixed rate of 2.95% / earns variable rate of 1.00% (2010: 1.21%)	307	(6)	307	(8)
EUR/EUR - pays fixed rate of 3.06% / earns variable rate of 1.82% (2010: 1.09%)	112	(7)	112	(5)
EUR/EUR - pays fixed rate of 3.58% / earns variable rate of 1.82% (2010: 1.09%)	112	(13)	112	(6)
	<b>531</b>	<b>(26)</b>	<b>531</b>	<b>(19)</b>
<b>Currency swaps</b>				
EUR/DKK - pays fixed rate of 4.27% / earns variable rate of 1.00% (2010: 1.21%)	250	(7)	250	(15)
	<b>250</b>	<b>(7)</b>	<b>250</b>	<b>(15)</b>
<b>Forwards</b>				
Electricity price agreement - average payment of DKK 352/MWh (2010: DKK 326/MWh)	99	(13)	76	3
Oil price agreement - average payment of USD 671/MT (2010: USD 707/MT)	8	-	11	1
	<b>107</b>	<b>(13)</b>	<b>87</b>	<b>4</b>
	<b>3,461</b>	<b>(101)</b>	<b>3,702</b>	<b>85</b>

The forward exchange contracts fall due in the period January 2012 to December 2013 (January 2011 to December 2012 at the end of 2010), while the interest rate and currency swaps fall due in the period March 2013 to July 2019 (March 2013 to July 2019 at the end of 2010). Electricity agreements have been contracted for the period January 2012 to December 2013 (January 2011 to December 2012 at the end of 2010) and oil contracts for the period January 2012 to June 2012 (January 2011 to December 2011 at the end of 2010).

At the end of 2011 the Group has hedged future cash flows in USD with 100% for 2012 and 50% for 2013 (2010: 100% for 2011 and 100% for 2012).

### Fair value hedges

The table below shows the derivatives that the Group has contracted to hedge currency exposure on financial assets and liabilities that give rise to currency adjustments in the income statement, and derivatives that no longer fulfill the criteria for cash flow hedges. Gains or losses on fair value adjustments at year-end are entered in the income statement.

DKK million	2011		2010	
	Contract amount based on agreed rates	Fair value Dec. 31	Contract amount based on agreed rates	Fair value Dec. 31
<b>Forward exchange contracts (sales)</b>				
AUD (net purchase)	(68)	2	(55)	2
CAD (net purchase)	(26)	1	-	-
GBP (net purchase)	(201)	2	(112)	(1)
JPY	-	-	25	(5)
MXN	14	-	23	-
SEK	(96)	-	41	-
USD	2,299	(32)	1,182	(3)
	<b>1,922</b>	<b>(27)</b>	<b>1,104</b>	<b>(7)</b>

The forward exchange contracts fall due in the period January 2012 to October 2012 (January 2011 to October 2011 at the end of 2010).

The gain on forward exchange contracts was DKK 161 million (2010: DKK 31 million), compared to a gain on the hedged items of DKK 8 million (2010: DKK 41 million).

### Other information

The derivatives are not traded on an active market based on quoted prices, but are individual contracts. The fair value of the derivatives is determined using valuation techniques that utilize market-based data such as exchange rates, interest rates, electricity prices, and oil prices (Level 2).

The carrying amounts for the categories Loans and receivables and Other financial liabilities at December 31, 2011, are DKK 2,746 million and DKK 3,526 million respectively (2010: DKK 3,422 million and DKK 3,734 million). The carrying amounts for the categories Hedge accounting (asset) and Hedge accounting (liability) are shown in Notes 15 and 23.

### Note 28 - Commitments and contingent liabilities

	2011	2010
	DKK million	DKK million
<b>Commitments</b>		
Rental commitments expiring within the following periods from the balance sheet date:		
Less than 1 year	59	63
Between 1 and 2 years	44	53
Between 2 and 3 years	35	42
Between 3 and 4 years	22	39
Between 4 and 5 years	20	21
After 5 years	87	102
<b>Rental commitments at December 31</b>	<b>267</b>	<b>320</b>

Of which commitments to related companies at December 31, 2011, amount to DKK 29 million, compared to DKK 29 million at December 31, 2010. The above rental commitments relate to non-cancelable operating lease contracts, primarily for buildings and offices.

The following amount has been recognized in the consolidated income statement in respect of rentals

	97	97
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#### Other contingent liabilities

Contractual obligations to third parties relating to capital expenditure, etc.

	373	347
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#### Other guarantees

Other guarantees and commitments to related companies

	137	157
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Other guarantees and commitments

	424	308
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#### Pending litigation and arbitration

Novozymes is party to a patent lawsuit in which Novozymes claims that Genencor Inc. (a DuPont company) has infringed Novozymes' US Patent No. 7,713,723 covering certain alpha-amylase enzymes for use in the biofuel and starch industries. Novozymes evaluates its position as positive, as a jury ruling came out in favor of Novozymes. As the ruling is subject to the judge's affirmation and possible appeal, the damages awarded to Novozymes have not yet been finalized and have therefore not been recognized in 2011. A final decision is expected in 2012.

In addition, Novozymes is engaged in certain other legal proceedings, and, in the opinion of the Board of Directors and Executive Management, settlement or continuation of these proceedings will not have a material effect on the Group's financial position. A liability has been recognized under Provisions where the risk of a loss on a legal proceeding is considered more likely than not.

#### Contract conditions

Several of the partnership contracts to which Novozymes is a party could be terminated by the opposite party in the event of significant changes concerning ownership or control of Novozymes. Furthermore, a few contracts contain provisions that restrict Novozymes' licenses to use specific forms of technology in such situations.

#### Liability for the debts and obligations of Novo Nordisk A/S

As a result of the Demerger of Novo Nordisk A/S into two companies, Novo Nordisk A/S and Novozymes A/S are jointly and severally liable in

accordance with Section 136, subsection 2 of the Danish Companies Act for debts and obligations arising after January 1, 2000, but relating to the period before January 1, 2000, that cannot be clearly attributed to either Novo Nordisk A/S or Novozymes A/S. Liability will be distributed proportionately between the two companies.

### Note 29 - Joint ventures

Novozymes A/S has interests in two joint ventures, namely two homeowners' associations run as jointly controlled entities with Novo Nordisk A/S. The objects of the associations are the operation and maintenance of common facilities.

	2011	2010
	DKK million	DKK million
Non-current assets	43	39
Current assets	43	39
<b>Total assets at December 31</b>	<b>86</b>	<b>78</b>
Non-current liabilities	(61)	(51)
Current liabilities	(25)	(27)
<b>Total liabilities at December 31</b>	<b>(86)</b>	<b>(78)</b>

Net profit

	-	-
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Novozymes A/S has not assumed any material contingent liabilities in connection with its interests in these joint ventures.

### Note 30 - Related party transactions

Novozymes A/S is controlled by Novo A/S, which holds 70.1% of the votes in Novozymes A/S. The remaining stock is widely held. The ultimate parent of the Group is the Novo Nordisk Foundation (incorporated in Denmark).

Related parties are considered to be the Novo Nordisk Foundation and its subsidiaries, i.e., the Novo and Novo Nordisk Groups, the directors of these entities, and the Board of Directors and Executive Management of Novozymes A/S, together with their immediate families. Related parties also include companies in which the above persons have significant interests.

All agreements relating to these transactions are based on the list prices used for sale to third parties where such list prices exist; otherwise the price has been set at what is regarded as market price. The majority of the agreements are renegotiated regularly. The Group has had the following transactions with related parties:

	2011	2010
	DKK million	DKK million
<b>Sale of goods, materials, and services</b>		
<b>Sale of goods and materials</b>		
- The Novo Nordisk Group	1	3
<b>Sale of services</b>		
- The Novo Nordisk Group	72	79
<b>Total sale of goods, materials, and services</b>	<b>73</b>	<b>82</b>



	2011	2010
	DKK million	DKK million
<b>Purchase of goods, materials, services, and assets</b>		
<b>Purchase of goods and materials</b>		
- Novo Nordisk A/S	69	74
- Minority shareholders in subsidiaries	51	61
<b>Purchase of services</b>		
- NNIT A/S	36	59
- Novo Nordisk A/S	58	69
- NNE Pharmaplan A/S	105	193
<b>Total purchases of goods, materials, services, and assets</b>	<b>319</b>	<b>456</b>

There have not been any material transactions with the Novo Nordisk Foundation or with Management of Novozymes A/S, Novo A/S, the Novo Nordisk Foundation, or the Novo Nordisk Group, other than normal remuneration. The remuneration of the Board of Directors and Executive Management is presented in Note 4.

	2011	2010
	DKK million	DKK million
<b>Receivables</b>		
- The Novo Nordisk Group	53	45
- Minority shareholders in subsidiaries	-	12
<b>Receivables at December 31</b>	<b>53</b>	<b>57</b>
<b>Financial liabilities</b>		
- Novo Nordisk A/S	21	19
<b>Financial liabilities at December 31</b>	<b>21</b>	<b>19</b>
<b>Payables</b>		
- NNIT A/S	5	6
- Novo Nordisk A/S	35	57
- NNE Pharmaplan A/S	26	41
<b>Payables at December 31</b>	<b>66</b>	<b>104</b>

### Note 31 - Government grants

During the financial year the Novozymes Group has received grants of DKK 24 million for research and development, compared to DKK 33 million in 2010. Government grants are recognized under Other operating income, net.

Government grants includes grants from the EU for various research projects and from the US Department of Energy for biomass.

## Note 32 - Acquisition of activities and companies

	EMD/Merck Crop BioScience	
	Carrying amount prior to acquisition	Fair value on date of acquisition
The assets and liabilities arising from acquisitions are as follows:		
Intangible assets excluding goodwill	99	1,047
Property, plant and equipment	32	57
Inventories	37	89
Trade and other receivables	103	101
Cash and cash equivalents	25	25
Other liabilities	50	109
Provisions	2	15
<b>Acquired net assets</b>	<b>244</b>	<b>1,195</b>
Goodwill on acquisitions		360
<b>Total purchase price</b>		<b>1,555</b>
Less:		
Cash and cash equivalents in acquired companies		25
<b>Cash outflow for acquisition of companies</b>		<b>1,530</b>

The acquired assets and goodwill comprise the following:

Total purchase price	1,555
Fair value of acquired net assets	1,195
<b>Goodwill</b>	<b>360</b>

### EMD/Merck Crop BioScience

On February 7, 2011, Novozymes bought 100% of the shares in EMD Crop BioScience USA Inc. and Merck Crop BioScience Argentina S.A., as well as the intellectual property rights of EMD Crop BioScience Canada.

The transaction comprises acquisition of the above-mentioned assets and liabilities and transfer of employees. The activities have been integrated in Novozymes' existing BioBusiness business area - Microorganisms.

EMD/Merck Crop BioScience had revenue of roughly USD 60 million in 2010 and has grown by roughly 15% a year from 2004–2010, with strong profit margins supportive of Novozymes' long-term EBIT margin target of more than 20%. The total amount paid to Merck KGaA was DKK 1,555 million, and Novozymes has financed the transaction using existing financial resources.

The revenue contributed by EMD/Merck Crop BioScience recognized in the consolidated income statement since February 7, 2011, was DKK 323 million, but the contribution to operating profit was not material due to integration costs and the IFRS effect on inventories. If EMD/Merck Crop BioScience had been owned for the whole year, revenue and operating profit would not have been materially different.

Acquisition-related costs of DKK 39 million have been charged to Sales and distribution costs at DKK 1 million in 2011 and DKK 38 million in 2010.

The gross contractual amount for trade receivables due was DKK 78 million, of which DKK 12 million was expected to be uncollectible at the acquisition date.

Goodwill represents the difference between the value of the acquired companies/activities and the value allocated to the specified net assets. Goodwill is thus an expression for assets for which a value cannot be measured reliably, including expected synergies arising in connection with amalgamation with the existing business. Approx. 50% of the calculated goodwill is expected to be deductible.

A more detailed description of the acquisition can be found in Financial and sustainability discussion.

**Note 33 - Non-cash items**

	2011	2010
	DKK million	DKK million
Financial gain/loss on sale of assets	8	9
Allowances for doubtful trade receivables	31	12
Tax	587	509
Depreciation, amortization, and impairment losses	786	679
Stock-based payment (excluding DKK 24 million in gross salary deduction scheme (2010: DKK 25 million))	87	63
(Gain)/loss on financial assets, etc., net	20	19
Unrealized foreign exchange (gain)/loss	(41)	(7)
Accrued interest income and interest costs	76	23
Change in provisions	(18)	33
Other items	113	-
<b>Non-cash items, total</b>	<b>1,649</b>	<b>1,340</b>

**Note 34 - Acquisition of activities and companies, net**

	2011	2010
	DKK million	DKK million
Acquisition of EMD/Merck Crop BioScience (2010: Turfal)	1,530	23
Divestment of activities	(151)	-
Transaction costs	47	-
<b>Acquisition of activities and companies, net</b>	<b>1,426</b>	<b>23</b>

**Note 35 - Cash and cash equivalents**

	2011	2010
	DKK million	DKK million
Cash at bank and in hand	667	1,465
Credit institutions - on demand	(43)	(141)
<b>Cash and cash equivalents at December 31</b>	<b>624</b>	<b>1,324</b>

**Note 36 - Expiration date for undrawn committed credit facilities**

	2011	2010
	DKK million	DKK million
Expiration of undrawn committed credit facilities:		
Less than 1 year	1,743	1,000
Between 1 and 2 years	2,000	745
Between 2 and 3 years	-	2,000
<b>Undrawn committed credit facilities</b>	<b>3,743</b>	<b>3,745</b>

**Note 37 - Financial risk factors**

Novozymes' international operations mean that the income statement and balance sheet are exposed to a number of financial risk factors. Financial risks are managed centrally for the entire Group. The use of financial instruments is governed by the treasury policy approved by Novozymes' Board of Directors. The treasury policy is unchanged from previous years, and contains rules on which financial instruments can be used for hedging, the counterparties that can be used, and the risk profile that is to be applied. Financial instruments are used to hedge existing assets, liabilities, and future net cash flows.

**Currency risk**

Currency risk arises due to imbalances between income and costs in each individual currency and because Novozymes has more assets than liabilities in foreign currencies in connection with its many foreign companies. Operating profit is most exposed to the EUR, USD, and JPY.

A 0.5% movement in the EUR would, other things being equal, result in a change in operating profit of around DKK 15–20 million (2010: DKK 15–20 million). A movement of 5% in the USD would result in a change in operating profit of around DKK 60–80 million (2010: DKK 60–80 million). A movement of 5% in the JPY would result in a change of around DKK 5–10 million (2010: DKK 5–10 million) in operating profit.

A 5% movement in the CNY would, other things being equal, result in a change in Shareholders' equity of around DKK 85 million (2010: DKK 71 million), while a movement of 5% in the USD would result in a change in Shareholders' equity of around DKK 19 million (2010: DKK 37 million).

Novozymes' policy is to hedge existing net assets in foreign currencies and expected future net exposure from the Group's operations. Hedging of exchange rate exposure is carried out through a combination of loans, forward exchange contracts, swaps, and options. Exchange rate hedging transactions are carried out to minimize risks and thereby increase the predictability of the Group's financial results.

Currency risk relating to net investments in foreign subsidiaries is hedged where this is deemed appropriate and is managed primarily by taking out loans and entering into swaps. Currency swaps, which are used to hedge equity investments, generally have a maturity period of over 12 months.

**Interest rate risk**

Interest rate risk arises in relation to interest-bearing assets and liabilities. An increase of 1 percentage point in the average interest rate on Novozymes' net interest-bearing assets would have a positive effect on profit before tax of around DKK 2 million. In accordance with Novozymes' treasury policy, a minimum of 30% of loans must be at fixed interest rates. At year-end 2011, 71% (2010: 67%) of the loan portfolio was at fixed interest rates, based on financial instruments.

According to Novozymes' treasury policy, free funds may only be invested in government bonds, ultra-liquid mortgage credit bonds, and money market deposits.

**Credit risk**

Credit risk arises especially on cash and cash equivalents, derivatives, and customer sales. The credit risk on cash and cash equivalents and derivatives is managed by only trading in derivatives and only placing deposits with banks that have a credit rating of at least A2 (Moody's) or A (S&P). The credit risk is calculated on the basis of net market values and is governed by the Group's treasury policy. Novozymes has entered into netting agreements (ISDA) with all the banks used for trading in financial

instruments, which means that Novozymes' credit risk is limited to net assets. At December 31, 2011, the Group considers its maximum credit risk to be DKK 2,794 million (2010: DKK 3,650 million), which is the total of the Group's financial assets. At December 31, 2011, the maximum credit risk related to one counterparty was DKK 235 million (2010: DKK 502 million). The credit risk of debtors is countered by thorough, regular analyses based on customer type, country, and specific conditions, see also *Accounting estimates and judgments*. Generally, customers are creditworthy. No collateral was held for financial assets at December 31, 2011.

#### Liquidity risk

In connection with the Group's ongoing financing of operations, including refinancing risk, efforts are made to ensure adequate and flexible liquidity. This is guaranteed by placing deposits in cash and ultra-liquid negotiable instruments, and using binding credit facilities.

The table below shows the future draw on liquidity based on the financial liabilities at December 31, 2011 (settled by financial assets). The table is broken down by payment periods, in accordance with the contractual due date. The amounts are shown undiscounted, so the figures cannot be directly reconciled with the respective items in the balance sheet.

DKK million	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	After 5 years
<b>Financial liabilities at December 31, 2011</b>				
Other financial liabilities	152	562	498	474
Trade payables	745	-	-	-
Other payables	1,095	-	-	-
Gross settlement of derivatives (outflow)	27	261	19	12

The figures below show the inflow from the above gross settlement of derivatives, so as to provide an adequate and fair picture of the actual draw on liquidity.

Gross settlement of derivatives (inflow)	10	255	9	5
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DKK million	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	After 5 years
<b>Financial liabilities at December 31, 2010</b>				
Other financial liabilities	271	5	1,057	478
Trade payables	764	-	-	-
Other payables	1,178	-	-	-
Gross settlement of derivatives (outflow)	28	28	276	16

The figures below show the inflow from the above gross settlement of derivatives, so as to provide an adequate and fair picture of the actual draw on liquidity.

Gross settlement of derivatives (inflow)	9	10	260	5
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#### Note 38 - Water allocated to primary source

	2011 1,000 m <sup>3</sup>	2010 1,000 m <sup>3</sup>
Drinking water	3,531	3,392
Industrial water	2,259	2,085
Steam	283	269
<b>Water, total</b>	<b>6,073</b>	<b>5,746</b>

#### Note 39 - Energy by primary source

	2011 1,000 GJ	2010 1,000 GJ
Coal	-	-
Gas oil	46	55
Heavy fuel oil	135	140
Light fuel oil	1	1
Natural gas	615	669
<b>Internally generated energy, total</b>	<b>797</b>	<b>865</b>
District heat	153	105
Electricity	2,197	2,177
Steam	782	757
<b>Externally purchased energy, total</b>	<b>3,132</b>	<b>3,039</b>
<b>Total energy consumption</b>	<b>3,929</b>	<b>3,904</b>

#### Note 40 - Treated wastewater for irrigation

	2011 1,000 m <sup>3</sup>	2010 1,000 m <sup>3</sup>
Volume	738	713

#### Note 41 - Total waste volume by disposal method

	2011 Tons	2010 Tons
Incineration	2,593	1,453
Landfilling	3,980	3,855
Recycling	4,806	4,380
Other	325	552
<b>Waste, total</b>	<b>11,704</b>	<b>10,240</b>

#### Note 42 - CO<sub>2</sub> emissions by scope and source

The reported CO<sub>2</sub> emissions are divided by scope and source. In accordance with the definition used by GHG, emissions are defined by scope:

Scope 1: All direct GHG emissions.

Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat, or steam.

Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, etc.

The reported Scope 3 emissions comprise emissions from transport of goods from primary production site to first delivery point, and transport between sites.

	2011 1,000 tons	2010 1,000 tons
Town gas	-	-
Diesel oil	-	-
Gas oil	3	4
Heavy fuel oil	11	11
Light fuel oil	-	-
Natural gas	32	35
<b>CO<sub>2</sub> - Scope 1</b>	<b>46</b>	<b>50</b>
District heat	8	7
Electricity	245	283
Steam	69	70
<b>CO<sub>2</sub> - Scope 2</b>	<b>322</b>	<b>360</b>
Ship	7	NA
Truck	9	NA
Air freight	6	NA
<b>CO<sub>2</sub> - Scope 3*</b>	<b>22</b>	<b>NA</b>
<b>CO<sub>2</sub> emissions, total</b>	<b>390</b>	<b>410</b>

\* Beginning with The Novozymes Report 2011, total CO<sub>2</sub> emissions now also include Scope 3 emissions. The corresponding 2010 data do not include Scope 3 emissions.

#### Note 43 - Global warming, CO<sub>2</sub>-equivalents

	2011 1,000 tons	2010 1,000 tons
Internally generated energy	46	50
Ozone-depleting substances, HCFCs	2	4
<b>CO<sub>2</sub>-equivalents, Scope 1</b>	<b>48</b>	<b>54</b>
<b>CO<sub>2</sub>-equivalents, Scope 2</b>	<b>322</b>	<b>360</b>
<b>CO<sub>2</sub>-equivalents, Scope 3*</b>	<b>22</b>	<b>NA</b>
<b>CO<sub>2</sub>-equivalents, total</b>	<b>392</b>	<b>414</b>

\* Scope 3 CO<sub>2</sub>-equivalents comprises Scope 3 CO<sub>2</sub> emissions only.

#### Note 44 - Ozone layer depletion, CFC<sub>11</sub>-equivalents

	2011 Kg	2010 Kg
CFCs	51	182
HCFCs	54	83
<b>CFC<sub>11</sub>-equivalents, total</b>	<b>105</b>	<b>265</b>

#### Note 45 - Employee statistics

	2011 No.	2010 No.
Women	2,056	1,958
Men	3,768	3,474
<b>Employees, total</b>	<b>5,824</b>	<b>5,432</b>
Full-time employees	5,501	5,114
Part-time employees	323	318
<b>Employees, total</b>	<b>5,824</b>	<b>5,432</b>
Denmark	2,530	2,409
Rest of Europe, Middle East, and Africa	270	395
North America	1,015	874
Asia Pacific	1,666	1,531
Latin America	343	223
<b>Employees, total</b>	<b>5,824</b>	<b>5,432</b>
Senior management	171	172
Management	890	839
Professional	1,690	1,463
Administrative	581	577
Skilled workers, laboratory technicians, and other technicians	1,112	986
Process operators	1,380	1,395
<b>Employees, total</b>	<b>5,824</b>	<b>5,432</b>

#### Note 46 - Percentage of women by job category

	2011 %	2010 %
Senior management	18.1	18.0
Management	29.3	30.2

As there is a particular focus on the percentage of women at management level, the percentage of women is only reported for Senior management and Management, and not for other job categories.

#### Note 47 - Job creation

	2011 No.	2010 No.
Net growth in number of employees, organic	219	111
Terminations	452	381

#### Note 48 - Rate of absence by job category

	2011 %	2010 %
Senior management, management, professional, and administrative	1.1	1.2
Skilled workers, laboratory technicians, other technicians, and process operators	3.0	3.3

Rate of absence has been broken down by grouped job categories based on whether the work carried out is primarily office based, and is therefore not stated per job category.

#### Note 49 - Consequences of occupational accidents

	2011 No.	2010 No.
Return to original job	37	34
Return to a different job in the same department	1	-
Transfer to a different job in another department	-	1
No longer employed by Novozymes, but still able to work	-	-
Out of work or early retirement	-	-
Case pending	2	-
<b>Occupational accidents, total</b>	<b>40</b>	<b>35</b>

Total days of absence related to accidents registered in the same year

	2011	2010
	426	499

For comparison purposes, cases that were pending at the end of 2010 have been updated in line with information available at the end of 2011. The derived figure for total days of absence has also been updated.

#### Note 50 - Consequences of occupational diseases

	2011 No.	2010 No.
Return to original job	4	11
Return to a different job in the same department	3	1
Transfer to a different job in another department	-	2
No longer employed by Novozymes, but still able to work	-	-
Out of work or early retirement	-	-
Case pending	4	-
<b>Occupational diseases, total</b>	<b>11</b>	<b>14</b>

Total days of absence related to diseases registered in the same year

	2011	2010
	11	479

For comparison purposes, cases that were pending at the end of 2010 have been updated in line with information available at the end of 2011. The derived figure for total days of absence has also been updated.

#### Note 51 - Types of occupational diseases

	2011 No.	2010 No.
Musculoskeletal disorders	1	5
Skin diseases	2	2
Identified hearing disorders	-	1
Stress related	-	-
Respiratory disease	3	1
Enzyme allergy	4	5
Eye disease	1	-
<b>Occupational diseases, total</b>	<b>11</b>	<b>14</b>

#### Note 52 - Fraud cases

	2011 No.	2010 No.
No dismissal	-	2
Dismissal of employee	4	2
Dismissal of employee and reported to the police	-	2
<b>Fraud cases, total</b>	<b>4</b>	<b>6</b>



# COMPANIES IN THE NOVOZYMES GROUP

## Group companies

	Country	Activity		Issued common stock/paid-up stock	Percentage of shares owned
Novozymes Biologicals Argentina S.A.	Argentina	■		ARS 12,000	100
Novozymes BioAg S.A.	Argentina	■		ARS 700,000	100
Novozymes Australia Pty. Ltd.	Australia	■		AUD 500,000	100
Novozymes Biopharma Holdings AU Ltd.	Australia		□	AUD 30,000,001	100
Novozymes Biopharma AU Ltd.	Australia		□	AUD 78,684,909	100
Novozymes Austria GmbH	Austria	■		EUR 36,337	100
Novozymes Belgium BVBA	Belgium	■		EUR 18,600	100
Novozymes Latin America Ltda.	Brazil	○ ● ■		BRL 23,601,908	100
Novozymes BioAg Productos Para Agricultura Ltda.	Brazil	● ■		BRL 7,454,860	100
Novozymes Biologicals Brasil Participações Ltda.	Brazil		□	BRL 8,640,000	100
Novozymes BioAg Limited	Canada	● ■ ▲		CAD 4,079,799	100
Novozymes Biologicals Investment Inc.	Canada		□	CAD 100	100
Novozymes (China) Biotechnology Co. Ltd.	China	○ ● ■		CNY 859,058,400	100
Novozymes (China) Investment Co. Ltd.	China	■ ▲		CNY 816,449,373	100
Novozymes (Shenyang) Biologicals Co. Ltd.	China	■		CNY 31,793,578	100
Qingdao Huayuan Fine Bio-Products Co. Ltd.	China		□	CNY 27,000,000	100
Suzhou Hongda Enzyme Co. Ltd.	China	○ ● ■		CNY 356,744,150	96
Novozymes (China) Biopharma Co. Ltd.	China	● ■		CNY 327,242,564	100
Novozymes A/S	Denmark	○ ● ■ ▲	□	DKK 650,000,000	-
Novozymes Adenium Biotech A/S	Denmark		□	DKK 600,000	100
Novozymes Bioindustrial A/S	Denmark		□	DKK 1,100,000	100
Novozymes Bioindustrial China A/S	Denmark		□	DKK 729,700,000	100
Novozymes Biopharma DK A/S	Denmark	■ ▲	□	DKK 611,000	100
Novozymes Biologicals Holding A/S	Denmark		□	DKK 600,000	100
Novozymes Biologicals France S.A.	France	■		EUR 650,000	100
Novozymes France S.A.	France	■		EUR 45,735	100
Novozymes Deutschland GmbH	Germany	■		EUR 255,646	100
Novozymes Hong Kong Ltd.	Hong Kong		□	HKD 768,285,140	100
Novozymes Biopharma Hong Kong Co. Ltd.	Hong Kong		□	HKD 551,386,045	100
Novozymes South Asia Pvt. Ltd.	India	● ■ ▲		INR 1,550,000,020	100
Novozymes Italia S.r.l.	Italy	■		EUR 10,400	100
Novozymes Japan Ltd.	Japan	■ ▲		JPY 300,000,000	100
Novozymes Malaysia Sdn. Bhd.	Malaysia	■		MYR 6,666,414	100
Novozymes Mexicana, S.A. de C.V.	Mexico	■		MXN 338,100	100
Novozymes Mexico, S.A. de C.V.	Mexico	■		MXN 35,224,200	100
Novozymes Netherlands BVBA	Netherlands	■		EUR 18,000	100
Novozymes Singapore Pte. Ltd.	Singapore		□	SGD 59,071,000	100
Novozymes South Africa (Pty) Ltd.	South Africa	■		ZAR 100	100
Novozymes Korea Limited	South Korea	■		KRW 300,000,000	100
Novozymes Spain S.A.	Spain	■		EUR 360,607	100
Novozymes Biopharma Sweden AB	Sweden		□	SEK 28,001,000	100
Novozymes Switzerland AG	Switzerland	■		CHF 5,000,000	100
Novozymes Switzerland Holding AG	Switzerland		□	CHF 3,000,000	100
Novozymes Enzim Diş Ticaret Ltd. Sirketi	Turkey	■		TRY 21,000	100
Novozymes Biopharma UK Ltd.	UK	● ■ ▲		GBP 22,535,113	100
Novozymes UK Ltd.	UK	■		GBP 1,000,000	100
Novozymes BioAg, Inc.	USA	● ■ ▲		USD 1	100
Novozymes Biologicals, Inc.	USA	● ■ ▲		USD 3,000,000	100
Novozymes Biologicals, Ltd.	USA	■		USD 10,000	100
Novozymes Biopharma US, Inc.	USA	■		USD 1	100
Novozymes Blair, Inc.	USA		□	USD 1	100
Novozymes, Inc.	USA	■ ▲		USD 1,000	100
Novozymes North America, Inc.	USA	○ ● ■ ▲		USD 17,500,000	100
Novozymes US, Inc.	USA		□	USD 115,387,497	100

## Joint ventures

	Country	Activity	Proportion of ownership interest
Hallas Park homeowners' association	Denmark		50
Smørrøsen homeowners' association	Denmark		50

○ ISO 14001-certified sites. All major companies are also ISO 9001-certified.

● Production

■ Sales & Marketing

▲ Research & Development

□ Holding companies, etc.

# STATEMENT OF THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT

The Board of Directors and Executive Management have today considered and approved the Annual Report of Novozymes A/S for the financial year January 1 – December 31, 2011.

The Consolidated Financial Statements are prepared in accordance with International Financial Reporting Standards as adopted by the EU, and the Financial Statements are prepared in accordance with the Danish Financial Statements Act. Moreover, the Consolidated Financial Statements and the Financial Statements are prepared in accordance with additional Danish disclosure requirements for listed companies. Management's Review is also prepared in accordance with Danish disclosure requirements for listed companies.

In our opinion, the accounting policies used are appropriate, and the Group's internal controls relevant to preparation and presentation of the Annual Report are adequate. The Consolidated Financial Statements and the Financial Statements give a true and fair view of the financial position at December 31, 2011, of the Group and the Company, and of the results of the Group and the Company operations, and of consolidated cash flows for the financial year 2011.

In our opinion, Management's Review includes a true and fair account of the development in the operations and financial circumstances of the Group and the Company, of the result for the year, and of the financial position of the Group and the Company as well as a description of the most significant risks and elements of uncertainty facing the Group and the Company.

In our opinion, Novozymes A/S adheres to the AA1000 AccountAbility principles, and environmental and social data are stated in accordance with the accounting policies.

We recommend that the Annual Report be adopted by the Annual Shareholders' Meeting.

*Bagsvaerd, January 19, 2012*

## **Executive Management**

Steen Riisgaard  
*President & CEO*

Benny D. Loft

Peder Holk Nielsen

Per Falholt

Thomas Nagy

Thomas Videbæk

## **Board of Directors**

Henrik Gürtler  
*Chairman*

Kurt Anker Nielsen  
*Vice-Chairman*

Agnete Raaschou-Nielsen

Jørgen Buhl Rasmussen

Lars Bo Kjøppler

Lena Olving

Mathias Uhlén

Paul Petter Aas

Søren Henrik Jepsen

Ulla Morin

# INDEPENDENT AUDITOR'S REPORT

To the Shareholders of Novozymes A/S

## REPORT ON FINANCIAL STATEMENTS AND ENVIRONMENTAL AND SOCIAL DATA

We have audited the Consolidated Financial Statements, the Parent Company Financial Statements, and Environmental and Social Data of Novozymes A/S for the financial year 1 January to 31 December 2011. The Consolidated Financial Statements and the Parent Company Financial Statements comprise income statement, balance sheet, statement of changes in equity and financial notes, including summary of significant accounting policies for both the Group and the Parent Company, as well as statement of cash flows and financial resources and statement of comprehensive income for the Group. The Consolidated Financial Statements are prepared in accordance with International Financial Reporting Standards as adopted by the EU, and the Parent Company Financial Statements are prepared under the Danish Financial Statements Act. Moreover, the Consolidated Financial Statements and the Parent Company Financial Statements are prepared in accordance with Danish disclosure requirements for listed companies. Environmental and Social Data are prepared in accordance with the accounting policies stated in accounting policies for Environmental and Social Data.

## MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS AND ENVIRONMENTAL AND SOCIAL DATA

Management is responsible for the preparation of Consolidated Financial Statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU and Danish disclosure requirements for listed companies and for preparing Parent Company Financial Statements that give a true and fair view in accordance with the Danish Financial Statements Act and Danish disclosure requirements for listed companies, and for such internal control as Management determines is necessary to enable the preparation of Consolidated Financial Statements and Parent Company Financial Statements that are free from material misstatement, whether due to fraud or error. Furthermore, Management is responsible for preparing Environmental and Social Data in accordance with the accounting policies stated in accounting policies for Environmental and Social Data.

## AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on the Consolidated Financial Statements, the Parent Company Financial Statements, and Environmental and Social Data based on our audit. We conducted our audit in accordance with International Standards on Auditing and additional requirements under Danish audit regulation. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the Consolidated Financial Statements, the Parent Company Financial Statements, and Environmental and Social Data are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts, data, and disclosures in the Consolidated Financial Statements, the Parent Company Financial Statements, and the Environmental and Social Data. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Consolidated Financial Statements, the Parent Company Financial Statements, and Environmental and Social Data, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation of Consolidated Financial Statements and Parent Company Financial Statements that give a true and fair view and considers internal control relevant to the Company's preparation of Environmental and Social Data that are prepared in accordance with the accounting policies for Environmental and Social Data in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management, as well as evaluating the overall presentation of the Consolidated Financial Statements, the Parent Company Financial Statements and Environmental and Social Data.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

The audit has not resulted in any qualification.

## OPINION

In our opinion, the Consolidated Financial Statements give a true and fair view of the Group's financial position at 31 December 2011 and of the results of the Group's operations and cash flows for the financial year 1 January to 31 December 2011 in accordance with International Financial Reporting Standards as adopted by the EU and Danish disclosure requirements for listed companies.

In our opinion, the Parent Company Financial Statements give a true and fair view of the Parent Company's financial position at 31 December 2011 and of the results of the Parent Company's operations for the financial year 1 January to 31 December 2011 in accordance with the Danish Financial Statements Act and Danish disclosure requirements for listed companies.

In our opinion, the Environmental and Social Data for the financial year 1 January to 31 December 2011 are prepared in accordance with accounting policies stated in accounting policies for Environmental and Social Data.

## STATEMENT ON MANAGEMENT'S REVIEW

We have in accordance with the Danish Financial Statements Act read Management's Review which comprises report, outlook and management. We have not performed any procedures additional to the audit of the Consolidated Financial Statements, the Parent Company Financial Statements and Environmental and Social Data. On this basis, in our opinion, the information provided in Management's Review is consistent with the Consolidated Financial Statements, the Parent Company Financial Statements and Environmental and Social Data.

*Bagsvaerd, January 19, 2012*

### **PricewaterhouseCoopers**

Statsautoriseret Revisionspartnerselskab

Mogens Nørgaard Mogensen  
State Authorized Public Accountant

Torben Jensen  
State Authorized Public Accountant

# INDEPENDENT ASSURANCE STATEMENT ON NOVOZYMES' 2011 SUSTAINABILITY REPORTING AND ADHERENCE TO THE AA1000 ACCOUNTABILITY PRINCIPLES

## TO THE STAKEHOLDERS OF NOVOZYMES

We have been engaged by Novozymes A/S' Management to obtain moderate assurance (review) as to whether Novozymes adheres to the AA1000 AccountAbility Principles and to obtain reasonable assurance (audit) as to the quantitative environmental and social data including accounting policies for environmental and social data in Novozymes' 2011 Annual Report, pages 54–55, 61–63, and 86–88.

## CRITERIA FOR THE PREPARATION OF REPORTING ON DATA

The criteria for the preparation of the environmental and social data are evident from the accounting policies for environmental and social data described in Novozymes' 2011 Annual Report, pages 61–63. The accounting policies for environmental and social data include information concerning which of Novozymes' activities and functions are included in the reporting, types of data, Management's reasons for choosing the data included and the accounting policies and methods applied.

## MANAGEMENT'S RESPONSIBILITY

Adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness is the responsibility of Management. Furthermore, Management is responsible for preparing the environmental and social data as well as for establishing data collection and registration and internal control systems with a view to ensuring reliable reporting, specifying acceptable reporting criteria and choosing data to be collected for intended users of the Annual Report.

## ASSURANCE PROVIDER'S RESPONSIBILITY

As assurance provider, it is our responsibility, on the basis of our work, to make observations and recommendations with respect to the nature and extent of Novozymes' adherence to the AA1000 AccountAbility Principles as well as to express an opinion on the reliability of the environmental and social data in the Annual Report, pages 54–55 and 86–88.

Our team of experts has competencies within performing assurance of environmental and social data and within assessing such data and information. In addition, our team has competencies with regard to assessing sustainability management systems. We have in 2011 not performed any tasks or services for Novozymes or other clients which would have conflicted with our independence, nor have we been responsible for the preparation of any part of the Annual Report. Thus, we are independent as defined in the AA1000 Assurance Standard (AA1000AS (2008)) and we consider our team qualified to carry out this independent assurance engagement.

## SCOPE, STANDARDS AND CRITERIA USED

We have planned and performed our work based on AA1000AS, using the criteria in the standard to perform a Type 2 engagement, and in accordance with the International Standard on Assurance Engagements (ISAE) 3000, "Assurance engagements other than audits or reviews of historical financial information."

We have worked to obtain:

- A moderate assurance (review) as to Novozymes' adherence to the AA1000 AccountAbility Principles
- A reasonable assurance (audit) of the quantitative environmental and social data in the Annual Report, pages 54–55 and 86–88

## METHODOLOGY, APPROACH, LIMITATION AND SCOPE OF WORK

Our methodology has included procedures to obtain evidence of Management's commitment to the AA1000 AccountAbility Principles and of the implementation of systems and procedures in support of the principles.

Our methodology has also included procedures to obtain evidence of the environmental and social data in the Annual Report. The procedures chosen depend on our judgment, including the assessment of the risks of material data misstatements. In conducting those risk assessments, we have considered internal controls relevant to the preparation and fair presentation of environmental and social data in order to design assurance procedures which are appropriate under the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Novozymes' internal controls.

Based on an assessment of materiality and risk, our work has included:

- (i) Enquiries and interviews with the chairman of the Board of Directors, members of Executive Management, staff from the Sustainability Development department as well as management of various corporate functions regarding Novozymes' adherence and commitment to the AA1000 AccountAbility Principles, the existence of systems and procedures to support adherence to the principles and the embedding of the principles at corporate level.
- (ii) Sample testing of key processes and controls which form part of management reporting systems, processes and procedures, and the obtaining of evidence supporting the environmental and social data disclosed in the Annual Report, pages 54–55 and 86–88. Our assurance on environmental and social data has been undertaken at chosen reporting units and combined with analytical assurance procedures on data covering the Novozymes Group.

## CONCLUSION

In our opinion, the environmental and social data for the financial year 1 January to 31 December 2011 (pages 54–55, 61–63, and 86–88) are prepared in accordance with accounting policies stated in accounting policies for environmental and social data, and, based on our review, nothing has come to our attention causing us to believe that Novozymes does not adhere to the AA1000 AccountAbility Principles.

## OBSERVATIONS AND RECOMMENDATIONS

According to AA1000AS (2008), we are required to include observations and recommendations for improvements in relation to Novozymes' adherence to the AA1000 AccountAbility Principles.

### REGARDING INCLUSIVITY

Management's strong commitment to inclusivity and stakeholder engagement continues. In 2011 Novozymes has strengthened its approach to stakeholder engagement through the Citizymes program and through the development of more systematic tools for stakeholder mapping and engagement. This development continues to form the basis of a structured and systematic stakeholder engagement process being integrated and applied across the organization.

### REGARDING MATERIALITY

Novozymes has integrated identification and assessment of materiality of sustainability issues into the ongoing management and governance processes, ensuring a systematic and documented approach to assessing materiality of sustainability issues.

### REGARDING RESPONSIVENESS

Novozymes is committed to being responsive to stakeholders – through the Annual Report, through the ongoing dialogue with stakeholders and through the systematic approach applied in developing suitable responses to sustainability issues.

We recommend that Novozymes considers how to provide an easy-to-understand overview of sustainability issues that are material to Novozymes in a reporting context, e.g. the Annual Report or on [www.novozymes.com](http://www.novozymes.com), including information on dilemmas concerning enzymes and biotechnology and related social impacts to ensure a balanced communication on sustainability issues.

*Bagsvaerd, January 19, 2012*

#### **PricewaterhouseCoopers**

Statsautoriseret Revisionspartnerselskab

Mogens Nørgaard Mogensen  
State Authorized Public Accountant

Birgitte Mogensen  
State Authorized Public Accountant

# THE NOVOZYMES REPORT 2011

Novozymes' ambition is to provide a report that integrates financial and sustainability data. We have been working with integrated reporting for many years, as this reflects the way we operate our business.

The Novozymes Report 2011 is available in English in a full online version at [www.report2011.novozymes.com](http://www.report2011.novozymes.com). The written online report is supplemented with a series of videos adding perspective and insight into Novozymes' performance. In addition, an integrated feature called My Report enables you to compile a full or customized pdf download of the report. We hope that you will find this feature useful whether you want to print the report or just save it on your own computer. The reporting website is dedicated to The Novozymes Report 2011 and other information relevant to our shareholders and financial stakeholders, but is also a mine of information for anyone else with an interest in Novozymes.

All photos in the report feature Novozymes employees from around the world, illustrating both our global presence and our human touch. It is our employees who make Novozymes the world leader in bioinnovation.

## REPORTING AND AUDITS

The website contains The Novozymes Report (which, pursuant to section 149 of the Danish Financial Statements Act, is an extract of the company's annual report) and the financial statements of the parent company Novozymes A/S. Together these form the company's annual report, which will be filed with the Danish Business Authority. The annual report will be available at [www.novozymes.com](http://www.novozymes.com) as a separate publication in Danish.

PwC has audited the consolidated financial statements, the parent company financial statements, and environmental and social data. PwC has also been the sustainability assurance provider and has based the assurance on the AA1000 Assurance Standard (2008).

The audit covers financial, environmental, and social data. These are marked "Audited by PwC." See also the statements in the report.

PwC has not audited the sections of the report found under the headings Report, Outlook, Management, and Supplementary reporting. The Supplementary reporting includes our report index based on the Global Reporting Initiative (GRI) and detailed sustainability data from our activities in Argentina, Brazil, Canada, China, Denmark, India, Sweden, the UK, and the US. Our Communication on Progress with respect to the Global Compact can be found at [www.novozymes.com](http://www.novozymes.com) under Sustainability.

The report has been produced in accordance with International Financial Reporting Standards (IFRS), the Danish Financial Statements Act, and the additional requirements of NASDAQ OMX Copenhagen A/S for the presentation of financial statements by listed companies. It has also been prepared as an element of Novozymes' reporting according to the GRI's G3 Guidelines for Sustainability Reporting.

## FORWARD-LOOKING STATEMENTS

The Novozymes Report 2011 contains forward-looking statements, including Novozymes' financial outlook for 2012, which, by their very nature, are associated with risks and uncertainties that may cause actual results to differ materially from expectations. The uncertainties may include unexpected developments in the international currency exchange and securities markets, market-driven price decreases for Novozymes' products, and the introduction of competing products in Novozymes' core areas. See Risk management.

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## EDITORIAL TEAM

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