

# SUSTAINABILITY REPORT 2018



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## METHODOLOGY, SCOPE AND ASSURANCE

This report covers the relevant and significant social, ethical and environmental issues for the financial year 1 January to 31 December 2018. It gives our stakeholders an overview of our performance in these areas, complementing our Annual Report, which primarily covers our financial and economic performance.

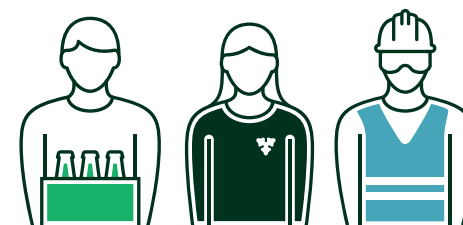
The first section presents our strategy, along with details of Together Towards ZERO, our global sustainability programme. The second section describes our performance against our four Together Towards ZERO ambitions, while presenting selected case stories from across the Group. The third section provides supplementary information under the headings: Responsible business, Economic contribution to society, and Data and assurance.

This report also serves as our annual communication on progress to the UN Global Compact and as the statutory statement on CSR in accordance with section 99a of the Danish Financial Statements Act.

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## ABOUT THE CARLSBERG GROUP



**40,000+** PASSIONATE PEOPLE



**118M HL**

OF QUALITY BREWS PRODUCED AT...

**85**

SITES COVERED IN THIS REPORT





# PROGRESS TOWARDS ZERO

Businesses have an increasingly important role to play in securing a sustainable future. That is why we are working hard to improve the financial and strategic health of our business and deliver on our ambitious sustainability programme, Together Towards ZERO.

2018 was a good year for the Carlsberg Group. We delivered a strong set of results, accelerating top-line growth, improving margins, delivering a strong cash flow and reducing debt even further. Taken together with the progress detailed in this report, I believe this demonstrates that we are living our purpose of brewing for a better today and tomorrow, proving that successful business is sustainable business.

As I look back at 2018 and forward to 2019, I am keenly aware of our responsibility to act. Scientists warn us that the world is at a tipping point. The planet is getting warmer and water resources are becoming scarcer. Tackling climate change is therefore critical for achieving a sustainable future. This is the reason why we have set our emission reduction targets in line

with the more ambitious 1.5°C level of the Paris Agreement.

The latest agreement reached in Katowice, Poland, during COP24 was a good step in the right direction. However, business leadership is also much needed to prevent irreparable damage, so I was pleased to co-sign a letter from the Alliance of CEO Climate Leaders calling for an ambitious climate deal.

At Carlsberg, we have embedded Together Towards ZERO in our corporate strategy, SAIL'22, guiding decisions top down and bottom up. Meanwhile, our commitment to the UN Global Compact and Sustainable Development Goals remains the global context for our local actions. Across the world, we are proud to support the local communities in which we operate.

Although 2018 was largely a year of progress, unfortunately this was not true for all our focus areas. Despite reducing our lost-time accident rate by 35% since our baseline year of 2015, I am far from satisfied with our health & safety record. Keeping people safe must always be our number one priority, and yet we suffered three fatalities during the year. I am deeply saddened by this loss of life and extend my sincerest sympathies to the families involved. These

tragedies underline the need for day-to-day vigilance to create a ZERO accidents culture.

In 2018, we improved energy efficiency and reduced relative carbon emissions across our operations by 5%, giving a total relative carbon reduction since 2015 of 20%.

Coal is the most carbon-intensive source of energy, and we are making progress on our commitment to phase it out by 2022, having already reduced our usage by 78% over three years. We will continue converting our remaining coal-fuelled sites in China, India and Poland.

We also made strides in reducing carbon in our wider value chain, including sustainable packaging innovations such as our plastic-reducing Snap Pack. Such innovations enable direct engagement with customers and consumers on sustainability, while delivering less plastic waste and lower carbon emissions.

As for water, we maintained our relative water consumption of 3.1 hl/hl. While we have reduced our usage by 9% since our baseline year, we still have a long way to go to achieve our 2030 target of halving our global usage.

Consumers want to make informed choices, and we are proud to tell them what is in our beers. In Western Europe, 86% of our packaging now provides information on ingredients and nutritional values, while 96% globally now carries responsible drinking icons or text to discourage irresponsible drinking. I am also pleased to see the continued growth of alcohol-free brews, giving consumers more choice.

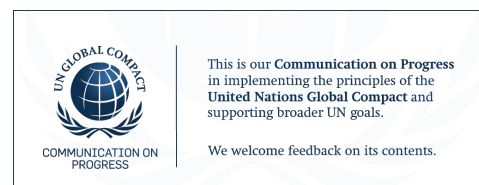
Our sustainability roadmap up to 2022 is well planned and our 2018 performance shows that, while we continue to make progress, significant challenges remain for reaching our 2030 targets. Solving these will mean innovating effectively, working with partners and preparing for a rapidly changing world.

We have always believed in the power of science, and our Young Scientists Community is developing pioneering solutions to help us deliver on our ambitious targets.

Our contribution to science and society has been further strengthened by our main shareholder, the Carlsberg Foundation, which granted more than DKK 500m for scientific, cultural and societal activities in 2018. Ultimately, the better our financial performance, the more support the Carlsberg Foundation can provide. In this respect, I am pleased that, as a consequence of our strong financial performance in 2018, the Supervisory Board is recommending a further increase in dividends and a share buy-back programme, returning DKK 7.2bn to our shareholders.

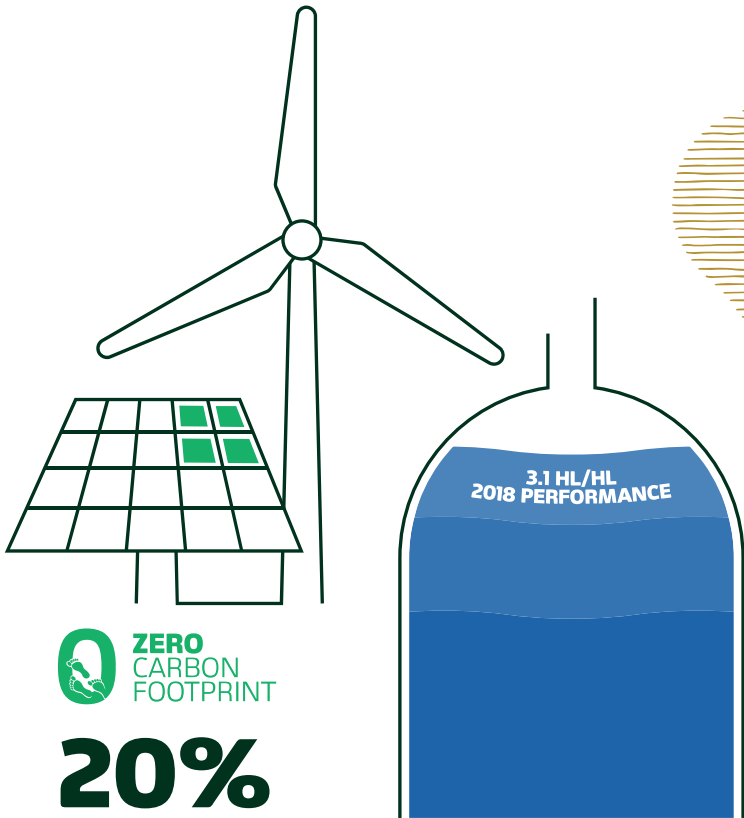
In short, the strength of our financial results, together with the continued progress against our sustainability ambitions, is testament to growing both a successful and a sustainable business.

Cees 't Hart  
CEO, Carlsberg Group

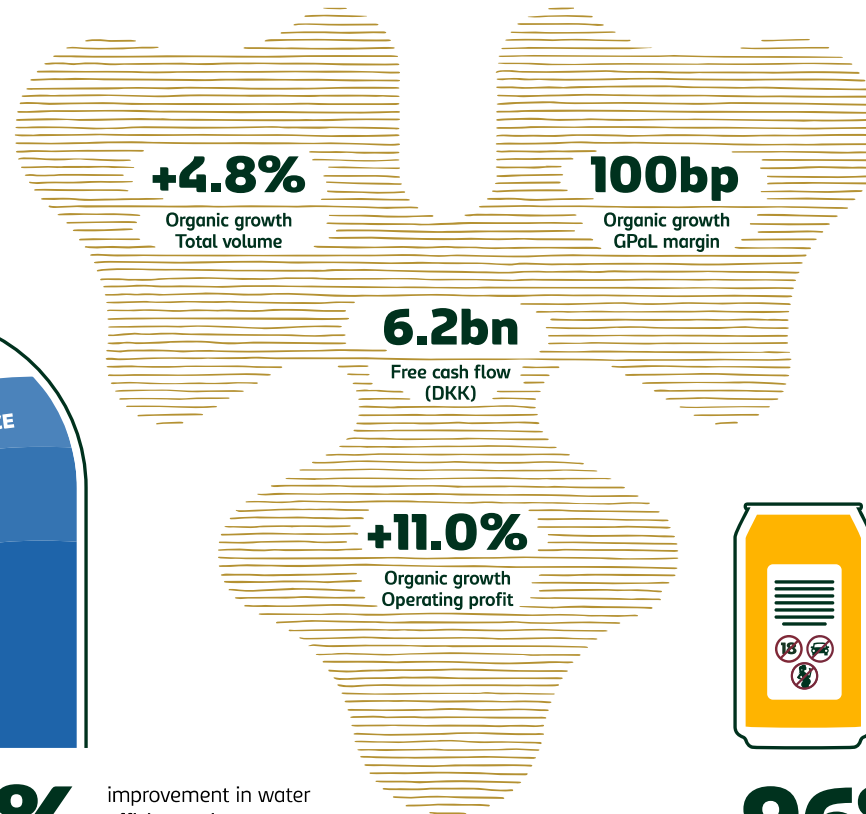


# SUCCESSFUL BUSINESS IS SUSTAINABLE BUSINESS

We believe a healthy business takes care to ensure that profitability and sustainability exist in harmony. Sustainability is therefore embedded in our corporate strategy, SAIL'22. This aims to create sustainable value growth in optimising the balance between volumes, margins, profit and cash. Here, you can see our strong 2018 financial performance and our sustainability progress.

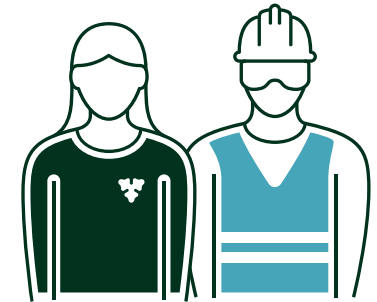


## 2018 FINANCIAL PERFORMANCE



**DKK 43bn**

total tax contributions to local and national governments in 2018.



**ZERO ACCIDENTS CULTURE**

**35%**

reduction in lost-time accident rate since 2015.



**ZERO IRRESPONSIBLE DRINKING**

**96%**

of our products now carry responsible drinking messages advising consumers not to drink-drive and not to drink when underage or pregnant.

# TOGETHER TOWARDS ZERO

Never before have the global issues of climate change, water scarcity and public health been so pressing. Building on our purpose of brewing for a better today and tomorrow, our response is our sustainability programme Together Towards ZERO.

Our four sustainability ambitions are: ZERO carbon footprint, ZERO water waste, ZERO irresponsible drinking and a ZERO accidents culture. Each ambition is underpinned by clear, measurable targets for 2022 and 2030. This report updates you on our progress.

## CREATING A MORE RESILIENT BUSINESS

Resilience comes through embedding sustainability in our corporate strategy for the entire Group, SAIL'22. Our ambitions continue to drive our actions: reducing risks and creating efficiency improvements while working in harmony with local communities and the environment.

We are building on our strong scientific foundation and heritage of developing ground-breaking innovations that benefit our brewing and wider society.



## OUR PURPOSE

*Some have to dig deep to find their purpose. For us, it has always been there. We pursue perfection every day. We strive to brew better beers; beers that stand at the heart of moments that bring people together. We do not settle for immediate gain when we can create a better tomorrow for all of us. We are brewing for a better today and tomorrow.*



## YOUNG SCIENTISTS COMMUNITY

In 2018, we hired a group of postdoctoral researchers to join the Carlsberg Young Scientists Community. This community of creative, innovative and forward-thinking young scientists from around the world is tasked with helping us find or develop relevant technologies and ways to apply them in our business. Its work will be crucial to the attainment of our targets of ZERO carbon footprint and ZERO water waste.

### PARTNERING TO DELIVER OUR PROGRAMME

We know we cannot achieve our ambitions by working in isolation. Our programme was devised with the support of experts using a science-based approach, and we are collaborating with experts to deliver it.

What is more, we regularly engage with our stakeholders, listening to how they think we can improve. Together, we can make faster progress towards ZERO.

### GLOBAL CHALLENGES

2018 saw record-high temperatures in many parts of the world. And the latest reports from the Intergovernmental Panel on Climate Change (IPCC) are alarming. It is clear that we must take faster action if we are to realise the aims of the Paris Agreement and limit the significant and dangerous changes predicted by leading climate scientists if we do not. That is why our targets align with the Paris Agreement's more ambitious aim of limiting global temperature rise to 1.5°C by the end of this century.

At the same time, the water systems that are fundamental to a growing human population and keep ecosystems thriving are becoming stressed. And this will only worsen with changes in our weather patterns as a result of climate change.

It hardly needs stating, but, to put it bluntly, no water means no beer. This changing world will undoubtedly have major implications for our industry.

Meanwhile, irresponsible drinking remains a complex social problem that can have detrimental effects for individuals and their families. As brewers, we must continue to work with governments and communities to move society towards a healthier, more positive drinking culture.

### IMPORTANT CONTRIBUTION TO THE GLOBAL ECONOMY

Our impact as a Group is broad and far-reaching. With operations in more than 35 countries, and export and licence activities in more than 100 countries, we keep thousands of people employed and support infrastructure through our tax contribution, which in 2018 totalled around DKK 43bn. You can see more on pages 35-39.

### FOCUSING ON THE AREAS THAT MATTER MOST

The actions we take with Together Towards ZERO are aligned with the UN's Sustainable Development Goals (SDGs), as you can see on the next page. These priorities are based on a materiality assessment of the most important sustainability management topics, risks and impacts for our business. We expect to update our materiality assessment in 2019 to ensure that our activities remain aligned with internal and external stakeholders, and that we maintain focus on the most important areas for us and society.

## BUSINESS MODEL



**TOGETHER  
TOWARDS  
ZERO**

In the Carlsberg Group, we believe in establishing clear global ambitions, frameworks and governance structures – all of which are realised locally across our markets. Together Towards ZERO is owned by our Executive Committee (ExCom) and overseen by the Supervisory Board, but responsibility for implementing the relevant key performance indicators (KPIs) is assigned to a network of area owners. In this way, the functions that have the biggest impact and capacity to influence are empowered to create change.

Every quarter, ExCom receives an overview of progress on selected sustainability KPIs across the business. Many of these KPIs are built into daily routines at sites across our markets.

**TOGETHER TOWARDS THE SDGs**

Taken together, the UN’s Sustainable Development Goals (SDGs) form a blueprint for a more sustainable world. They call on governments, civil society, businesses and the general public to act to end poverty, reduce inequality and limit climate change by 2030.

Being interconnected, all the SDGs are important, and within each goal there are a number of targets and topics.

We focus our efforts on the goals and targets that are material to our business and where we can create the greatest impact, and review these every year. The diagram on this page shows the goals most affected by each area of Together Towards ZERO, as well as those that cut across all our activities.

In the performance sections of this report you can also see the specific targets we are contributing towards under each goal – and some examples of actions we are taking. Examples of our action for cross-cutting SDGs 12, Responsible consumption and production, and 17, Partnerships for the goals, can be found on pages 12 and 19 respectively. Providing this granular detail ensures transparency and demonstrates our commitment to the goals.

**MOST MATERIAL SDGs**







# ZERO CARBON FOOTPRINT



To reduce plastic waste and lower the CO<sub>2</sub> impact of our multipacks, we have introduced our new Snap Pack. It uses glue technology to hold multipacks together, meaning you just snap the cans apart.

Compared with traditional multipack packaging, the Snap Pack will cut plastic usage by up to 76%. Once fully rolled out, it is estimated that the Snap Pack will reduce our total use of secondary plastic packaging by more than 1,200 tonnes annually. A world first for the beer industry, the Snap Pack took us three years to develop in collaboration with our partners.



**LEARN MORE  
ON OUR WEBSITE**

[www.carlsberggroup.com/  
sustainability/actions-towards-zero](http://www.carlsberggroup.com/sustainability/actions-towards-zero)

# ZERO CARBON FOOTPRINT

Climate change is threatening people's lives and livelihoods around the world. We are committed to bold climate action that progresses towards a ZERO carbon footprint.

The Intergovernmental Panel on Climate Change (IPCC) has issued critical warnings for global warming of 2°C and more above pre-industrial levels. Without urgent action, by the end of the century weather will be more extreme, sea levels will be higher and crops will struggle.<sup>1</sup>

This is why we have designed our carbon targets in Together Towards ZERO to reduce our emissions in line with the more ambitious 1.5°C level of the Paris Agreement. We believe it is possible for companies to significantly cut emissions while still driving business growth.

## 2030 TARGETS

**ZERO**  
**30%**

**CARBON EMISSIONS AT OUR BREWERIES**

**REDUCTION IN BEER-IN-HAND CARBON FOOTPRINT**

## 2022 TARGETS

**50%**  
**100%**  
**ZERO**

**REDUCTION IN CARBON EMISSIONS AT OUR BREWERIES**

**ELECTRICITY FROM RENEWABLE SOURCES AT OUR BREWERIES**

**COAL AT OUR BREWERIES**

**15%**  
**100%**  
**30**

**REDUCTION IN BEER-IN-HAND CARBON FOOTPRINT**

**LOW-CLIMATE-IMPACT COOLING**

**PARTNERSHIPS TO REDUCE SHARED FOOTPRINT**



**ZERO CARBON EMISSIONS  
EXAMPLES OF OUR SDG ACTIONS**



**SDG TARGETS**

- 7.2** By 2030, increase substantially the share of renewable energy in the global energy mix.
- 7.3** By 2030, double the global rate of improvement in energy efficiency.

**EXAMPLES OF OUR ACTIONS**

- ✔ **Increasing share of renewable energy**
- ✔ **Improving energy efficiency**

**SDG TARGETS**

- 13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters.
- 13.3** Improve education, awareness-raising and capacity on climate change mitigation, adaptation, impact reduction and early warning.

**EXAMPLES OF OUR ACTIONS**

- ✔ **Meeting our science-based target**
- ✔ **Encouraging suppliers to reduce emissions**
- ✔ **Raising awareness of the need for action on climate change**

**ELIMINATING BREWERY EMISSIONS**

**2018 PERFORMANCE UPDATE**

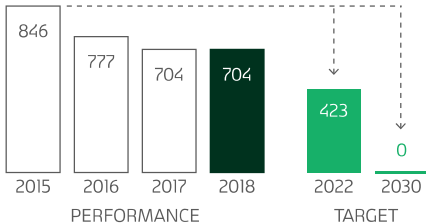
In 2018, we reduced relative carbon emissions by 5% to 5.6 kg CO<sub>2</sub>/hl, from 5.9 kg CO<sub>2</sub>/hl in 2017. This represents a 20% reduction since 2015, our baseline year. Our absolute emissions remained at the same level as in 2017 due to country mix effects. Energy efficiency improved by 5% to 25.6 kWh/hl, compared to 26.9 kWh/hl in 2017.

**EFFICIENCY PROGRAMMES**

We continued our mission to eliminate emissions with a drive towards world-class efficiency, implementing best practice and searching for innovative ways to continuously improve our existing processes.

To equip our breweries with best practice learnings from across the Group, in 2018 we implemented the Carlsberg Operational Manual (COM) globally. Progress in efficiency requires innovation and new thinking, and also the continuous maintenance of equipment, particularly as it ages.

**ABSOLUTE CO<sub>2</sub> EMISSIONS (kt)**



\* Within PwC's assurance scope.

**ELIMINATING COAL**

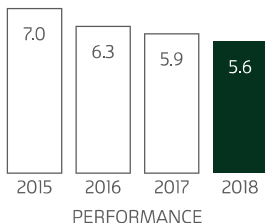
We are acting fast to eliminate coal because it is a carbon-intensive, polluting source of energy. In 2018, we reduced our coal usage by 28% compared with 2017, giving a 78% reduction since 2015. We will continue the focus on converting our remaining coal-fuelled sites in China, India and Poland on our journey towards ZERO coal by 2022.

**RENEWABLE ENERGY**

In 2018, 46% of our total electricity consumption came from renewable sources, which represents an increase of 1% compared with 2017 performance.

Our breweries in Western Europe use 100% renewable electricity, including 394,808 MWh with renewable energy certificates in 2018. Meanwhile, we use solar installations at breweries in China, India and Switzerland, and in 2018 added a new 1 MW rooftop installation at our brewery in Utena, Lithuania.

**RELATIVE CO<sub>2</sub> EMISSIONS (kg CO<sub>2</sub>/hl)\***



\* Within PwC's assurance scope.



**BIOMASS IN SERBIA**

A new biomass boiler at our Čelarevo brewery, fuelled by wood pellets, helped reduce relative carbon emissions at the site by 22% in 2018.

Combined with the pre-existing wastewater treatment biogas facility and the use of renewable electricity, more than 55% of the site's total energy now comes from renewable sources. This is an example of how we are progressing towards eliminating carbon emissions at our breweries by 2030.

## CROSS-CUTTING SDGs

### EXAMPLES OF OUR SDG ACTIONS



#### SDG TARGETS

- 12.2** By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
- 12.6** Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
- 12.9** Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.

#### EXAMPLES OF OUR ACTIONS

- ▼ **Driving energy and water efficiency at our breweries**
- ▼ **Innovating packaging such as Snap Pack**
- ▼ **Investing in new technology and research in production, packaging and energy**

Sources of renewable thermal energy include biomass and biogas. As of 2018, a total of 24 breweries have biogas extraction facilities and/or use biomass to deliver renewable heat for breweries across our regions.

In total, energy from renewable thermal and electricity sources, including biomass, biogas and solar, has grown to 20%, compared to 18% in 2017 and 15% in 2015, our baseline year.

As a member of RE100, a coalition of influential businesses committed to 100% renewable electricity, we continue to advocate the wider use of energy from renewable sources.



## EFFICIENCY GAINS IN CHINA

Nowhere has seen more impressive results from our Group-wide efficiency drive than our Chinese breweries. Since our baseline year of 2015, thermal energy efficiency has improved by more than 29%, electricity by almost 11% and water by 15%.

The rapid progress has been a result of factors such as implementing best practice through the Carlsberg Operational Manual (COM), educating our people, and converting coal boilers to natural gas boilers.

One of the most innovative initiatives has been upgrading 24 packaging lines to use new "nano insulation" technology. Originally developed to insulate spacecraft, this

technology reduces energy consumption significantly, using material that is ten times thinner than traditional mineral wool to create the same effect. On average, nano insulation cuts the energy use of our packaging lines by 10%.

Other benefits include the increased lifespan of up to 50 years, enhanced cleanliness due to the stainless steel finish, and a more comfortable working environment for our workers due to an average 5-7°C lower working environment in summer.

## REDUCING OUR BEER-IN-HAND EMISSIONS

It is not enough to eliminate our brewery emissions – we also need to tackle our value chain emissions for the total carbon footprint of our products. We call this our beer-in-hand footprint and we have set targets to reduce carbon emissions in our value chain by 15% and 30% in 2022 and 2030 respectively.

### 2018 PERFORMANCE UPDATE

To measure progress towards our 2022 and 2030 targets, we are carrying out in-depth assessments of our beer-in-hand carbon footprint every three years. The next is due in 2020 to measure 2017-2019 progress.

Meanwhile, we are building on our solid 2017 progress with several carbon-reducing initiatives across packaging, refrigeration, waste and recycling systems, and logistics.

### PACKAGING INNOVATIONS

At around 40%, packaging is the biggest source of carbon emissions in our value chain. Many stakeholders are involved in its development and use, so we are working collaboratively on improvements.

An example of our work in this area in 2018 was the launch of several packaging innovations together with the redesign of the Carlsberg brand. Building on Together Towards

ZERO, our commercial team worked with our development and supply chain teams to reassess the brand's packaging, identifying where more sustainable improvements could be made. These innovations are shown at the bottom of this page.

Other improvements in 2018 included reducing the weight of Carlsberg glass bottles by 10%, thus also reducing their CO<sub>2</sub> impact.

### PARTNERSHIPS

These innovations have only been made possible by working closely with our supply chain partners. Carbon is now an important part of our supplier conversations, as we



### SNAP PACK

In 2018, we launched our new Snap Pack to reduce plastic usage in our multipacks by up to 76% with an innovative glue technology. Less material also means less CO<sub>2</sub> impact.



### C2C LABEL INKS & COATING FOR REFILLABLE BOTTLES

In 2018, we launched Cradle to Cradle Certified™ (C2C) silver inks on bottle labels to improve the future recycling potential of the materials where these inks are used. We also applied new coating to refillable glass bottles to make them attractive for longer, increasing reuse and thus decreasing CO<sub>2</sub> emissions.



### RECYCLED SHRINK WRAP

In 2018, we launched recycled shrink wrap containing 50-100% recycled plastic – partly from our own production – for multipacks where Snap Pack is not available. With up to 60% lower CO<sub>2</sub> impact than virgin shrink wrap, it creates more demand for recycling, closing the materials loop.



“ We take reducing our impact on the environment very seriously. In 2018, we took a further step in our commitment to eliminate carbon emissions from our breweries by 2030. Since 2015, we have reduced our relative carbon emissions by 20%. I’m proud of the teams in supply chain and across the business who are reducing emissions and innovating new technologies to reach our target.”

**Philip A. Hodges**  
EVP Group Supply Chain  
Carlsberg Group

encourage all companies to be equally ambitious in their carbon reductions to help us reduce the total carbon impact of our products.

15 of our suppliers have committed to science-based targets – out of only 515 companies to have taken this step globally.

Aside from supplier partnerships, in 2018 we went further and initiated a partnership with Plastic Change, while deepening our partnership with WWF Denmark. With their help, we are devising solutions to reduce the beer-in-hand carbon footprint of our products, introducing circular packaging solutions and educating the public on the importance of recycling. We will make further announcements about this during 2019.

**LOW-CLIMATE-IMPACT REFRIGERANTS**

The ability to serve our beers cold from fridges and draught equipment is a basic expectation of consumers and therefore core to our business. Refrigeration makes up 9% of our value-chain carbon footprint, so we have a 2022 target to purchase only 100% low-climate-impact cooling equipment using, for example, hydrocarbon refrigerants while also meeting our standards for energy efficiency and lighting.

We are therefore pleased to report that in 2018 88% of newly purchased commercial fridges and beer coolers lived up to our specifications for low-climate-impact cooling. We expect to further improve on this figure in 2019 as availability and service capabilities improve.

**WHAT WE SAID 2017**

**Breweries**

**ZERO carbon roadmap**  
Refine local ZERO carbon footprint roadmaps to achieve 2022/2030 targets

**Performance improvements**  
Implement best practice to reduce energy consumption and continue ISO 50001 certifications in Western Europe

**Renewable electricity**  
Revise renewable energy procurement strategy

**Carlsberg Young Scientists Community**  
Establish a community of young scientists focused on developing solutions to achieve our 2030 carbon target

**Beer-in-hand**

**Supplier engagement**  
Engage with suppliers with highest CO<sub>2</sub> footprint to reduce shared emissions

**Supplier relationship management**  
Integrate CO<sub>2</sub> in supplier relationship management process to measure and follow up on supplier performance

**Market innovations**  
Develop and market innovations with lower carbon footprint and material use

**Consumer awareness**  
Increase communication and engagement with consumers on climate change


**WHAT WE DID 2018**

**Breweries**


Supply chain strategy updated to deliver against 2022 targets at our breweries, including investments and action plans 


Operational standards updated and improved. ISO 50001 certifications obtained at 2 additional sites 

Procurement strategy updated to reflect market developments, renewable electricity types (solar and wind), regulatory changes and available instruments 


Six postdoctoral students assigned specific research tasks at Carlsberg Research Laboratory within e.g. energy engineering and carbon reduction 

**Beer-in-hand**

Some suppliers engaged in discussions related to ambitious carbon targets and Science Based Targets Initiative. 15 suppliers have science-based targets approved or under application 

171 suppliers evaluated in 2017/2018 on CO<sub>2</sub> performance and other KPIs 

Several sustainable packaging innovations introduced as part of Carlsberg brand reappraisal 

Climate change and CO<sub>2</sub> explicitly used in consumer-facing communication related to recycled shrink wrap, Snap Pack and other matters 

**INCREASING FOCUS ON WASTE AND RECYCLING SYSTEMS**

In all markets, we are closely following discussions around the circular economy, waste and recycling. One market where we are taking a more active role is Russia, where Baltika Breweries collaborates with waste operators to help develop a separate waste collection and recycling system. Baltika and its partners have provided more than 10,000 containers in over 50 Russian cities for the collection of consumer packaging waste. In 2018, around 79,000 tonnes of waste was sent for recycling. Baltika will be helping to expand the initiative across Russia in 2019.

We will continue working actively with this agenda to increase recycling and reuse of our packaging materials across our markets and portfolio.

**LOGISTICS**

As logistics makes up 14% of our carbon footprint, we are always looking for more efficient ways to transport our products. In 2018, we continued our long-term efficiency programmes: optimising route planning; improving load factors to put fewer vehicles on the road; and, where possible, sharing delivery loads with other businesses and industries.

To go further, we are exploring new technologies that can help us reduce our logistics carbon footprint. During 2018, we worked with two vehicle manufacturers to explore the use of electric trucks for city deliveries. We hope to run a trial at the end of 2019 with the aim of expanding this solution.

We are also working to identify and source the most efficient and practical forklift trucks for

our warehouses. This often means switching to electric power as an alternative to diesel or liquified petroleum gas (LPG).

**AGRICULTURE**

The Carlsberg Research Laboratory is continuing its work on new high-yielding, disease-tolerant malting barley varieties with special properties for brewing. The aim is to produce variants adapted for a broad geographical area, different climatic environments and extreme weather conditions, reducing the carbon footprint by improving yields, and thereby increasing profitability for farmers.

**THE PROPORTION OF GREENHOUSE GAS EMISSIONS RELATING TO EACH STAGE IN THE LIFE CYCLE OF OUR PRODUCTS**



**ACTIONS TOWARDS ZERO 2019**

**Breweries**

Implement actions from roadmaps to achieve carbon reductions, improve energy efficiency and continue efforts to phase out coal

Increase use of renewable heat and renewable electricity by utilising biogas from new wastewater plants, switching to biomass, generating more on-site renewable electricity and using market instruments

Explore new technologies in energy generation and usage

**Beer-in-hand**

Refine approach to reduce scope 3 carbon emissions, including carbon KPIs for suppliers and the incorporation of carbon footprint in the tender process

Engage with key suppliers to promote and support their carbon emission ambitions



# ZERO WATER WASTE



PU:REST is a crystal-clear pilsner brewed using purified wastewater, challenging consumers' preconceived notions and demonstrating how wastewater technology can help solve future world water shortages.

The wastewater used in PU:REST was purified at the Hammarby water treatment plant near to Nya Carnegiebryggeriet (New Carnegie Brewery), Sweden, where it was used together with organic pilsner malt, Spalter hops and Brooklyn House lager yeast. Devising and producing PU:REST involved a close collaboration between Nya Carnegiebryggeriet, IVL Swedish Environmental Institute and Carlsberg Sverige. The limited-edition beer sold out in major retailers within a week.

[LEARN MORE  
ON OUR WEBSITE](#)

[www.carlsberggroup.com/sustainability/  
actions-towards-zero](http://www.carlsberggroup.com/sustainability/actions-towards-zero)



# ZERO WATER WASTE

Current trends show that by 2025 two thirds of the world's population may face water shortages and ecosystems will be under stress.

To put this in context, only 3% of the world's water supply is fresh and safe for human use – yet most is frozen in glaciers or otherwise inaccessible. Today, with the impact of pollution, climate change and other factors, 1.1 billion people worldwide have no access to fresh water. For 2.7 billion people, water is scarce for at least one month every year.<sup>2</sup>

This is why we have set targets to halve water usage at our breweries and to partner to safeguard shared water resources in high-risk areas.

## 2018 PERFORMANCE UPDATE

If we used no water at all, there would be no beer. It is an essential ingredient both in our products and for cleaning during the brewing process. Our 2030 water usage target of 1.7 hl used for every 1 hl of beer brewed will enable us to meet our ambition of virtually eliminating water waste.

### 2030 TARGETS

**50%** REDUCTION IN WATER USAGE AT OUR BREWERIES

**PARTNER TO SAFEGUARD SHARED WATER RESOURCES IN HIGH-RISK AREAS**

### 2022 TARGETS

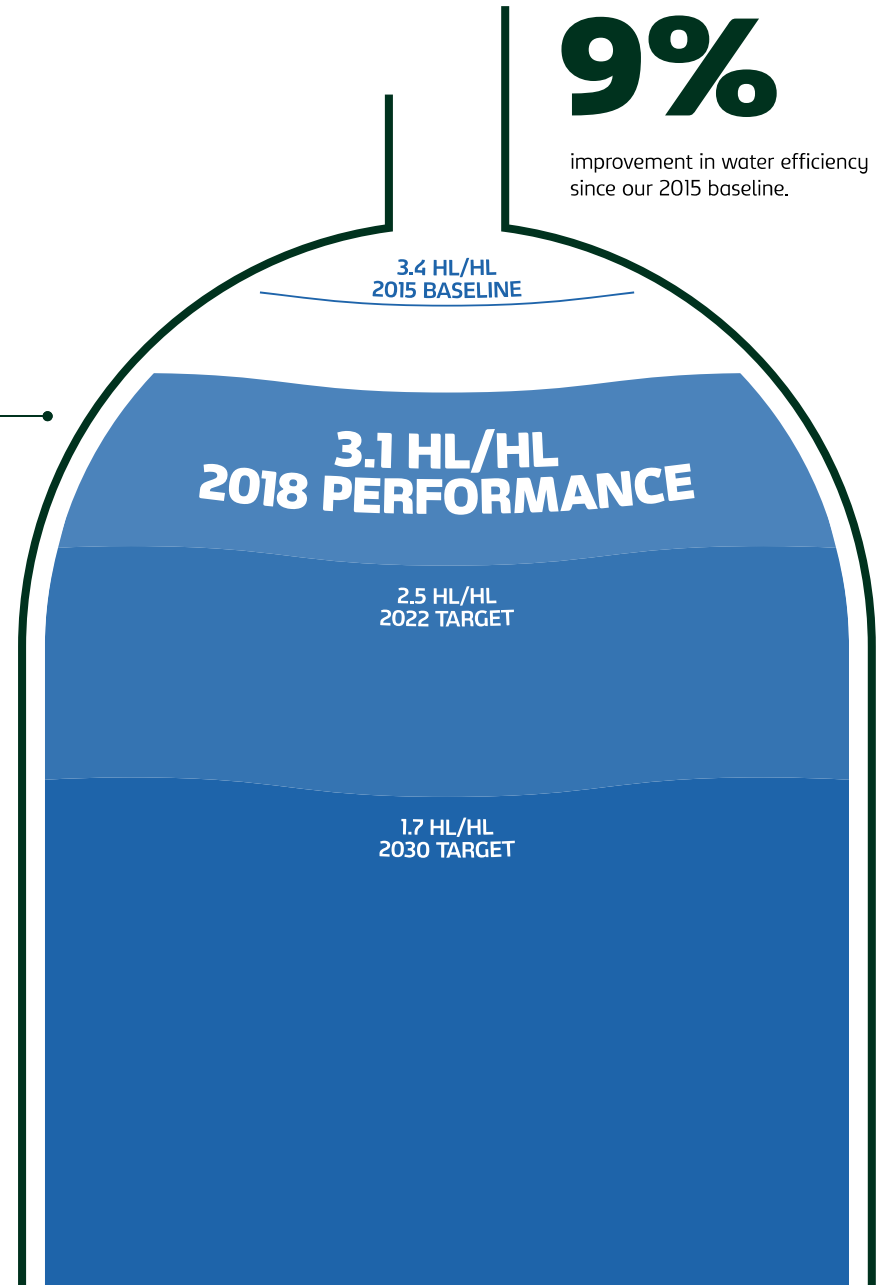
**25%** REDUCTION IN WATER USAGE AT OUR BREWERIES

**EXPLORE GOING BELOW 2.0 HL/HL AT ALL HIGH-RISK BREWERIES**

**PARTNER TO SAFEGUARD SHARED WATER RESOURCES IN HIGH-RISK AREAS**



Partnership formed with WWF Denmark to safeguard shared water resources in high-risk areas.



## ZERO WATER WASTE EXAMPLES OF OUR SDG ACTIONS



### SDG TARGETS

- 6.4** By 2030, substantially increase water-use efficiency and ensure sustainable withdrawals and supply of fresh water to address water scarcity.
- 6.5** By 2030, implement integrated water resources management at all levels.

### EXAMPLES OF OUR ACTIONS

- 🚩 **Reducing water usage and optimising wastewater treatment**
- 🚩 **Working to protect shared water resources in high-risk areas**

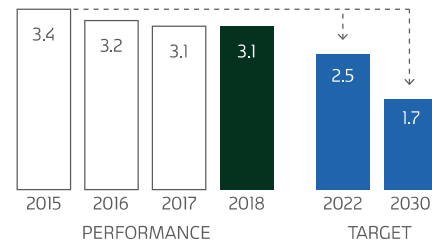
At 3.1 hl/hl, we have made a 9% improvement in water efficiency since our 2015 baseline. This represents strong performance within our industry and takes constant effort from our people to maintain and improve further. However, we are aware that a flat performance in 2018 versus 2017 means that faster change will be required to reach our 2022 target.

### ACTIONING OUR ROADMAPS

Much of our progress since 2015 has been the result of a rigorous efficiency drive, which was reinforced during 2018 by a revision of our global operational standards for water. These reflect industry best practice, equipping our breweries around the world with an understanding of the minimum expected.

We have also refined our ZERO water waste roadmap, which sets out our investment and action plan to achieve the target, with a focus on new technologies such as the current zero liquid discharge projects at four of our Indian locations.

### RELATIVE WATER CONSUMPTION (hl/hl)\*



\* Within PwC's assurance scope.

Achieving our 50% reduction target by 2030 will require further innovation and development. This is a focus for our Young Scientists Community, which you can read more about on page 7.

### WASTEWATER TREATMENT

Treating wastewater so that it can be reused is an essential method for cutting water usage within the brewing process. With the right equipment, it can be reused for cleaning or safely discharged into the environment.

However, in some markets we are facing regulatory challenges to taking full advantage of this method, which will be key to achieving our 2022 and 2030 targets.

### MARKET PROJECTS

In the UK, a new project involves recovering used rinsewater from the cleaning of bottles prior to filling. After treatment, the water is used for pasteurisation, saving around 45,000 hectolitres of water during the year.

### WHAT WE SAID 2017

#### ZERO water waste roadmaps

Refine local ZERO water waste roadmaps to achieve 2022/2030 targets

#### Performance improvements

Implement best practice to reduce water consumption

#### Carlsberg Young Scientists Community

Establish community of young scientists focused on developing solutions to achieve our 2030 water targets

### WHAT WE DID 2018

Supply chain strategy updated to deliver against 2022 targets at our breweries, including investments and action plans



Operational standards for water updated to reflect our efficiency efforts and promote best practice



Six postdoctoral students assigned specific research tasks at Carlsberg Research Laboratory within e.g. water purification technology and advanced wastewater treatment



**CROSS-CUTTING SDGs**  
**EXAMPLES OF OUR SDG ACTIONS**



**SDG TARGETS**

- 17.16** Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships.
- 17.17** Encourage and promote effective public, public-private and civil society partnerships.

**EXAMPLES OF OUR ACTIONS**

- ❖ **Partnering with NGOs, such as WWF Denmark, and suppliers to develop innovations**
- ❖ **Establishing the Carlsberg Young Scientists Community to conduct carbon and water research**
- ❖ **Partnering with retail stores, bars and restaurants to tackle underage drinking**



“ Scarce water resources and access to water are major challenges facing the planet right now. These are only being heightened by climate change and the resulting change in weather patterns. Action is needed to protect nature and communities in high-risk areas – both now and in the future. We look forward to collaborating with Carlsberg to help deliver on this action.”

**Bo Øksnebjerg**  
**Secretary General, WWF Denmark**

Our Ritsona brewery in Greece reduced its relative water consumption by 16% in 2018, by implementing best practice from our Carlsberg Operational Manual. Implemented solutions included leak reductions on filling lines and optimisation of the process cleaning in brewing and packaging.

**ISSUES AND RESPONSES 2018**

Water samples obtained by a third-party media centre in 2018 showed biological oxygen demand (BOD) levels in the river surrounding Gorkha Brewery in Nepal to be above acceptable levels. This prompted an immediate internal investigation into the efficiency of the brewery’s wastewater treatment plant, which concluded that it was not the source of the elevated levels, and that the plant is meeting our requirements and local standards.

Our further, wider investigation identified potential causes as the low rate of river flow during low season as well as the distribution of wet spent grains to farmers near the brewery. To improve river flow, we conducted dredging and also changed the distribution of the wet spent grains to avoid the risk of nutrient-rich run-off reaching the river.

Compliance and adhering to our operational standards is absolutely key. We constantly strive to proactively improve our standards and remediate any concerns or issues raised.

**PARTNERSHIP WITH WWF**

While we know that reducing water usage at our breweries is an important step for protecting local water resources, this alone will

not solve water scarcity issues – particularly around our high-risk sites. Consequently, we have committed to partner to safeguard shared water resources in these areas, and we are delighted to have entered our first such partnership, with WWF Denmark.

We are currently working with WWF to develop a strategy in this area, and we look forward to sharing more about this, and other specific projects, during 2019.

**ACTIONS TOWARDS ZERO 2019**

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Implement actions from roadmaps to achieve higher water efficiency and conservation

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Explore new technologies for cutting-edge water reuse and recycling

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Conduct projects in water-stressed areas to protect shared water resources and improve local water management

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Ensure that wastewater discharge standards are up to date to ensure compliance globally



86% of Western European packaging now provides information on ingredients and nutritional values per 100 ml. Consumers have a right to know what is in our beers, and we are proud to show them, which is why we will continue to roll this out across all regions through to 2022.

 **LEARN MORE ON OUR WEBSITE**

[www.carlsberggroup.com/sustainability/actions-towards-zero](http://www.carlsberggroup.com/sustainability/actions-towards-zero)



**ZERO  
IRRESPONSIBLE  
DRINKING**

# ZERO IRRESPONSIBLE DRINKING

When people get together, our beers are enjoyed in moments of enjoyment and relaxation. Sometimes, however, irresponsible drinking takes place. While the issues and causes are complex, we are working with partners to encourage a healthier drinking culture.

Change is happening. The World Health Organization (WHO) reports significant declines in regular and risky drinking patterns in the EU since 2002. These include prevalence of drunkenness, early initiation of alcohol consumption and binge drinking, with improvements particularly noticeable in the Nordics and the UK.<sup>3</sup> However, major challenges remain, and improving further will require joint efforts from many different stakeholders.

While consumers make their own decisions about how they consume our beers, we can support them in making smart choices. Our approach to this consists of enabling, informing and encouraging responsible choice, as detailed on page 22. We use campaigns to target the biggest issues in each market. In some, drink-

### 2030 TARGETS

**100%** OF OUR MARKETS IMPROVE ON RESPONSIBLE DRINKING YEAR ON YEAR

### 2022 TARGETS

**100%** RESPONSIBLE DRINKING MESSAGING THROUGH PACKAGING AND BRAND ACTIVATIONS

**100%** OF OUR MARKETS RUN PARTNERSHIPS TO SUPPORT RESPONSIBLE CONSUMPTION

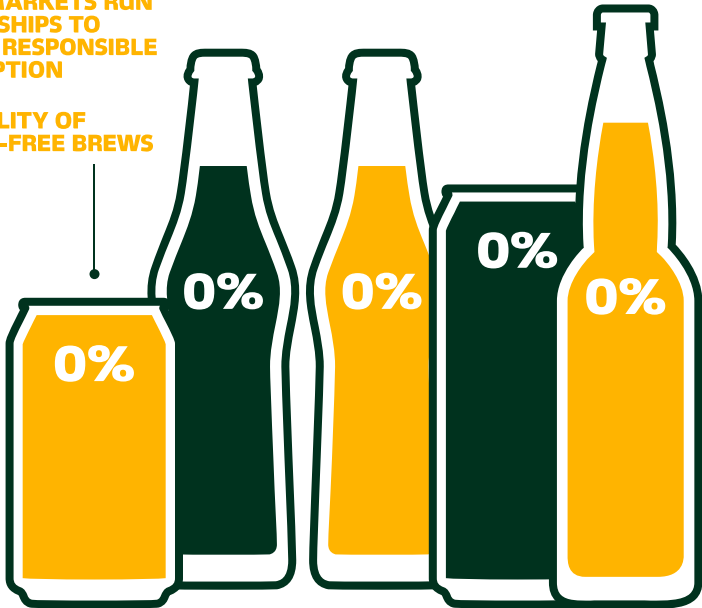
**100%** AVAILABILITY OF ALCOHOL-FREE BREWS (AFB)

**33%**

volume growth of alcohol-free brews in Western Europe.

**96%**

of our products now carry responsible drinking messages advising consumers not to drink-drive and not to drink when underage or pregnant.



**ZERO IRRESPONSIBLE DRINKING  
EXAMPLES OF OUR SDG ACTIONS**



**SDG TARGETS**

- 3.5** Strengthen the prevention and treatment of substance abuse, including harmful use of alcohol.
- 3.6** By 2020, halve the number of global deaths and injuries from road traffic accidents.

**EXAMPLES OF OUR ACTIONS**

- ✔ **Applying responsible drinking messaging across our packaging and brand communications**
- ✔ **Implementing standards on digital platforms to prevent exposure of content to minors**
- ✔ **Growing availability of alcohol-free brews**
- ✔ **Installing alcolocks in company cars**

driving is the greatest challenge; in others, it is underage or binge drinking. So by working with local partners, we pinpoint the key behaviour to change, and do this at point of sale, during consumption moments and across our marketing communications.

An advisory group of behavioural experts from anthropology to health and psychology is helping to design our activities to improve effectiveness. In 2018, the group made two proposals aimed at raising awareness and measuring people’s choices by analysing the effect of alcohol intake and the availability of alcohol-free options. We are reviewing these proposals and will implement related pilots on a market level while we document the effect of the efforts on behaviour.

**ENCOURAGING RESPONSIBLE CONSUMPTION**

**Packaging**

96% of our products now carry responsible drinking messages advising consumers not to

**OUR APPROACH**



**ENABLE**

Offer a wider set of alcohol-free choices that consumers can turn to on different drinking occasions.

drink-drive and not to drink when underage or pregnant.

In 2018, we exceeded our 2017 commitment to include information on ingredients and nutritional values on 80% of packaging in Western Europe, reaching 86%. So together with other brewers, we are voluntarily listing ingredients and calories per 100 ml in accordance with general EU requirements for foodstuffs. Consumers have a right to know what is in our beers, and we are proud to show them where they expect to find it – on our packaging. We will therefore continue to roll this out across all regions through to 2022, and hope that other brewers, as well as wine and spirits producers, will follow this lead.

**Marketing communication**

Because compliance requirements vary across markets, our own internal regulatory system ensures strict global controls for advertising placement and contents. These include never using models under 25 years of age, never

appealing to minors and never placing ads unless at least 70% of the audience is of legal drinking age.

Digital platforms have never been more significant, so in order to achieve our 2022 target for responsible drinking messaging, we are implementing a new industry standard, the Digital Guiding Principles (DGPs). These principles extend marketing codes to digital platforms, with particular focus on preventing exposure of minors to alcohol-related advertising, using measures such as age-gating to verify legal drinking age, preventing the forwarding of advertisements to minors, and including responsible drinking messages across brand channels.

In the first half of 2018, we participated in the second global independent auditing process of the European Advertising Standards Alliance (EASA). It reported a steep rise in compliance for audited channels, from 13% in 2017 to around 60%. We subsequently accelerated our



**ENCOURAGE**

Encourage consumers to make positive drinking choices through dialogue and engagement.



## PREVENTING UNDERAGE BEER SALES IN UKRAINE

In 2018, Carlsberg Ukraine tackled underage drinking on Global Beer Responsibility Day, 14 September, targeting shop assistants and parents in an effort to raise awareness of the issue.

Over 1,600 employees visited 20,000 shops to talk about the dangers of selling alcohol to young people. Campaigners wore T-shirts featuring retro audio cassettes with the headline “Don’t know how it works? Sorry, no beer for you!” Shop staff were given fun gifts to prompt ID requests.

In addition, two leading psychologists mentored parents on how to talk to their teenage children about the importance of not drinking alcohol while underage. A Facebook page attracted more than 21 million visits over a four-month period.

**➤ FIND OUT MORE ON OUR WEBSITE**

[www.carlsberggroup.com/sustainability/actions-towards-zero/](http://www.carlsberggroup.com/sustainability/actions-towards-zero/)

efforts, ensuring that DGPs were in place for approximately 85% of local channels for our global brands by the end of the year.

While we have made good progress in implementing the DGPs, their infancy means that much monitoring is required by our central team to ensure implementation across our markets. We will continue to do this as they become established and second nature to our marketers.

### Preventing underage drinking

Our beers are for consumption by people above the legal drinking age, so we are working hard to prevent sales to younger people. Our 2022 target is for 100% of our markets to run partnerships to support responsible consumption. To this end, we are partnering with retail stores, bars and restaurants to implement our approach of informing, enabling and encouraging responsible drinking.

### WHAT WE SAID 2017

**Number of consumers (GBRD)**  
Reach 40 million consumers during Global Beer Responsibility Day (GBRD)

**Digital Guiding Principles (DGPs)**  
Ensure that the six standards within the DGPs are implemented across all our brand digital channels to safeguard people below the legal drinking age

**Concept initiatives**  
Develop and execute initial initiatives recommended by an independent advisory group to promote responsible drinking

### WHAT WE DID 2018

More than 70 million consumers reached through local market campaigns



DGPs implemented across approximately 85% of local channels for our global brands



Two concept initiatives developed to be tested in the next two years



By way of example, an awareness campaign by Baltika Breweries involved visiting and engaging with staff at 90,000 points of sale, while Carlsberg Ukraine covered 20,000 points of sale. This represents good progress towards our target of year-on-year improvement on responsible drinking. Read more about this in the case story on page 23.

We also collaborated with the Danish Partnership for Responsible Alcohol Consumption. This multi-faceted partnership with key Danish stakeholders promotes a responsible alcohol culture in Denmark, with specific focus on preventing underage drinking and selling. We ran a trial using electronic IDs and awareness-raising, resulting in a 25% increase in employee confidence when requesting ID and a strong increase in refused transactions due to lack of certified ID.

Despite positive developments, particularly in some key markets, we are by no means satisfied. We will therefore continue to focus on preventing underage drinking, as it is a crucial area. While strengthening measures at point of sale is effective, a broader whole-society approach is required to address this challenge.

### PREVENTING DRINK-DRIVING

For many years, we have been working worldwide with key partners such as the police, bars and restaurants to raise awareness of the issue of drink-driving.

In a 2018 report, the European Transport Safety Council, a long-standing partner of the brewing industry, announced fewer road deaths attributed to alcohol, citing changing public

attitudes towards drink-driving, the adoption of legal measures and enhanced enforcement.<sup>4</sup>

However, drink-driving remains a problem, and in some markets where there is no drink-driving stigma and sanctioning, it is an even bigger issue. As in other areas, we are adopting our “inform, enable and encourage” approach through dialogue and engagement.

In 2018, we ran a number of initiatives across those markets where drink-driving is a particular issue. In China, more than 200,000 consumers engaged in dialogue about preventing drink-driving with local police forces, car dealers and the media. In Azerbaijan, a video campaign highlighting the impact on two people’s lives of traffic accidents caused by drink-driving reached over 400,000 people through digital and traditional media. In Belarus, on Global Beer Responsibility Day the Alivaria brewery provided free minibuses to take home bar-goers who lived in remote areas.

Also within our own organisation, we are making changes. Since introducing our car policy in 2017, all newly purchased company cars are equipped with alcolocks to prevent staff from driving if they are over the legal alcohol limit. So far in Western Europe, 24% of our cars have alcolocks installed.



## BIRELL LAUNCHED IN BULGARIA AND POLAND

May 2018 saw the launch of a new alcohol-free beer, Birell. Initially launched in two styles, Pilsner Lager and Belgian Wit, the brand made its debut in Bulgaria and Poland, ahead of a further roll-out planned for 2020.

Developed specifically as an alcohol-free beer, Birell delivers the same body, mouthfeel, head and, most importantly, great taste that consumers expect from regular beer, just without the alcohol.

[VISIT BIRELL'S WEBSITE](#)

[www.birell.com](http://www.birell.com)

The new AFB was developed in response to strong consumer demand following continuous category growth over the past 10 years. It meets the needs of aspirational consumers wanting a greater choice of alcohol-free options without compromising on taste.





“ People want a broader set of choices for different occasions and to know what goes into our beers. That is why we are expanding our portfolio of alcohol-free brews and have committed to providing ingredient and nutritional information per 100 ml on our packaging.”

**Jessica Spence**  
Chief Commercial Officer,  
Carlsberg Group

### ALCOHOL-FREE BREWS

Alcohol-free brews (AFB) can offer a welcome alternative to traditional beers, particularly on occasions where alcohol is not an appropriate choice. A key target for us is 100% availability of AFB by 2022. That means we are working towards market-wide distribution, providing options for consumers who want to enjoy a refreshing beer but, for example, want to drink less alcohol or have to drive.

We are making good progress towards this target. Availability is already over 80% in some markets, such as France, Switzerland and Sweden, and we are seeing strong progress where we have launched new AFB brands, such as Birell in Bulgaria, which you can read more about on page 24.

Expanding our AFB portfolio and availability gives consumers more options in all sorts of situations, not just when driving, but also when cycling or sailing. In Denmark, for example, where cycling is the most common form of transport, one in four bicycle-related accidents involves alcohol. So this has been the focus of an ongoing campaign to raise awareness among Danish consumers.

In Sweden, Carlsberg Sverige commissioned an “alcohol-free beer boat” to deliver alcohol-free beers to sailors on the waters of the Stockholm Archipelago. The initiative raised awareness of the risks of drinking while sailing by offering consumers an alternative, great-tasting beer option. In addition, Sweden became the first country to launch Carlsberg Alcohol Free on draught.

### ENCOURAGING A POSITIVE DRINKING CULTURE

Our brands have an important role to play in shaping a better alcohol culture, which is why we use their channels to run dedicated responsibility campaigns for consumers that communicate in relevant, targeted ways. Many brands do so already, with campaigns such as Tuborg’s “Drink With Respect” in Denmark, Kronenbourg’s “Consommer Avec Modération” in France and Carlsberg’s “Celebrate Responsibly” in Malaysia encouraging responsible choices during moments of consumption through dialogue and engagement.

Our activities are always grounded in the local context and challenges, so we need to be flexible in our approach while staying on-brand. In Finland, for example, during “midsummer season” people enjoy our products – and in a country of a thousand lakes they often do so near water. With this in mind, the Finnish team devised messages for the Karhu brand, such as “Do not let Karhu turn your boat upside down”, to raise awareness of the risks of combining alcohol with sailing and swimming.

Changing cultural norms does not happen overnight. Our challenge is to ensure that our consumer messages hit the right tone. Rather than sounding preachy and negative, they should focus on nudging people to make responsible choices and foster dialogue.

### ACTIONS TOWARDS ZERO 2019

Continue to implement and measure compliance with Digital Guiding Principles

Accelerate the formation of global and local partnerships for responsible drinking

Expand our global offering of alcohol-free brews (AFB)



“Always follow work at height procedures” is one of our five Life Saving Rules. Having rolled out training in the rules globally during 2018, this initiative has deeply impacted our organisation.

▶ **LEARN MORE  
ON OUR WEBSITE**

[www.carlsberggroup.com/sustainability/actions-towards-zero](http://www.carlsberggroup.com/sustainability/actions-towards-zero)



**ZERO  
ACCIDENTS  
CULTURE**

# ZERO ACCIDENTS CULTURE

Protecting the lives and health of our people is a fundamental value for us. We aim to achieve a ZERO accidents culture by making health & safety top of mind at all times and by ensuring compliance with our rules and standards.

So how are we creating a lasting ZERO accidents culture? It starts with leaders setting an example. But it works best when our people on the ground are trained to observe rules and procedures, and empowered to continually identify risks and propose solutions themselves, thereby enabling us to prevent accidents and, if they do occur, learn from them.

## 2018 PERFORMANCE

In 2017, we achieved a significant reduction in accident rates – and in 2018 we sustained this performance. We are focused on continuing to reduce accidents year-on-year.

The Group lost-time accident rate (LTAR) in 2018 was 4.3. Specifically, the number of employee lost-time accidents (LTAs) went

## 2030 TARGETS

**ZERO LOST-TIME ACCIDENTS**

## 2022 TARGETS

**REDUCTION IN ACCIDENT RATE YEAR-ON-YEAR**



Our Life Saving Rules programme was rolled out through a company-wide training programme. Built on industry experience, it focuses on the specific areas where we have learned that people's lives can be endangered if rules are not followed correctly.



Only a combination of leadership, consistent communication and safety routines will deliver progress towards our ZERO accidents target. In 2018, we sustained the good progress of 2017.

**ZERO ACCIDENTS CULTURE  
EXAMPLES OF OUR SDG ACTIONS**



**SDG TARGETS**

**8.8** Protect labour rights and promote safe and secure working environments for all workers.

**EXAMPLES OF OUR ACTIONS**

- ✦ **Embedding a ZERO accidents culture in employees and contractors through communication and initiatives**
- ✦ **Training leaders to model desired behaviours, communicate consistently and engage with teams on health & safety**

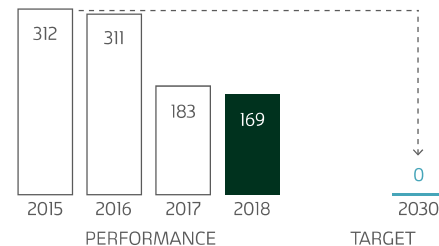
down to 169 from 183 in 2017, while the number contractor LTAs was 42 in 2018.

Despite the sustained accident rate, our performance in 2018 was not good enough, as we recorded three fatalities: a subcontractor in a construction accident, a brewery worker in a boiler accident and a sales employee in a traffic collision. We are deeply saddened by these tragic accidents, which underline the need for day-to-day vigilance to create a ZERO accidents culture.

**INCREASED OBSERVATIONS**

In 2018, we saw a significant increase in observations reported by our employees, which enabled us to implement a number of preventative actions. This is a positive sign of improved engagement and progress towards making health & safety top of mind for all our people, and also testament to an improved safety culture. However, only a combination of leadership, consistent communication and safety routines will deliver progress towards our ZERO accidents target.

**LOST-TIME ACCIDENTS\***



\* Within PwC's assurance scope.



**CREATING IMPACT THROUGH  
REAL-LIFE STORIES**

In Russia, the life of technician Denis Smirnov was tragically changed by a workplace accident at our brewery in St Petersburg in 2004. The documentary *Blade* was created to tell his dramatic story.

Association of Communication Directors and Corporate Publishing.

Real-life case stories and engaging media content help to embed Together Towards ZERO and a ZERO accidents culture.

Released on the World Day for Health and Safety at Work, Denis's true story creates awareness of the importance of following health & safety rules. It was named best health & safety video in a competition run by the Russian



“Nothing is more important than the health & safety of our people and no task is so important that we cannot take time to do it safely. The challenge is to build a ZERO accidents culture across our business, whereby all 40,000+ employees are engaged to lead, identify and eliminate risks and live our safety practices.”

**Philip A. Hodges**  
EVP Group Supply Chain  
Carlsberg Group

This is a day-by-day mission that is being embraced by all levels of the organisation.

**LIFE SAVING RULES**

In 2018, we rolled out our Life Saving Rules programme across the business. Built on industry experience, this programme focuses on the specific areas where we have learned that people’s lives can be endangered if rules are not followed correctly.

This initiative has deeply impacted the organisation. We have rolled out a company-wide training programme on the basics of the Life Saving Rules. And we have started delivering detailed communication packages for each of the rules to ensure that staff fully understand the requirements and are equipped to comply with them.

**LIFE SAVING RULES:**

- #1. Always follow traffic rules (on site and on the road)
- #2. Always follow lock out/tag out procedures
- #3. Never remove, bypass or impair safeguards or interlocks
- #4. Always follow work at height procedures
- #5. Always follow confined space entry procedures

In 2019, the journey continues with additional actions that will ensure consistent embedding of this programme in our ways of working and a sustained level of compliance.

**LEADERSHIP TRAINING**

Our programme advanced significantly in 2018, preparing our leaders to better model desired behaviours, communicate consistently and engage with their teams on health & safety.

We have already reached over 1,500 leaders and we are targeting 1,200 more in 2019. This will have an important impact on making health & safety top of mind and allow us to deliver on our commitment to reach all leaders by 2020.

**WHAT WE SAID 2017**

**Leadership**

Continue to roll out the health & safety leadership training to reach all managers globally by 2020

**Life Saving Rules**

Roll out the Life Saving Rules programme globally, including communication and training, followed by a consistent compliance verification process

**WHAT WE DID 2018**

More than 1,500 people managers trained in sales, marketing and supply chain departments



Life Saving Rules initiative launched globally. All relevant employees have received basic training and performance is consistently tracked





## NEPAL ENLISTS CELEBRITY HELP

Gorkha Brewery in Nepal featured Jitu Nepal, a popular actor, in an internal communications campaign to help cultivate a ZERO accidents culture. The campaign consisted of safety-related posters and a series of shareable videos.

Following a health & safety assessment of the brewery, key campaign messages were identified to encourage safe workplace practices, and then delivered by Jitu Nepal in an engaging way.

### PREVENTING RECURRENCE OF ACCIDENTS

In 2018, most accidents were a result of slips, trips and falls, traffic collisions, and being struck by or bumping into equipment and obstacles.

To prevent recurrence of accidents, we investigate them and share conclusions and preventative actions with all markets. In certain cases, learnings are captured in safety alerts with mandatory actions for all sites. Those actions are tracked for completion and sustained compliance.

### ADDRESSING CHALLENGES

**On-site contractors:** To ensure that third-party contractors working on our premises are kept safe, we are introducing a new contractor management programme with improved routines for service provider selection, on-site induction and supervision, and safe work planning.

**Safe driving:** We have started addressing driving risks with our Life Saving Rule #1 package and will deliver a more comprehensive Driver Training Programme in 2019.

**Reducing injuries in sales:** We cannot control the hazards in off-site work environments, but we can make our staff more aware and better prepared to avoid slips, trips and falls and other injuries. We have started rolling out a dedicated package comprising a safety kit of protective equipment (anti-slip shoes, cut-resistant gloves, safety cutter, reflective vest) and awareness tips on the most common hazards.

## ACTIONS TOWARDS ZERO 2019

Continue to roll out H&S Leadership training and reach at least 65% of people managers

Continue to implement the Life Saving Rules by upgrading Group standards and ensuring compliance through self- and independent assessments

Introduce a new Safe Driving training programme for the sales organisation

Implement the new contractor management programme across the organisation

We are working to ensure that a strong ethical approach is at the core of every area of our business.



**DOWNLOAD OUR POLICIES  
ON OUR WEBSITE**

[www.carlsberggroup.com/  
sustainability/download/download  
-our-policies](http://www.carlsberggroup.com/sustainability/download/download-our-policies)

AB ŠVYTURYS - LITENOS AŃS  
Part of the Carlsberg Group

# RESPONSIBLE BUSINESS

# RESPONSIBLE BUSINESS

## LIVE BY OUR COMPASS

Launched in 2016 and built into SAIL'22, our Live by our Compass programme continues to provide detailed guidance on ethical behaviour, emphasising the importance of integrity at all levels of our organisation. We reinforce this with risk assessments, third-party screening, compliance training and market audits.

As part of this, we are implementing a control framework for all legal compliance areas, including competition law, data protection, and anti-bribery and corruption. Special attention has been paid to ensuring compliance with the EU's General Data Protection Regulation (GDPR).

We have clear policies in place and focus, for example, on building a high level of awareness and a strong tone from our top-60 leadership team.

Our policies include:

### Labour & Human Rights Policy

To define the labour & human rights standards to which all employees in the Carlsberg Group are entitled, irrespective of the country in which they work.

### Anti-Bribery & Corruption Policy

To outline and explain the prohibitions against bribery and corruption in all our operations, highlight the specific compliance requirements relating to these prohibitions, and reinforce our commitment to conducting business globally with the highest level of honesty and integrity.

### Competition Law Policy

To help ensure compliance with competition laws wherever we operate, we are building a high level of awareness of our Competition Law Policy through training programmes. In 2018, a global e-learning programme in competition law targeted 15-20,000 employees, supported by face-to-face training for relevant employees.

### Environmental Policy

To prevent and control potential risks to the environment, mitigating the impact of climate change, supported by our ambitious targets in Together Towards ZERO.

### EFFECTIVE COMMUNICATION

For a global business with more than 40,000 people, it is a challenge ensuring that every employee knows where to find our 29 policies and 200+ manuals. For this reason, in December 2018 we launched a single global online platform covering all codes, policies and





manuals, accompanied by a comprehensive communications package.

**SPEAKING UP**

In 2018, 95 suspected matters of misconduct were reported through our Speak Up system – a significant increase from 2017, when we received 53 reports. We believe this increase is due to the continued awareness-raising of the Speak Up programme. This is fulfilling its purpose and leading to greater transparency.

When a suspected matter of misconduct is reported through the system, we aim to review and close it as soon as possible. In 2018, 27% of the matters reported through the system were upheld, resulting in sanctions varying from verbal reprimands to dismissal.

**LABOUR & HUMAN RIGHTS**

We are committed to providing a safe, healthy and empowering environment for our people, always acting in a fair and responsible manner with respect for global standards and guidelines.

This is guided by our behavioural framework, Triple A, with the As standing for alignment, accountability and action. It defines how we should work together across the organisation, including treating people in a fair and equal way.

**IMPLEMENTING OUR LABOUR & HUMAN RIGHTS POLICY**

In 2017, we began rolling out our Labour & Human Rights Policy to people managers, HR and legal professionals in Asia. This continued during 2018, when we primarily focused on the

same groups in Eastern Europe, reaching 90% with our e-learning module or other training activities. We believe it is more effective to target our activity for greater impact on higher-risk areas rather than taking a lighter and broader approach. Learning was backed up by a manual offering comprehensive insight and clarity on interpreting, using and implementing our Labour & Human Rights Policy.

In 2018, we prioritised our work on ensuring compliant behaviour among specific employee groups with a higher risk of compliance issues, and therefore did not fully meet our aim of implementing initiatives to continuously identify and account for human rights impacts. In 2019, further steps will be taken towards a systematic approach to assessing human rights impacts in selected areas.

**TRAINING**

Our “Triple A Leader” initiative develops a common understanding of good leadership among mid-level leaders. It aims to raise competences while also focusing on building a feedback culture and developing our people.

**RESPONSIBLE SOURCING**

Our company works with numerous suppliers and business partners from production to retail. Their integrity is key to our sustainability performance.

For this reason, we are always working to identify and understand any issues, extending our influence and ensuring that our value chain meets our high standards. These are set out in our Supplier & Licensee Code of Conduct for

**WHAT WE SAID 2017**

**Live by our Compass**

**Risk assessment**  
Conduct market risk assessment on key compliance risks in all markets

**Third-party screening**  
Update protocols for screening business partners and third parties

**Speak Up**  
Promote Speak Up facilities through awareness campaign

**Compliance training**  
Develop compliance training curriculum for employees tailored to functional risk level

**Market audits**  
Conduct in-market audits in all regions to monitor effectiveness of the Live by our Compass programme

**Labour & human rights**

**Training**  
Eastern Europe: reach 90% of line managers, HR and legal professionals through e-learning and face-to-face training in selected markets

**Onboarding**  
Include training and awareness in local onboarding programmes for people managers and HR professionals utilising new HR system platform

**Human rights impact initiatives**  
Implement initiatives to continuously identify and account for human rights impact. Carry out ongoing monitoring of local market compliance

**WHAT WE DID 2018**

Global risk assessment carried out, mapping the key risks by market on a heat map



New Third Party Screening process created in consultation with 60+ internal stakeholders and incorporated into the Anti-Bribery & Corruption Manual



Launch of the Speak Up Manual and Misconduct Investigation Manual supported by communication material and other awareness activities



Focus directed onto providing anti-bribery & corruption (ABC) training via Train the Trainer sessions for legal counsels



Monitoring of Live by our Compass programme moved to 2019 in order to focus on ABC compliance following go-live of the global Live by our Compass platform in December 2018



E-learning and other training initiatives rolled out to 90% of line managers, HR and legal professionals across Eastern Europe region



Onboarding e-learning made available for people managers in eight markets that are “live” on the new HR platform



Initial steps taken to consider a framework for systematic human rights methodology and impact assessment. Ongoing monitoring of local market compliance with labour & human rights conducted



labour & human rights, environment, health & safety and business ethics. Compliance is vital – and this is measured in our supplier relationship management programme as well as our integrated quality audits.

In 2018, we continued our membership of SEDEX (Suppliers Ethical Data Exchange) and are evaluating our future participation.

#### INTEGRATED QUALITY AUDITS

We carry out regular quality audits to check that each supplier complies with our Code. There is a particular focus on those in high-risk areas who face additional complexities. In 2018, we carried out 166 such audits, focusing on glass bottles, aluminium cans and malt.

If an issue is revealed, our first response is to help the supplier achieve compliance, making lasting improvements. However, if it is serious, we suspend material deliveries.

#### LOOKING AHEAD

Though it is primarily a quality tool, the roll-out of our new Supplier Quality Management tool will enable us to collect environmental, health & safety and sustainability data from suppliers. It will be supported by direct upload of documentation by suppliers, which will help us ensure that the latest data is available and regularly revised by suppliers.

We will also update the Supplier and Licensee Code of Conduct as part of the revision process for the Live by our Compass programme, continuously reviewing and promoting high ethical standards.

#### QUALITY AND SAFETY OF OUR PRODUCTS

Ultimately, across the Carlsberg Group we are all about delivering high-quality beers and beverages. It is our top priority to get this right every time, ensuring that our products are always safe and of high quality.

#### CONTINUOUSLY RAISING STANDARDS

In 2018, we achieved 100% Food Safety System Certification (FSSC) in Western Europe. Six of our 14 sites in Eastern Europe are also certified, an additional four sites having obtained certification during 2018. We expect to reach 100% across this region in 2019.

Six of our 40 Asian sites have obtained this certification, while 11 sites have ISO 22000 certification, two more than in 2017. We will continue to make progress on certification in Asia by building the necessary support systems. In 2019, we will finalise our roadmap for achieving this. In addition, our new Supplier Quality Management tool will increase the visibility of our global supply base and critical suppliers, moving from a market-by-market system to a global system that allows for quicker action if needed.

#### RESPONDING TO QUALITY ISSUES

We are rigorous in our attempts to identify any quality issues at the root-cause stage, long before any products leave our sites. It is very rare for a quality issue to arise after a product has left our site, and we have measures in place to minimise the consequences if that should happen. In 2018, we recalled one product, in Denmark, due to a quality risk.

Less serious issues are dealt with by withdrawals, where a product is withdrawn from customer inventories before reaching consumers. In 2018, nine withdrawals were made, representing progress compared with 2017, when there were 11.

While there is no room for complacency, we have seen progress thanks to more systematic processes and an increase in the reporting of minor problems during the brewing process, leading to more shared learnings.

### ACTIONS TOWARDS ZERO 2019

#### Live by our Compass

Roll out the legal risk and control framework through awareness programmes, e-learning, face-to-face training and monitoring

Implement the updated Third Party Screening process and Gift, Entertainment and Donations Manual. Develop a 2019-2021 monitoring plan for anti-bribery & corruption

#### Labour & human rights

Revise labour & human rights e-learning and make it available and mandatory for all new managers to take through our HR system platform in selected markets

Implement supporting initiatives to ensure compliance with Labour & Human Rights Policy in selected areas

Conduct in-market audits in all selected markets to monitor effectiveness of Labour & Human Rights Policy implementation



Beer creates value and positively contributes to economies around the world. With a presence in more than 100 countries, we make a significant global economic contribution through our products' production, distribution and sales – as pictured here in Paris.

▶ **LEARN MORE  
ON OUR WEBSITE**

[www.carlsberg.com/en/what-we-are/about-the-carlsberg-brand/global-presence/](http://www.carlsberg.com/en/what-we-are/about-the-carlsberg-brand/global-presence/)

**ECONOMIC  
CONTRIBUTION  
TO SOCIETY**

# ECONOMIC CONTRIBUTION TO SOCIETY

## CREATING JOBS THROUGHOUT THE VALUE CHAIN

### 40,000+ EMPLOYEES

In 2018, the Carlsberg Group directly employed more than 40,000 people in our majority-owned businesses around the world.

Most work in the breweries, which often provide vital employment in rural areas. We also employ highly skilled people in sales & marketing, finance, procurement, research & development, logistics and administrative functions.

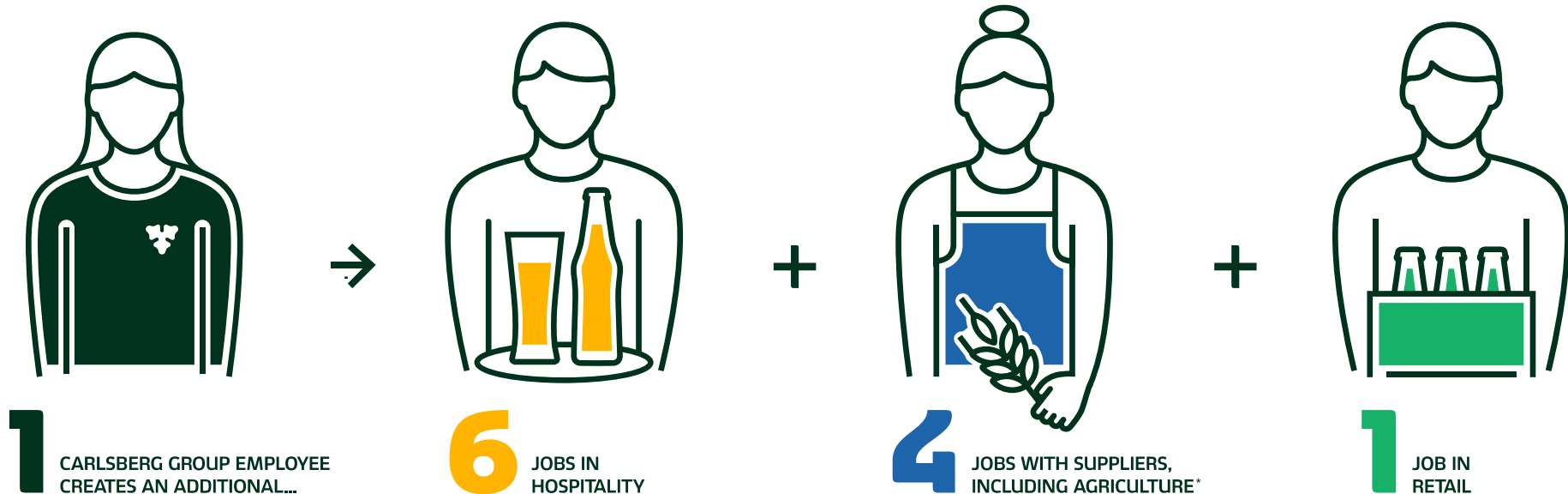
### CREATING JOBS IN OTHER SECTORS

Our breweries generate a significant number of jobs via suppliers in the agricultural, packaging and logistics sectors, stimulating indirect employment.

The sale of our products also contributes to induced employment – jobs created in the hospitality (bars, restaurants) and retail (grocery stores) sectors.

Taking all these activities into account, the economic research consultancy Regioplan estimates that in 2018 we created total indirect and induced employment amounting to approximately 472,000 employees, equivalent to more than 11 additional jobs created for every Carlsberg Group employee.

Through our operations around the world, we support the implementation of SDG 8, Decent work and economic growth, by contributing to economic prosperity, increasing productivity and innovation in the markets where we operate.



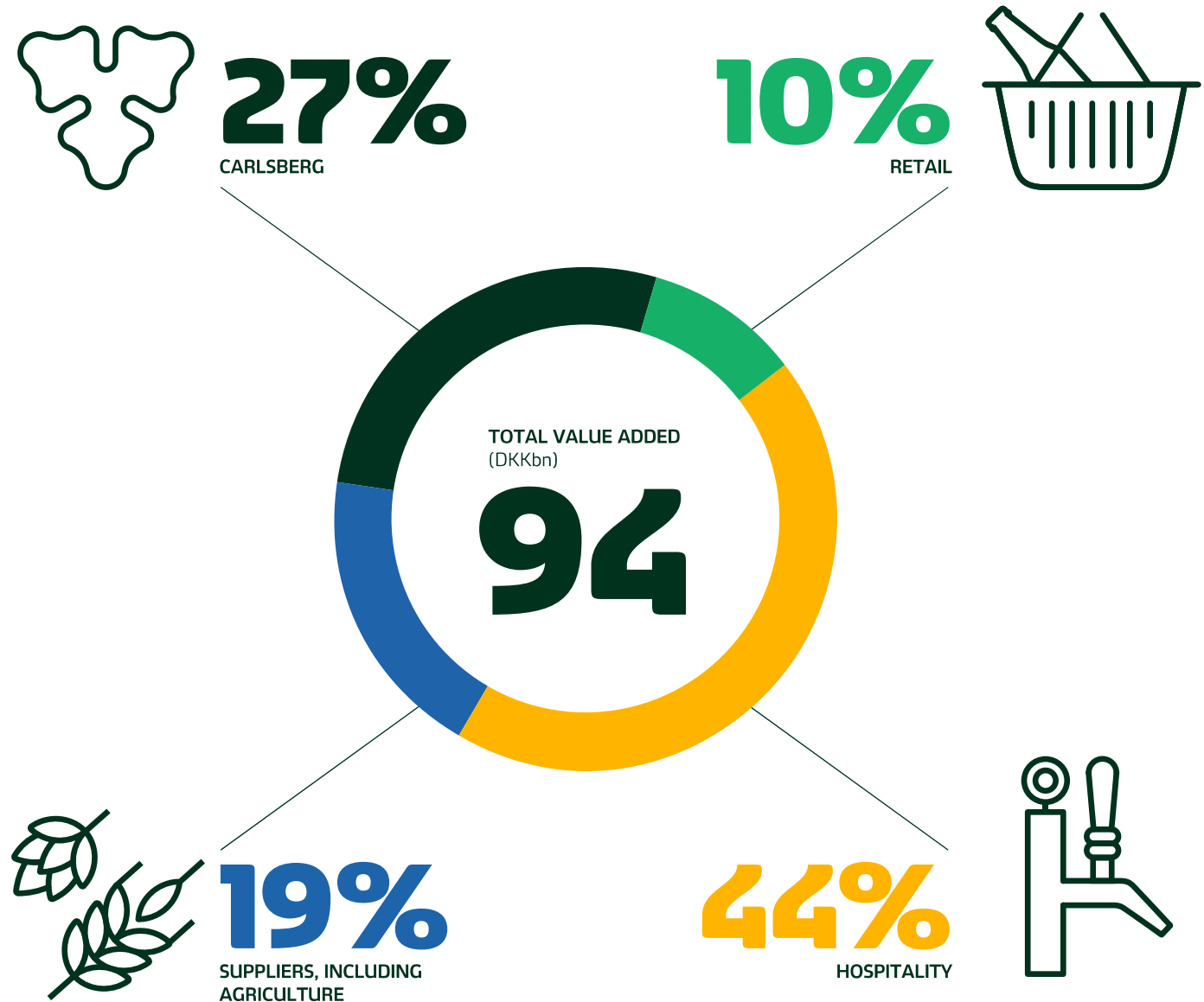
\* The number of jobs generated with suppliers, including in agriculture, is down slightly on 2017 due to lower costs of purchasing from suppliers in our Russian and Chinese markets. However, costs of purchasing from suppliers in Western Europe have increased since 2017.

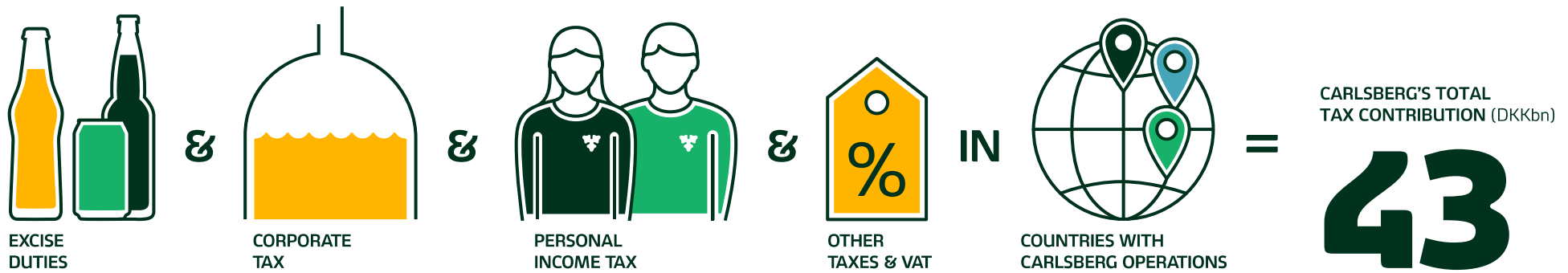
## GENERATING VALUE THROUGHOUT THE VALUE CHAIN

Added value is defined as the difference between the cost of the goods and services acquired for production and the amount received when the final product is sold on the market. Our network of suppliers, customers in hospitality and retail outlets, and production and sales facilities all add value to the final product, which is sold worldwide to consumers.

This added value makes it possible to pay our employees' wages, cover tax liabilities and reward our lenders and investors. It is also the source of VAT revenues collected by governments in the countries in which we operate.

Calculated by Regioplan using a well-recognised methodology, value added through the production and sale of all Carlsberg Group products worldwide in 2018 amounted to DKK 94bn. Most added value occurred in the hospitality sector.





## ECONOMIC VALUE GENERATED AND TOTAL TAX CONTRIBUTION

### ECONOMIC VALUE

Economic value generated is a combination of gross revenue, other income, financial income and income included in special items. Our contribution is distributed among our stakeholders through payments to suppliers for goods and services, wages to employees, financial expenses to those who provide capital, and taxes paid to governments. The economic value retained is the profit we use to finance dividends for our shareholders and support future business growth.

In 2018, economic value generated totalled DKK 90bn. Our total tax contribution, including

both taxes borne and taxes collected, amounted to DKK 43bn.

### TAXES BORNE

Taxes borne by the Carlsberg Group include direct taxes such as corporate income tax, social security taxes, environmental taxes and indirect taxes such as excise duties. In 2018, we paid DKK 31bn in taxes, representing 35% of the total economic value generated.

### TOTAL TAX CONTRIBUTION

In addition to taxes borne, we also collect taxes on behalf of governments in the countries in which we operate. These include taxes paid on behalf of our employees, VAT and other relevant taxes. In 2018, our collected taxes amounted to DKK 12bn and our total tax contribution amounted to DKK 43bn.

### TOTAL GOVERNMENT REVENUES GENERATED

Our products generate substantial revenues for governments, support public services and stimulate economic growth in the countries in which we operate. In addition to our total tax contribution mentioned above, government revenues are also generated in related sectors such as agriculture, retail and hospitality.

According to a well-established methodology, Regioplan estimates that in 2018 the Carlsberg Group generated DKK 131bn in government revenues through direct activities and activities in related industries. Our direct share of total government revenues was 33%.



[VIEW OUR TAX POLICY](#)  
[www.carlsberggroup.com](http://www.carlsberggroup.com)

# DETAILED OVERVIEW OF ECONOMIC VALUE GENERATED AND TOTAL TAX CONTRIBUTION

In 2018, the Carlsberg Group generated a total of DKK 90bn in economic value. Total taxes borne by Carlsberg represent 35% of our economic value generated.

ECONOMIC VALUE GENERATED (DKKbn)

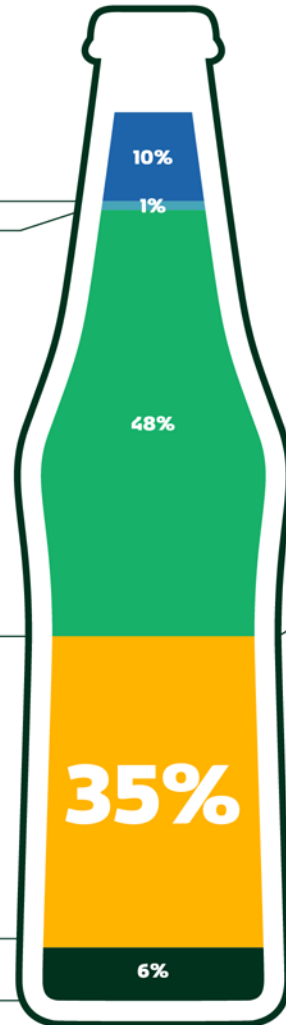
# 90

EMPLOYEE WAGES DKK 9bn  
 PROVIDERS OF CAPITAL DKK 1bn

OPERATING COSTS DKK 43bn

TAXES BORNE, INCL. EXCISE DUTIES DKK 31bn

ECONOMIC VALUE RETAINED DKK 6bn



12  
 TAXES COLLECTED  
 (DKKbn)

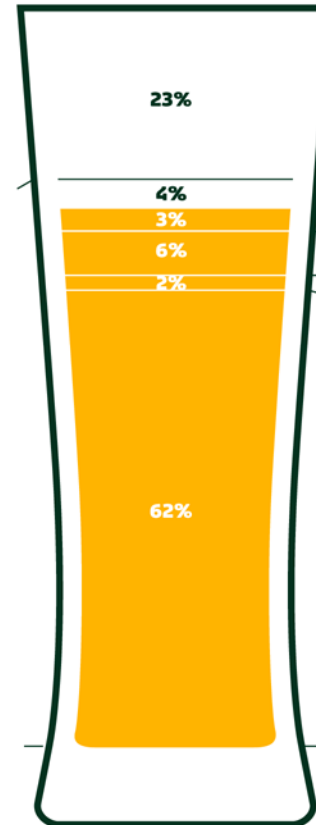
31  
 TAXES BORNE,  
 INCL. DUTIES  
 (DKKbn)

TOTAL TAX CONTRIBUTION (DKKbn)

# 43

VAT DKK 10bn  
 PERSONAL INCOME TAXES DKK 2bn  
 SOCIAL SECURITY TAXES DKK 1bn  
 CORPORATE INCOME TAX DKK 2bn  
 OTHER TAXES DKK 1bn

EXCISE DUTIES DKK 27bn



\* All numbers have been rounded

# DATA SUMMARY TABLE

## ENERGY, CARBON AND WATER

	2014	2015	2016	2017	2018
<b>General production figures</b>					
Number of reporting sites	101	110	92	85	85
Beer production (million hl)	107.0	105.4	100.9	97.9	102.2
Soft drinks production (million hl)	13.6	13.9	14.3	14.2	15.6
Total production of beer and soft drinks (million hl)*	120.6	119.3	115.2	112.1	117.8
Malting (kt)	492.0	547.2	311.5	301.3	314.1
<b>Environmental performance data (beer, soft drinks and malt production)</b>					
Total thermal energy consumption (GWh)*	2,970	2,943	2,481	2,326	2,341
Total electricity consumption (GWh)*	1,012	988	914	869	885
Total CO <sub>2</sub> emissions (from direct and indirect fuel consumption) (kt)* (market-based)	982	945	768	698	701
Total CO <sub>2</sub> emissions (from direct and indirect fuel consumption) (kt) (location-based)			883	802	801
Total SO <sub>2</sub> emissions (tonnes)	1,651	1,695	815	731	509
Total NO <sub>x</sub> emissions (tonnes)	1,586	1,562	1,163	1,075	1,027
Total water consumption (million m <sup>3</sup> )*	42.1	41.2	37.7	35.6	37.5
Total wastewater discharged (million m <sup>3</sup> )	27.2	26.6	24.2	23.0	23.8
<b>Solid waste &amp; by-products</b>					
Incinerated (kt)	9.3	8.7	5.7	5.1	9.2
To sanitary landfill (kt)	64.6	68.6	56.9	68.6	60.9
Special waste (kt)	0.7	0.7	1.4	0.7	0.4
Recycled (kt)	164.8	189.2	225.5	222.0	162.6
Disposed of for land applications (kt)	173.7	165.9	127.4	117.4	125.1
Other (kt)	21.0	-	-	-	-
Total solid waste (kt)	434.1	433.1	416.9	413.8	358.3
Brewer's grains and brewer's yeast utilised (kt)	1,409.0	1,348.9	1,265.0	1,236.0	1,372.8

\* Within PwC's assurance scope (see PwC's Assurance Report, pages 60-61).



	2014	2015	2016	2017	2018
<b>Relative figures for beer and soft drinks production</b>					
Thermal energy (kWh/hl)*	21.4	21.2	20.0	19.3	18.3
Electricity (kWh/hl)*	8.0	7.8	7.7	7.6	7.3
Combined energy (thermal and electricity) (kWh/hl)*	29.4	29.0	27.7	26.9	25.6
CO <sub>2</sub> emissions (kg CO <sub>2</sub> /hl)*	7.3	7.0	6.3	5.9	5.6
Water (hl/hl)*	3.4	3.4	3.2	3.1	3.1
<b>Relative figures for malt production</b>					
Thermal energy (kWh/tonne)	694.1	692.2	489.3	457.9	436.4
Electricity (kWh/tonne)	87.1	84.1	73.2	67.1	65.6
Combined energy (thermal and electricity) (kWh/tonne)	781.1	776.3	562.5	525.0	501.9
CO <sub>2</sub> emissions (tonnes CO <sub>2</sub> /tonne)	0.19	0.18	0.13	0.12	0.11
Water (m <sup>3</sup> /tonne)	2.3	2.2	1.6	1.5	1.4
<b>Other figures</b>					
Complaints	93	33	36	32	9
Number of ISO 14001-certified sites	69	74	66	70	76
Number of ISO 50001-certified sites	1	3	4	18	20
<b>Water source split</b>					
Municipal water	49%	48%	46%	48%	49%
Own boreholes	43%	42%	47%	46%	45%
Surface water	8%	10%	7%	6%	6%
<b>Wastewater destination</b>					
Public sewer with wastewater treatment	66%	67%	66%	66%	69%
On-site treatment, followed by public sewer without wastewater treatment	3%	3%	2%	2%	1%
On-site treatment, followed by discharge to river/lake	30%	28%	28%	28%	26%
Other	1%	2%	4%	4%	4%
<b>Thermal energy mix</b>					
Natural gas	68.0%	66.1%	71.9%	69.1%	72.9%
Coal	14.9%	15.6%	7.0%	5.9%	3.5%
District heating	6.8%	6.4%	7.1%	7.6%	7.4%
Heavy fuel	3.4%	2.8%	3.1%	3.6%	3.0%
Renewable energy	5.2%	6.9%	8.2%	9.8%	11.8%
Light fuel	1.1%	1.2%	1.4%	3.0%	1.4%
Other	0.6%	1.0%	1.3%	1.0%	0%

\* Within PwC's assurance scope (see PwC's Assurance Report, pages 60-61).

	2014	2015	2016	2017	2018
<b>Total CO<sub>2</sub> emissions from refrigerants</b>					
HFC-based refrigerants (kt CO <sub>2</sub> )*	12.9	14.9	9.8	6.8	2.9
<b>Together Towards ZERO carbon baseline</b>					
Absolute emissions (kt CO <sub>2</sub> ) (Together Towards ZERO 2015 baseline)		846	777	704	704*
<b>Renewable electricity</b>					
Percentage of electricity from renewable sources		41	43	45**	46*
<b>Sites using coal</b>					
Number of sites using coal		31	17	12	6*
<b>Packaging mix</b>					
Cans	26.1%	26.6%	27.4%	28.6%	29.9%
RGB	33.7%	33.7%	31.5%	29.8%	28%
NRGB	8.2%	9.2%	9.5%	11.6%	12.3%
R-PET	1.0%	0.0%	0.0%	0.0%	0.0%
PET	22.5%	23.0%	23.0%	20.8%	20.3%
Kegs	6.6%	6.4%	7.6%	7.8%	7.7%
Bulk	1.3%	1.0%	0.9%	1.2%	1.4%
Other	0.4%	0.1%	0.1%	0.2%	0.4%

\* Within PwC's assurance scope (see PwC's Assurance Report, pages 60-61).

\*\* Restated.

## HEALTH &amp; SAFETY

	2014	2015	2016	2017	2018
<b>Figures for Production***</b>					
Number of lost-time accidents*	156	114	105	73	59
Lost-time accident rate*	9.1	6.2	7.0	5.1	4.5
Number of lost days*	2,207	1,911	1,281	1,219	1,393
Days lost rate*	128.8	104.5	85.6	85.6	105.4
<b>Figures for Logistics**</b>					
Number of lost-time accidents*	150	140	109	62	48
Lost-time accident rate*	17.4	15.5	13.8	8.2	7.5
Number of lost days*	2,201	2,511	1,619	1,128	1,393
Days lost rate*	254.8	277.2	205.1	149.5	218.0
<b>Figures for Sales &amp; Marketing**</b>					
Number of lost-time accidents*	40	52	95	43	58
Lost-time accident rate*	2.8	3.3	6.2	2.5	3.5
Number of lost days*	613	565	2,787	961	1,545
Days lost rate*	43.2	36.2	183.0	56.3	94.1
<b>Figures for Administration**</b>					
Number of lost-time accidents*	6	6	2	5	4
Lost-time accident rate*	1.3	1.4	0.6	1.4	1.2
Number of lost days*	97	43	30	57	271
Days lost rate*	21.3	9.7	8.2	16.3	82.0
<b>Figures for the Group**</b>					
Number of lost-time accidents*	352	312	311	183	169
Lost-time accident rate*	7.9	6.6	7.4	4.3	4.3
Number of lost days*	5,118	5,030	5,717	3,365	4,602
Days lost rate*	115.0	106.2	136.9	79.4	117.0
Fatalities (Carlsberg Group employees on and off site, contractors and members of public on site)	6	5	5	1	3
Number of lost-time accidents, contractors*					42
Number of lost-time accidents, members of public*					0
<b>Lost-time accidents – department split</b>					
Percentage in Production	44	37	34	40	35
Percentage in Logistics	43	45	35	34	28
Percentage in Sales & Marketing and Administration	13	19	31	26	37

\* Within PwC's assurance scope (see PwC's Assurance Report, pages 60-61).

\*\*\* Carlsberg Group employees. For Days Lost and Days Lost Rate for 2018, please note that the indicator definitions have changed; see page 54.

**RESPONSIBLE DRINKING AND MARKETING COMMUNICATION**

	2014	2015	2016	2017	2018
Percentage of companies implementing responsible drinking initiatives	62	78	75	90	76****
Percentage of fermented produced volume carrying responsible drinking guiding symbols and/or equivalent text*	67	54	85	97	96
Percentage of total beer volume that lists nutritional information*					65
Percentage of total beer volume that lists ingredient information*					85
Number of responsible drinking campaigns	115	239	194	248	159
Number of reported incidents of non-compliance with the Marketing Communication Policy	6	4	4	0	2
Number of sales, marketing and innovation employees trained through the marketing communication e-learning module	490	N/A	N/A	502	0

**LIVE BY OUR COMPASS**

	2014	2015	2016	2017	2018
Total number of employees trained in the Code of Ethics & Conduct			4,336	34,500	2,911
Percentage of companies that have implemented third-party screening procedures	68	84	84	95	100
Number of incidents reported through our Speak Up system	30	87	55	53	95

\* Within PwC's assurance scope (see PwC's Assurance Report, pages 60-61).

\*\*\*\* 28 out of 37 companies.

## LABOUR &amp; HUMAN RIGHTS

	2014	2015	2016	2017	2018
Total workforce (FTE*****)	46,832	47,464	42,062	41,430	40,837
<b>Percentage of employees by employment contract</b>					
Permanent employees	82	88	86	89	86
Temporary employees	18	12	14	11	14
<b>Percentage of employees by employment type</b>					
Full-time	94	98	93	93	94
Part-time	6	2	7	7	6
<b>Percentage of employees by employment category</b>					
Total presidents + top managers	2.1	1.5	1.5	1.4	1.8
Total managers	11.5	12.3	12.6	13.2	13.5
Total specialists	40.9	39.9	36.7	36.9	38.5
Total workers	45.5	46.3	49.2	48.5	46.2
<b>Percentage of employees by gender</b>					
Male	72	72	69	71	68
Female	28	28	31	29	32
<b>Percentage of management level by gender</b>					
Male	76	78	77	76	75
Female	24	22	23	24	25
<b>Percentage of employees by age</b>					
Younger than 18	0.02	0.19	0.11	0.13	0.02
19-29	23	22	23	25	23
30-39	34	33	33	35	35
40-49	27	29	27	25	26
50 or older	16	16	17	15	16

\*\*\*\* FTE data from Carlsberg Group Annual Report 2018.

	2014	2015	2016	2017	2018
<b>Employee turnover</b>					
Employee turnover percentage	15	19	21	24	19
<b>Employee turnover percentage by age</b>					
Younger than 18	-	-	-	-	-
19-29	36	32	31	31	36
30-39	31	33	34	38	35
40-49	18	20	20	18	16
50 or older	15	15	15	15	13
<b>Employee turnover percentage by gender</b>					
Male	72	71	69	63	70
Female	28	29	31	37	30
<b>Hours of training per employee</b>					
Average for the Group	15	15	15	15	16
<b>Collective bargaining</b>					
Percentage of employees covered by collective bargaining agreements	71	73	74	74	72
<b>Policy implementation status</b>					
Percentage of labour & human rights procedures and processes implemented as average for the Group	94	92	92	90	94
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>RESPONSIBLE SOURCING</b>					
Number of integrated quality audits	101	171	182	154	166

# REPORTING PROCESS AND SCOPE

## REPORTING APPROACH AND CRITERIA SCOPE OF THE SUSTAINABILITY REPORTING

This report covers the relevant and significant social, ethical and environmental issues for the financial year 1 January to 31 December 2018. It gives our stakeholders an overview of our performance in these areas, complementing our Annual Report, which primarily covers our financial and economic performance.

For many years, we have been using the standards of Global Reporting Initiative (GRI) as guidance for our sustainability work. For this 2018 report, the GRI G4 Sustainability Reporting Guidelines were applied in preparing the underlying data and framing our reporting principles; however, the Carlsberg Group no longer applies GRI-specific disclosures.

We receive recommendations on our sustainability activities and reporting from our assurance provider, PwC, while we ourselves routinely analyse global megatrends, take part in industry initiatives and assess the activities of our competitors. This ensures that we fully understand the key issues and keep up to date.

The report focuses on the topics that we consider most important to our business and society. It is based on a range of inputs, including, but not restricted to, the materiality

assessment from 2016, water risk assessment work undertaken with WWF, the UN's Sustainable Development Goals (SDGs), carbon footprinting analyses undertaken with the Carbon Trust and guidance from the advisory group helping us with responsible drinking.

## BOUNDARY SETTING

Entities included in this report's performance data include majority-owned subsidiaries, which are defined as companies that the Carlsberg Group directly or indirectly owns, in which it controls more than 50% of the voting rights or that it otherwise controls.

Joint ventures and companies over which the Carlsberg Group does not have the opportunity to exercise management control are not covered. However, we work with our partners routinely to ensure ongoing focus on sustainability issues. If a majority-owned entity is acquired during the financial year, it will be included in the following year's report.

The economic contribution section of the report follows the boundary setting of the Annual Report, which includes non-controlling joint ventures and other associates.

## COMMENTS ON BOUNDARY SETTING

The following sites have been closed/sold since 2017 and have therefore been excluded from the 2018 reporting:

### LITHUANIA:

Svyturys Utenos Alus, Klaipeda

The following sites have been added to the 2018 reporting scope:

### INDIA:

Carlsberg India: Mysuru Karnataka brewery

The following companies have been renamed/restructured since 2017:

### CHINA:

"Carlsberg Brewery (Guangdong Ltd)" and "Carlsberg Beer Enterprise Management (Chongqing) Company Limited, Chongqing ("Eastern Assets")" have been combined into a reporting entity named "CIB & TMH".

"Chongqing Brewery Group", "Chongqing Jianiang Beer Co., Ltd" and "Chongqing Brewery Guoren Co., Ltd." have been combined into one company reporting entity called "CBC".

Breweries from previous company entities have been moved into the new reporting entities.

## ENSURING DATA QUALITY

In gathering information about our sustainability performance, we applied the widely used principles of balance, clarity, accuracy, reliability, timeliness and comparability. Please find additional information on each of the topics below:

### BALANCE

We are committed to communicating honestly and openly about our performance, both when it has improved and when it has not. Our aim is to provide our stakeholders with sufficient information about our company for them to form their own judgements concerning the Carlsberg Group's position and role in the societies in which we operate.

### CLARITY

We strive to make our sustainability reporting accessible and easy to read for anyone, but we are always open to feedback about the way we communicate on our material issues.

### ACCURACY AND RELIABILITY

Since 2009, our dedicated sustainability reporting system has helped us collect data from local sites and consolidate this at Group

level. Every year, we have improved the indicator definitions for our performance indicators in order to help our entities report accurately and reliably.

However, it is a challenge to obtain a complete and fully aligned overview of all our data that, at the same time, takes into account local procedures for data gathering. For this reason, we are continuously working on improving data accuracy. Since 2009, we have been using an international provider of sustainability software solutions to systematise and collect our data. This gives us a higher degree of control over the data-gathering process, helps local companies compare data year-on-year, and enables instant consistency checks during the data-gathering phase. In 2018, we upgraded to a newer version of the software that offers several user improvements. As well as the system, we use internal data management systems to collect information such as employee headcounts. An additional tool used to improve our sustainability data is the Carlsberg Operational Manual (COM), which sets out details regarding processes and best practices.

PwC has been appointed to provide independent assurance regarding selected economic, environmental and safety indicators. In each section of the report, we indicate which data has been assured. For further details, see pages 60-61.

### TIMELINESS

Internally, we report our sustainability data with varying degrees of frequency, depending on the nature of the data. Where necessary, we revise the reporting frequency in order to strike the right balance between obtaining the correct data and observing appropriate time intervals for reporting on it. Annual data gathering and external reporting are aligned with financial data collection, following the calendar year.

### COMPARABILITY

On pages 49-55, we have published the definitions we use for the key indicators in the report, which are also the data points on which PwC provides assurance.

We include three or five-year data in all cases where a comparable 3- or 5-year data history is available.

### DEFINITIONS

During the reporting process, we identified some differences in the interpretation of certain indicators at site level. However, we do not feel these differences significantly impact the validity of the reported data. Within the environmental data, any reference to “production site” or “site” refers to sites where the Carlsberg Group produces beer, soft drinks or malt, as well as combinations of these, and the water and energy consumption at these sites. The term “production site” does not include off-site consumption such as logistics and off-site administration. Definitions for environmental indicators and health & safety are available on pages 49-55.

### TARGETS

We communicate through actions and targets:

- One-year short-term actions towards ZERO
- 2022 targets
- 2030 targets

These have been developed by each of the area owners in cooperation with Group Sustainability and may be adjusted following significant changes in the business, such as major acquisitions and divestments. As far as possible, we include such changes by applying scenario planning to our target-setting process.

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## REPORT REFERENCES

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Danish Health Authority. Sundhedsstyrelsens 7 udmeldinger om alkohol (Danish Health Authority's 7 recommendations about alcohol). 2018.

Portman Group. New research shows that 76% of people are now drinking at, or below, low risk levels. 2019. Based on the survey Alcohol Alternatives. YouGov on behalf of Portman Group. December 2018.

4. European Transport Safety Council. Progress in Reducing Drink Driving in Europe. 2018.



# INDICATOR DEFINITIONS

Here, we explain the indicators we use to measure our sustainability performance. We define them and clarify their scope and any relevant assumptions we have made when collecting data globally.

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO CARBON FOOTPRINT</b>		
Total production of beer and soft drinks	<p><b>Definition:</b> Volume of fermented and non-fermented products produced.</p> <p>Production output that has passed through the production process on the company's own premises is included. Output is defined as approved packaged product to warehouse, plus volume of bulk beer and volume of bulk non-fermented products.</p> <p><b>Scope:</b> Beer and soft drinks production sites as defined on page 48.</p>	Million hl
Total thermal energy consumption	<p><b>Definition:</b> Total thermal energy consumption used for beer, soft drinks and malt production.</p> <p>Thermal energy originates from different energy sources such as light fuel oil, heavy fuel oil, natural gas, town gas, biogas from wastewater treatment plants, coal, biomass, district heating, grid electricity and biogas with renewable certificates (documented and traceable).</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Thermal energy sold to third parties, fuels for on-site logistics and fuels used for electricity production from on-site combined heat and power (CHP) plants are excluded from "Total thermal energy consumption". Losses from CHPs are included.</p>	GWh

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO CARBON FOOTPRINT</b>		
Total electricity consumption	<p><b>Definition:</b> Total electricity consumption for beer, soft drinks and malt production.</p> <p>Electricity originates from different sources such as: renewable electricity generated on site (solar, wind), electricity bought with renewable certificates (e.g. Guarantees Of Origin, Renewable Energy Guarantees Origin – REGO), electricity from grid and electricity from on-site combined heat and power plants.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Electricity sold to third parties is excluded from total electricity consumption.</p>	GWh
Total CO <sub>2</sub> emissions (from direct and indirect fuel consumption)	<p><b>Definition:</b> Total fossil fuel carbon dioxide emissions (direct and indirect).</p> <p>Direct emissions are from the combustion of fuels for thermal energy and indirect emissions are from purchased electricity and district heating.</p> <p>CO<sub>2</sub> emission factors used for fossil fuels and electricity are in accordance with the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories and International Energy Agency statistics. Electricity grid emission factors from IEA are updated annually.</p> <p>Renewable energy types have an emission factor of 0 g CO<sub>2</sub>/kWh.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48.</p> <p><b>Assumptions:</b> CO<sub>2</sub> emissions related to sold thermal energy and electricity is not deducted from “Total CO<sub>2</sub> emissions”.</p>	kt
Relative thermal energy consumption	<p><b>Definition:</b> Thermal energy needed to produce 1 hectolitre of beer and soft drinks.</p> <p>“Total thermal energy consumption” / “Total production of beer and soft drinks”</p> <p><b>Scope:</b> Beer and soft drinks production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Thermal energy used for malting or other extraordinary site activities is deducted from “Total thermal energy consumption”.</p>	kWh/hl

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO CARBON FOOTPRINT</b>		
Relative electricity consumption	<p><b>Definition:</b> Electricity needed to produce 1 hectolitre of beer and soft drinks.</p> <p>“Total electricity consumption” / “Total production of beer and soft drinks”</p> <p><b>Scope:</b> Beer and soft drinks production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Electricity used for malting or other extraordinary site activities is deducted from “Total electricity consumption”.</p>	kWh/hl
Relative CO <sub>2</sub> emissions	<p><b>Definition:</b> Fossil fuel carbon dioxide emissions (direct and indirect emissions) emitted from energy used to produce 1 hectolitre of beer and soft drinks.</p> <p>“Total CO<sub>2</sub> emissions (from direct and indirect fuel consumption)” / “Total production of beer and soft drinks”</p> <p><b>Scope:</b> Beer and soft drinks production sites as defined on page 48.</p> <p><b>Assumptions:</b> CO<sub>2</sub> emissions related to malting or other extraordinary site activities are deducted from “Total CO<sub>2</sub> emissions (from direct and indirect fuel consumption)”.</p>	kg CO <sub>2</sub> /hl
Total CO <sub>2</sub> emissions from refrigerants	<p><b>Definition:</b> CO<sub>2</sub> equivalent emissions caused by refrigerant losses from on-site refrigerant systems.</p> <p>Emission factors for refrigerants are generic table values.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48.</p>	kt
Percentage of electricity from renewable sources	<p><b>Definition:</b> Share of electricity from renewable sources.</p> <p>Renewable sources can be on-site renewable electricity generation or electricity supplied with Guarantees Of Origin, Renewable Energy Guarantees Origin or similar standards.</p> <p>RE100 requirements provide the guiding principles for how renewable electricity is reported.</p> <p>“Total renewable electricity intake” / “Total electricity intake”.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48.</p> <p><b>Assumptions:</b> Electricity generated from on-site CHPs is not included in “Total electricity intake”.</p>	%

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO CARBON FOOTPRINT</b>		
Number of sites using coal	<p><b>Definition:</b> Number of breweries that used coal as primary thermal energy source during the reporting period.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48.</p> <p><b>Assumptions:</b> The brewery does not use coal on site to generate thermal energy.</p>	Number of sites
(Together Towards ZERO indicator) Absolute CO <sub>2</sub> emissions	<p><b>Definition:</b> Sum of "Total CO<sub>2</sub> emissions (from direct and indirect fuel consumption) " and "Total CO<sub>2</sub> emissions from refrigerants".</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48.</p>	kt
<b>ZERO WATER WASTE</b>		
Total water consumption	<p><b>Definition:</b> Total water consumption for beer, soft drinks and malt production.</p> <p>Water originates from water withdrawal from own boreholes, municipal water supply, surface water or other sources.</p> <p><b>Scope:</b> Beer, soft drinks and malt production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Water intake to brewery sold to third parties is excluded from "Total water consumption".</p>	million m <sup>3</sup>
Relative water consumption	<p><b>Definition:</b> Water needed to produce 1 hectolitre of beer and soft drinks.</p> <p>"Total water consumption" / "Total production of beer and soft drinks"</p> <p><b>Scope:</b> Beer and soft drinks production sites as defined on page 48. Consumption for non-production site activities is included.</p> <p><b>Assumptions:</b> Water used for malting or other extraordinary site activities is deducted from "Total water consumption".</p>	hl/hl

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO IRRESPONSIBLE DRINKING</b>		
Percentage of fermented produced volume carrying responsible drinking guiding symbols and/or equivalent text	<p><b>Definition:</b> "Volume of packed fermented products that carry responsible drinking guiding symbols and/or equivalent text" / "Total packed fermented production volume x 100%".</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48, excluding companies without production and/or direct sales activities.</p> <p><b>Assumptions:</b> Volume in kegs and bulk is excluded from "Total packed fermented production volume".</p>	%
Percentage of total beer volume that lists nutritional information	<p><b>Definition:</b> "Volume of total beer volume that lists nutritional information (on primary packaging, excluding kegs and alcohol-free brews)" / "Total beer volume (excluding kegs and alcohol-free brews)".</p> <p>Nutritional declaration: nutrition declared on consumer-facing primary packaging. Minimum requirement is to present energy in linear form (e.g. "Energy: 190 kJ/46 kcal per 100 ml").</p> <p>Primary packaging : All consumer-facing primary packaging for beer products, excluding kegs. Does not include alcohol-free brews.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48, excluding companies without production and/or direct sales activities.</p>	%
Percentage of total beer volume that lists ingredient information	<p><b>Definition:</b> "Volume of total beer volume that lists ingredient information (on primary packaging, excluding kegs and alcohol-free brews)" / "Total beer volume (excluding kegs and alcohol-free brews)".</p> <p>Ingredient declaration: Ingredients presented on consumer-facing primary packaging in linear form (e.g. "Water, barley malt, hops").</p> <p>Primary packaging: All consumer-facing primary packaging for beer products, excluding kegs. Does not include alcohol-free brews.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48, excluding companies without production and/or direct sales activities.</p>	%

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO ACCIDENTS CULTURE</b>		
Lost-time accidents (LTAs) in Production, Logistics, Sales & Marketing, Administration	<p><b>Definition:</b> Any wound or damage to the body, resulting from a brief single event or exposure, causing lost time.</p> <p>Lost time occurs when the injured/ill person is medically considered unable to work. It includes time away from work for rest, recovery or treatment.</p> <p>“Accident” and “injury” are used interchangeably.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	LTA
Days lost (DL) in Production, Logistics, Sales & Marketing, Administration	<p><b>Definition:</b> Calendar days, starting the day after the incident and ending the day before return to work, including weekends, holidays etc.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	DL
Full-time equivalents (FTEs) in Production, Logistics, Sales & Marketing, Administration	<p><b>Definition:</b> Full-time equivalents (FTEs) is equal to the average number of employees on the payroll. Part-time employees are converted into FTEs proportionally.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	FTE
Lost-time accident rate (LTAR) in Production, Logistics, Sales & Marketing, Administration	<p><b>Definition</b> Number of lost-time accidents (LTAs) x 1,000 / Number of full-time equivalents (FTEs).</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	LTAR

INDICATOR NAME	INDICATOR DEFINITION	UNIT
<b>ZERO ACCIDENTS CULTURE</b>		
Days lost rate (DLR) in Production, Logistics, Sales & Marketing, Administration	<p><b>Definition:</b> Number of days lost (DLs) x 1,000 / Number of full-time equivalents (FTEs).</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	DLR
Lost-time accidents (LTAs), contractors on Carlsberg site	<p><b>Definition:</b> Any wound or damage to the body, resulting from a brief single event or exposure, causing lost time.</p> <p>Lost time occurs when the injured/ill person is medically considered unable to work. It includes time away from work for rest, recovery or treatment.</p> <p>Contractor – any individual who works for a service provider (or who is self-employed) and performs an outsourced activity for Carlsberg (including individuals who work for subcontractors).</p> <p>Carlsberg site – any site managed by Carlsberg, or where construction work is being carried out on our behalf, including greenfield and brownfield project sites.</p> <p>“Accident” and “injury” are used interchangeably.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	LTA
Lost-time accidents (LTAs), members of public on Carlsberg site	<p><b>Definition:</b> Any wound or damage to the body, resulting from a brief single event or exposure, causing lost time.</p> <p>Lost time occurs when the injured/ill person is medically considered unable to work. It includes time away from work for rest, recovery or treatment.</p> <p>Member of public – any individual who does not correspond to the definitions of regular employee, temporary employee or contractor (e.g. visitors, delivery personnel, suppliers, consultants, students, family members)</p> <p>Carlsberg site – any site managed by Carlsberg, or where construction work is being carried out on our behalf, including greenfield and brownfield project sites.</p> <p>"Accident" and "injury" are used interchangeably.</p> <p><b>Scope:</b> All majority-owned companies and production sites as defined on page 48.</p>	LTA

# LIST OF REPORTING SITES

COUNTRY	COMPANY	SITES
<b>WESTERN EUROPE</b>		
Bulgaria	Carlsberg Bulgaria	Pirinsko, Shumensko
Croatia	Carlsberg Croatia	Koprivnica
Denmark	Carlsberg Danmark Carlsberg Breweries	Jacobsen Brewery, Saltum, Carlsberg Fredericia No production sites
Estonia	Saku Õlletehase as	Saku
Finland	Sinebrychoff	Kerava
France	Kronenbourg	Kronenbourg Obernai
Germany	Carlsberg Deutschland	Holsten-Brauerei Hamburg AG, Mecklenburgische Brauerei Lütz
Greece	Olympic Brewery S.A.	Thessaloniki, Ritsona Brewery
Italy	Carlsberg Italia	Varese
Latvia	Aldaris	Aldaris Riga
Lithuania	Svyturys Utenos Alus	Utena
Norway	Ringnes	Farris, Gjelleråsen, Imsdal
Poland	Carlsberg Polska	Okocim Brewery Brzesko, Kasztelan Brewery, Szczecin Brewery
Serbia	Carlsberg Srbija	Carlsberg Srbija - Celarevo
Sweden	Carlsberg Sverige	Falkenberg, Ramlösa Sverige
Switzerland	Feldschlösschen Carlsberg Supply Company	Rhözüns, S Rheinfeld, Sion No production sites
UK	Carlsberg UK	Northampton



COUNTRY	COMPANY	SITES
<b>EASTERN EUROPE</b>		
Azerbaijan	Baku (Company)	Baku
Belarus	Alivaria	Alivaria
Kazakhstan	Carlsberg Kazakhstan	Carlsberg Kazakhstan (brewery site)
Russia	Baltika Breweries	Baltika Brewery St Petersburg, Baltika Don Brewery Rostov-Na-Don, Baltika Khabarovsk, Baltika Novosibirsk, Baltika Samara, Baltika Tula Brewery Tula, Yarpivo Brewery Yaroslavl, Yarpivo Voronezh
	Carlsberg Eastern Europe (Grain Co)	Malt Plant Yaroslavl, Malt Plant Tula
Ukraine	Carlsberg Ukraine	Lvivska Brewery Lviv, Slavutich Zaporozhye, Slavutich Kiev
<b>ASIA</b>		
China	Xinjiang Group	Akesu Brewery, Urumqi No. 2 Brewery, Wusu Brewery, Yining Brewery, Korle Brewery
	CIB & TMH	Carlsberg Brewery Guangdong (Huizhou), Changzhou Tianmuhu Beer Co. Ltd, Anhui Tiandao Beer Co. Ltd
	Ningxia Group	Ningxia Xixia Jianiang Brewery
	Yunnan Group	Kunming Huashi Brewery Yunnan, Dali Beer Co. Ltd
	CBC	Mawangxiang Brewery, Dazhulin Brewery, Hechuan Brewery, Liangping Brewery, Wanzhou Brewery, Fuling Brewery, Panzhuhua Brewery, Xichang Brewery, Boke Brewery, Shizhu Brewery, Yibin Brewery, Guoren Lixian Brewery, Guoren Changde Brewery, Guoren Yongzhou Brewery
	Carlsberg Procurement (Shenzhen)	No production sites
	China National Office (HQ)	No production sites
	Carlsberg Hong Kong	No production sites
	Carlsberg Brewery Hong Kong	No production sites
	India	Carlsberg India
Laos	Lao Brewery	Pepsi Plant Vientiane, Lao Brewery Pakse, Lao Brewery Vientiane
Malaysia	Carlsberg Malaysia	Carlsberg Kuala Lumpur
Myanmar	Myanmar Carlsberg	Bago Brewery
Nepal	Gorkha Brewery	Gorkha Brewery
Singapore	Carlsberg Singapore	No production sites
Vietnam	Carlsberg Vietnam	Phu Bai, SEAB Hanoi

# TAX CONTRIBUTION PRINCIPLES

## BASIS OF PREPARATION GENERAL COMMENTS

This Basis of Preparation presents the scope and methodology of the collection and reporting of the data on tax payments used in the Economic Contribution to Society section (“the Section”).

The Section aims to provide readers with an overview of the total tax contribution to society that the Carlsberg Group (excluding associates) has generated during the year. The total tax contribution is defined as taxes borne and taxes collected by the Carlsberg Group.

The Basis of Preparation supports the data for taxes borne, taxes collected and total tax contribution included in the Section.

It is the responsibility of the management of the Carlsberg Group to ensure that appropriate procedures are in place to prepare reporting in line with this Basis of Preparation.

All data, unless otherwise stated, has been prepared for the year from 1 January 2018 to 31 December 2018.

Data is collected for all companies that Carlsberg A/S controls. Control is obtained

when Carlsberg A/S directly or indirectly owns or controls more than 50% of the voting rights in the subsidiary or has control in some other way. Subsidiaries that Carlsberg A/S controls have reported 100% of their taxes borne and collected, and the full amount is included in the Carlsberg Group tax contribution.

Companies over which the Carlsberg Group exercises a significant influence, but does not control, are considered to be associates. Significant influence is generally obtained by direct or indirect ownership or control of more than 20% but less than 50% of the voting rights. Data for associates is not part of the Carlsberg Group tax contribution.

Entities acquired or formed during the year are recognised in the Section from the date of acquisition or formation. Entities that are disposed of or wound up are recognised in the consolidated income statement until the date of disposal or winding-up.

The data includes a degree of estimation, as tax per entity is not reported in detail if a type of tax is below DKK 100,000 per year. Instead, taxes below DKK 50,000 are not reported, and taxes above DKK 50,000 but below DKK 100,000 are reported as DKK 50,000. The

data is reported by the entity in local currency in multiples of 1,000.

## SCOPE OF REPORTING AND DEFINITION OF KEY TERMS

“Tax” in this Section means any amount of money required to be paid to, or collected and subsequently remitted to, a government.

Taxes have been reported by differentiating between taxes borne and taxes collected. The following sections provide the scope of the data presented in the Section.

Terms defined in the Carlsberg Group’s Annual Report 2018 are not described below.

Taxes borne and taxes collected are the taxes due in respect of an accounting period as defined in IFRS, as adopted by the EU. Borne taxes paid and collected taxes paid, including excise duty paid, are included when cash is released from or received by the Carlsberg Group.

## KEY TERM DEFINITIONS Economic value generated

Economic value generated comprises gross revenue, other income, financial income and income included in special items, and share of profit after tax in associates and joint ventures.

Income recognised in other comprehensive income is not included.

## Total tax contribution

Total tax contribution is the sum of borne and collected taxes paid to governments for the period from 1 January to 31 December. Amounts are included as paid when cash is released from or received by the Carlsberg Group.

## Operating costs

Include cost of sales, sales and distribution expenses, administrative expenses and other operating expenses, but excluding employee wages.

## Employee wages

Include wages to employees, excluding social security costs.

## Providers of capital

Include financial expenses recognised in the income statement, but excluding financial expenses recognised in other comprehensive income.

## Economic value retained

Consolidated profit after tax.

**Current tax**

The corporate income tax due in respect of taxable profit for an accounting period, as defined in the International Financial Reporting Standard IAS 12.

**Deferred tax**

The corporate income tax due in respect of temporary differences between carrying amounts and tax base, as defined in the International Financial Reporting Standard IAS 12.

**Employee taxes**

Include personal income taxes and social contribution for employees (borne and collected).

**Government**

Any government body or nation, state, region or district.

**Direct tax**

A tax paid directly to a government by the person on whom it is imposed. Such taxes also include non-refundable VAT, non-recoverable withholding taxes, real estate tax etc.

**Indirect tax**

A tax required to be paid to a government by one person at the expense of another.

**SCOPE OF REPORTING****1. BORNE TAXES AND EXCISE DUTIES**

These are the taxes that the Carlsberg Group is obliged to pay to a government on its own behalf, or taxes that the Group is obliged to pay to a third party and that cannot be recovered from a government.

**Corporate income tax**

Corporate income tax comprises any tax on the business calculated on the basis of its profits, income or capital gains. Typically, these taxes would be reflected in corporate income tax returns made to governments and tend to become payable, and are paid, either in the year the profits were made or up to one year later, depending on the local tax rules as to timing of payments.

**Excise duties (beer and soft drinks etc.)**

Excise duties are indirect taxes on the consumption of alcoholic beverages etc.

**Energy taxes (net, non-refundable)**

Energy taxes comprise environmental taxes levied on the consumption of energy borne by companies' own supply of energy. Such taxes may include taxes on the consumption of electricity, oil, gas or coal.

**Environmental fees**

Environmental fees comprise additional environmental taxes that may apply depending on company operations. Such taxes may include other taxes and duties on the supply of goods and services that are potentially harmful to the environment and have not been included in the energy taxes.

**VAT (non-deductible)**

Non-deductible VAT is the part of the input VAT that cannot be recovered, e.g. VAT on gifts or entertainment.

**Real estate taxes**

Real estate taxes comprise any property-related taxes, including property, land and estate tax (other than stamp duty, which is

shown below). Typically, these taxes tend to become payable, and are paid, to governments throughout the year.

**Withholding taxes on dividends, royalties, interest and professional fees**

Withholding taxes comprise the final tax burden on payment of dividends, interest etc. after possible tax relief.

**Transportation taxes**

Transportation taxes comprise flight tax, petrol tax, registration duties and other taxes levied on the mobility of goods and employees.

**Social contribution for employees**

Social contribution for employees comprises the social security contributions levied on and borne by the employing company. Such contributions may include the employer's national insurance contributions, employment insurance tax, employees' provident fund, old-age, survivors' and disability insurance tax.

**Stamp duties**

Stamp duties comprise taxes that arise on transfers of assets or capital. Typically, these taxes would be reflected in stamp duty returns made to governments and tend to become payable, and are paid, to governments shortly after capital or assets have been transferred.

**Other taxes**

This category comprises all paid taxes that have not been included in the above categories.

**2. BORNE TAXES AND EXCISE DUTIES**

These are taxes not finally borne by the Carlsberg Group, but for which the Group bears an administrative burden of collection. These

taxes are, however, indirectly generated from the Group's business activities and are therefore part of the Group's total tax contribution.

**Personal income taxes**

This comprises employee taxes withheld from employee wages and paid to governments, i.e. tax collected and remitted to governments on behalf of employees.

**Social contribution withheld by the company**

This comprises social contributions payable by employees to social security, and private funded and unfunded schemes. Generally, the employment of staff requires the employing company to administer employees' social security contributions by deducting these from wages and salaries.

**Withholding tax on dividend distributions made by Carlsberg A/S**

This comprises taxes that are required to be withheld in advance on payments made to shareholders.

**VAT/GST**

VAT is a broadly based consumption tax assessed on the value added to goods and services. It applies more or less to all goods and services that are bought and sold for use or consumption.

VAT is assessed and collected at each point in the manufacturing–distribution–sales process of a good or supply of a service.

Like VAT, the Goods and Service Tax (GST) is a value-added tax assessed on most goods and services bought and sold for consumption.

# LIMITED ASSURANCE REPORT OF THE INDEPENDENT AUDITOR

The Carlsberg Group engaged us to provide limited assurance on the data and information described below and set out in the Carlsberg Group Sustainability Report for the year ended 31 December 2018.

## OUR CONCLUSION

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us not to believe that data in scope for our limited assurance engagement in the Carlsberg Group Sustainability Report for the year ended 31 December 2018 are without material misstatements and have been prepared, in all material respects, in accordance with the accounting policies as stated in the sections “Reporting process and scope” (pages 47-48), “Indicator definitions” (pages 49-55), “List of reporting sites” (pages 56-57), and “Tax contribution principles” (pages 58-59) of the 2018 Carlsberg Group Sustainability Report.

This conclusion is to be read in the context of what we say in the remainder of our report.

## WHAT WE ARE ASSURING

The scope of our work was limited to assurance on selected 2018 data in the section “Data summary table” (pages 40-44) of the 2018 Carlsberg Group Sustainability Report, namely:

- Energy, carbon and water: data on “Total production of beer and soft drinks”, “Total thermal energy consumption”, “Total electricity consumption”, “Total CO<sub>2</sub> emissions (market-based)”, “Total water consumption”, “HFC-based refrigerants”, “Percentage of electricity from renewable sources” and “Number of sites using coal” (pages 40-42);
- Responsible drinking: data on “Percentage of fermented produced volume carrying responsible drinking guiding symbols and/or equivalent text”, “Percentage of total beer volume that lists nutritional information” and “Percentage of total beer volume that lists ingredient information” (page 44);
- Health & Safety: data on “Lost-time accident rate” and “Days lost rate” in the Carlsberg Group and “Lost-time accidents (contractors and members of public)” (page 43);

- In the “Economic contribution and tax contribution” section, the following information for 2018: “Taxes borne incl. excise duties”, “Corporate tax paid” and “Excise duty paid” (pages 38-39).

We do not provide any assurance on the achievability of the Carlsberg Group’s objectives, targets and expectations.

## PROFESSIONAL STANDARDS APPLIED AND LEVEL OF ASSURANCE

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (revised), “Assurance Engagements other than Audits and Reviews of Historical Financial Information”. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks; consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had

a reasonable assurance engagement been performed.

## OUR INDEPENDENCE AND QUALITY CONTROL

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other ethical requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. Our work was carried out by an independent multidisciplinary team with experience in sustainability reporting and assurance.

## UNDERSTANDING REPORTING AND MEASUREMENT METHODOLOGIES

Data and information need to be read and understood together with the accounting principles (sections “Reporting process and scope”, “Indicator definitions”, “List of reporting sites” and “Tax contribution principles”), which Management is solely responsible for selecting and applying. The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

## WORK PERFORMED

We are required to plan and perform our work in order to consider the risk of material misstatement of the data and information. In doing so and based on our professional judgement, we:

- Completed a media search to identify relevant risks and issues within the scope of the assurance engagement for Carlsberg during the reporting period;
- Reviewed the suitability of the reporting criteria;
- Evaluated the design and implementation of the systems, and processing and internal controls over the selected data in scope for our assurance engagement;

- Conducted interviews with relevant policy owners at corporate levels, who are responsible for collecting, consolidating and carrying out internal control procedures on the selected data in scope for our assurance engagement;
- Visited production sites in Italy, Malaysia and Ukraine to obtain insight into local sustainability management, review data and assess the robustness of the sustainability data management systems;
- Conducted an analytical review of the selected data in scope for our assurance engagement submitted by all production sites for consolidation at corporate level;
- Evaluated relevant internal and external documentation, based on sampling, to determine whether the selected data in scope for our assurance engagement is supported by sufficient evidence;
- Reconciled selected tax information with the audited consolidated financial statements of Carlsberg A/S;
- Read other information included in the 2018 Carlsberg Group Sustainability Report in order to identify any material inconsistencies with the selected data in scope for our assurance engagement and our limited assurance report thereon.

## MANAGEMENT’S RESPONSIBILITIES

Management of the Carlsberg Group is responsible for:

- Designing, implementing and maintaining internal control over information relevant to the preparation of data in the 2018 Carlsberg Group Sustainability Report that is free from material misstatement, whether due to fraud or error;
- Establishing objective accounting principles (sections “Reporting process and scope”, “Indicator definitions”, “List of reporting sites” and “Tax contribution principles”) for preparing data and information;
- Measuring and reporting data and information in the Sustainability Report based on the accounting principles; and
- The content of the 2018 Carlsberg Group Sustainability Report.

## OUR RESPONSIBILITY

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether selected environmental, health & safety, social and economic contribution data in the 2018 Carlsberg Group Sustainability Report are free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion to the stakeholders of the Carlsberg Group.

Copenhagen, 6 February 2019

## PricewaterhouseCoopers

Statsautoriseret  
Revisionspartnerselskab  
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