



Update 2002

Heineken Report Safety, Health & Environment

Heineken
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Data overview – world

Heineken Environmental Performance

Absolute figures		Heineken Group ⁵			Breweries		
Performance indicator	Unit	2000	2001	2002	2000	2001	2002
Production	millions of hl	–	–	–	71.1	71.2	77.6
Production	thousands of tons	–	–	–	–	–	–
Water	millions of m ³	48.1	45.2	47.7	43.4	40.6	43.2
Waste water	millions of m ³	36.1	34.5	35.6	32.2	30.8	31.9
Electricity	GWh	848.9	839.2	891.5	763.2	751.5	800.0
Thermal energy	TJ	10,559	10,127	10,754	8,947	8,437	9,044
CO ₂ emissions	tons	659,879	683,983	697,566	570,829	589,069	602,026
NO _x emissions ³	tons	1,026	647	663	795	584	591
SO _x emissions ³	tons	2,376	2,093	1,759	2,223	1,878	1,563
Organic load before treatment	tons COD	99,463	92,724	99,176	93,605	88,337	95,549
Effluent organic load ²	tons COD	–	23,381	22,709	–	–	–
Effluent total nitrogen ²	tons N	–	770	740	–	–	–
Effluent total phosphorous ²	tons P	–	395	372	–	–	–
Effluent suspended solids ²	tons d.m.	–	5,177	4,782	–	–	–
Hazardous waste	tons	804	675	740	–	–	–
Waste water sludge ⁴	tons d.m.	13,378	8,094	4,996	–	–	–
Remaining waste	tons	107,633	101,067	76,432	–	–	–
NH ₃ in use	tons	667	634	621	–	–	–
NH ₃ losses	tons	98	70	73	–	–	–
(H)CFC in use	tons	34	33	34	–	–	–
(H)CFC losses	tons	9	10	10	–	–	–
Halons in use	tons	13	11	8	–	–	–
Complaints ⁴	number	144	133	119	–	–	–

Specific figures		Breweries					
Performance indicator	Unit	2000	2001	2002	2003 ¹	2004 ¹	2005 ¹
Water	hl/hl	6.1	5.7	5.6	5.3	5.1	5.0
Electricity	kWh/hl	10.7	10.6	10.3	9.9	9.8	9.6
Thermal energy	MJ/hl	125.8	118.5	116.5	113.0	110.0	105.0

Specific figures		Malting plants					
Performance indicator	Unit	2000	2001	2002	2003 ¹	2004 ¹	2005 ¹
Water	m ³ /ton	5.6	5.0	4.4	4.7	4.7	4.6
Electricity	kWh/ton	127.9	123.9	122.5	121.0	120.0	120.0
Thermal energy	MJ/ton	3,158	3,053	2,984	2,950	2,920	2,870

¹ Targets² Discharged to surface water³ Because significant errors were found in the SO_x and NO_x data for two production units (Seville and Chirpan) in 2000, the increase/decrease in the figures does not reflect operational changes⁴ Because errors were found in the 2001 data for waste water sludge (Massafra, Valencia and Ho Chi Minh City) and complaints (Achimota) the reported decrease in the figures does not reflect operational changes⁵ Not all reports have been received from Germany (Rosenheim, Kulmbach, Plauen and Chemnitz) and are not included in the data

Introduction

Heineken published its most recent biennial Safety, Health and Environment Report 2000-2001, covering the activities and environmental performance of its breweries, maltings and soft-drink plants world-wide. In that report, coverage of our safety performance was confined to Europe and the information on our activities relating to health was focused on Africa. In this report, coverage is extended to all production units world-wide.

Also in our 2000-2001 report, we defined our corporate values and business principles and introduced our Responsibility Management Programme, which embodies the response of Heineken to the challenge of sustainable development. The initial findings and results of this programme will be published in our next report.

The 2000-2001 Safety, Health and Environment Report is available on our website www.heinekeninternational.com

Safety

We regret to report two fatalities of company personnel and the fatality of one contractor in 2002, one in an accident involving a forklift truck in Cagliari (Italy) and the other fatality as the result of a brain haemorrhage in Elblag (Poland). The contractor was killed in Lagos (Nigeria) when a vessel containing disinfectant failed. We also regret the death of two employees in traffic accidents when commuting to work, one in Kinshasa (Democratic Republic of Congo) and one in Lae (Papua New Guinea).

This report includes, for the first time, accident data for production units all over the world. Since last year's report covered only the European production units, this was the first time many plants outside Europe were required to submit accident data. Because they have only recently started reporting this information in accordance with the corporate definitions, there is still room for improvement in the reliability of the data they provide. In a few cases, local circumstances (civil war) prevented us gathering or verifying the data. The overall accident severity increased from 79 in 2001 to 81 days per 100 FTE's in 2002. The high severity scores at several plants were due to a small number of cases requiring a long recovery time, a few of which ended in permanent disability. Both the severity and frequency of accidents have decreased significantly at several African production units over the past three years, as a result of paying greater attention to safety and encouraging people to use the personal protective equipment supplied. The improvements in Africa are the main contribution to the decline in the overall accident frequency by 7% in 2002. The substantial reduction in the accident frequency reported by the Bujumbura brewery is attributed to the success of efforts to prevent alcohol abuse at work.



Curing and caring in Africa

Occupational and public health developments within Heineken in 2002

Because public health provision is often limited, Heineken provides both curative and preventive health care for its employees and their families on the African continent. Progress in public health care, the health aspects of occupational health and safety and the background of our approach are summarised below.

The major aims of the occupational health and safety programme for Heineken are:

- Health protection: to protect employees, contractor personnel and others from health hazards associated with work and the working environment.
- Health promotion: to promote activities which are beneficial to a healthy lifestyle and to encourage avoidance of health risks.
- Health prediction: to predict the long-term effects of the above hazards on employees' health and to illustrate the benefits of a healthy lifestyle.
- Continuous improvement in the implementation of CHIP (Continuous Health Improvement Programme).

Progress was achieved in the pilot study at the Bralima Brewery in Kinshasa (Democratic Republic of Congo), which was discussed in the context of the health-management system described in our 2000-2001 SHE report, in the following areas:

Analysis and assessment

- General and department-level health hazard analysis and assessment
- Introduction of standardised incident and accident recording in a database

Management and control

- Safety engineers and coordinator appointed, with line responsibility within the technical discipline
- Introduction of personal protective equipment management system

Information and training

- Health and safety workshop for all department heads, highlighting their responsibilities
- Health and safety training module

Audit and review

- Introduction of regular shop floor visits by the safety coordinator and medical adviser
- Reviews by appointed SHE Committee members



Since September 2001, Highly Active Antiretroviral Treatment (HAART) has been added to existing medical provisions in five African countries (Burundi, Rwanda, Democratic Republic of Congo, Congo and Nigeria). The treatment is being rolled out gradually to ensure that the quality of the programme is maintained. Workers and their dependants are invited to have their Human Immunodeficiency Virus (HIV) status checked and, if their immunity is impaired, are offered antiretroviral drugs.

Implementing this programme required investment in staff training and medical equipment: the in-house lab facilities were upgraded and training was provided for all the medical personnel involved. This investment will also improve the overall functioning of the regular medical services. In addition to provision of HIV treatment, prevention effort has been intensified at all sites, in which cooperation with governments and non-governmental partners has proved invaluable. The programme conceived and implemented by Heineken has been used by other companies as a model in planning and executing their own HIV projects.

UPDATE

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Environment

Production

Beer production increased by over 6 million hl in 2002 to almost 78 million hl, reflecting the acquisition of breweries in Russia and Germany. Malt production increased from 476 thousand tons in 2001 to 487 thousand tons in 2002, due to higher output at Ruisbroek (Belgium) and Hurbanovo (Slovakia). Soft-drink production remained stable at approximately 6 million hl.

Water and waste water

Water consumption by the breweries continued to decline in 2002, with specific water consumption falling 2% compared with 2001, to 5.6 hl per hl of beer. This reduction was achieved through a combination of the investment projects at the 's-Hertogenbosch and Madrid breweries and the 'Aware of Water' programme.

Specific water consumption by the maltings was 13% lower at 4.4 m³ per ton of malt in 2002, helped by the new malting in Hurbanovo. Specific water consumption for soft-drink production increased slightly, from 3.6 hl per hl in 2001 to 3.8 hl per hl of soft drink in 2002, mainly due to the investments in the Skopje plant and a more intense cleaning regime in Lamia (Greece).

The total Chemical Oxygen Demand (COD) load of the effluent leaving the breweries, maltings and soft-drink plants and discharged to surface water, most of which is treated, amounted to 22.7 thousand tons in 2002.



Electricity

Specific electricity consumption of breweries continued to decline in 2002, falling 2% compared with 2001 to 10.3 kWh per hl of beer, reflecting the savings predominantly achieved via investment projects at 's-Hertogenbosch (Netherlands) and efficiency gains in Shanghai (China).

Our maltings reported a 1% decrease in specific electricity consumption, from 123.9 kWh per ton in 2001 to 122.5 kWh per ton of malt in 2002.

Specific electricity consumption by our soft-drinks plants was 10% higher, up from 4.6 kWh to 5.1 kWh per hl of soft drink, partly due to the replacement of packaging machines at Bunnik with new equipment which uses more power and the additional pumps installed in the new syrup hall.

Thermal energy

Specific thermal energy consumption by our breweries continued to decline, falling to 116.5 MJ per hl of beer in 2002. This improvement was mainly due to the new equipment installed at our breweries in Madrid and Den Bosch.

The figure for our maltings in 2002 was 2,984 MJ per ton of malt, which represents a decrease of 2% compared with the year before and was achieved through technical improvements such as more efficient insulation and the overhaul of the heaters at two maltings in Slovakia.

Specific thermal energy consumption for our soft-drink plants rose from 38.1 MJ per hl in 2001 to 40.8 MJ per hl of soft drink in 2002, mainly due to the alterations at Lamia and our new plant in Skopje.

Carbon dioxide emissions

Total carbon dioxide emissions increased from 684 thousand tons in 2001 to 698 thousand tons in 2002, corresponding to specific emissions of 7.8 kg per hl of beer and 2.4 kg per hl of soft drinks. The equivalent figure for our maltings was 165 kg per ton of malt. Because the trend in carbon dioxide emission is related to the trend in thermal energy consumption, it was lower for our breweries and maltings and slightly higher for our soft-drink plants.

By-products and waste

Output of residual industrial waste was 24% lower last year, down from 101 thousand tons in 2001 to 76.4 thousand tons in 2002, with the African region recording the biggest decrease, of almost 25 thousand tons. Nigeria, where a good start has been made by selling brewers' grains to local farmers instead of dumping them at landfill sites, was largely responsible for this improvement.



Projects

Investment projects

Modifications included the upgrading of the fermentation and storage departments at the 's-Hertogenbosch brewery (Netherlands), a new syrup hall in the soft-drink plant of Bunnik (Netherlands) and the commissioning of new bottling lines at the brewery in Madrid (Spain). New plants included the new malting in Hurbanovo (Slovakia) and a new brewery and soft-drink plant in Skopje (Macedonia). Starting up of the Skopje plant is one of the factors contributing to the rise in water, electricity and thermal energy consumption for soft-drink production.

Improvement projects

The 'Aware of Water' project, which has proved to be highly effective in reducing water consumption, has been completed and a new 'Aware of Energy' project was started at the end of 2002 which aims to cut overall energy consumption by 7.5% over three years. A video featuring a kick-off statement by our Chairman, Thony Ruys, has been sent out to all our breweries and workshops are planned in 2003.

Further progress has been made in our 'Sustainable Agriculture' project. Meetings have been held with farmers to define the conditions for more sustainable barley production, combined with crop rotation. The performance indicators which have been defined will be tested in the coming year.

