

# Sustainability in Craft Brewing

## Forward by the President of Bierconvent International

At the beginning of the 20th century, it was a matter of course that there would be a brewery in every town. However, the brewing industry was hit by a wave of mergers at the end of the century to such an extent that transnational corporations were able to secure a significant share of the market.

And yet, for every action there is an equal and opposite reaction. The first one emerged in the 1980s, when some courageous entrepreneurs on the West Coast of the United States founded brewpubs with a broad range of beers. The reinterpretation of traditional beer styles and the rediscovery of the rich tapestry of long established brewing practices is now part of the well-known success story of these trailblazers, and this has been followed by their successors.

The movement has continued practically unabated. Microbreweries have become established all over the world, and many are reaching formidable production levels. Equipment manufacturers have responded with a diverse range of new products and innovative devices for brewing beer.

However, founding a brewpub and expanding it successfully into a sizeable brewery involves more than merely brewing exceptional beers. If this welcome development is to continue on a global scale, it must be sustainable. Modern-day society places demands on companies of any size with regard to their contributions to environmental protection and social development. The central issue facing the craft brewing industry on an international scale is sustainability, and it can no longer be ignored.

The central notion of the BCI is to uphold the venerable traditions associated with beer and to promote its status within society. Our advocacy for the development of brewpubs and craft breweries has resulted in our support of this work and thus has allowed us to establish the first comprehensive set of guidelines for sustainable business practices for craft breweries.

I hereby thank all those who were involved in creating this set of guidelines: first, the two authors Katharina Landerer and Manfred Mödinger as well as our project partners, the Weihenstephan-Triesdorf University of Applied Sciences and the Verband der Privaten Brauereien Bayern e.V. (Association of Private Breweries of Bavaria). On behalf of all those who were involved – whether correcting and commenting – in the creation of this work, our heartfelt gratitude goes out to Professor Dr. Ludwig Narziß.

I hope that this set of guidelines will become widely available, thus providing stimulation and support to brewmasters and brewery owners around the world in their efforts to achieve sustainable development for their breweries.

Prague, July 2014

Stanislav Procházka

## Forward by the Verband der Privaten Brauereien Bayern e.V.

The topic of sustainability has undeniably come to occupy a prominent position among our society's concerns, although it has yet to be clearly defined. There is nevertheless a consensus that in going about our daily business, we need to examine more carefully the consequences of our environmental and economic strategies. It is also imperative that this approach does not end at the threshold of the company but that the entire process of procurement and logistics are also included. In a preliminary analysis of the issue, it is clear that sustainable development in a brewery cannot be achieved by merely acting upon a couple of conclusions but rather requires constant work and a wide variety of measures. Many modifications must be taken into consideration once decisions have been made. Of course, this greatly amplifies the complexity of the issue.

For this reason, we, the Private Breweries of Bavaria, welcome these guidelines, which are a source of numerous practical hints, especially for small and medium-sized breweries. The various topics are divided according to category and discussed in turn. Thus, the decision-makers on the ground will be given a means to confront the issues and to recognize the relevant connections, so that they can better implement sustainability in their breweries.

Munich, July 2014

Dr. Werner Gloßner  
Executive Director

## Forward by the Weihenstephan-Triesdorf University of Applied Sciences

The term "sustainability" stems from the verb "to sustain", which means, "to persist or remain for an extended period". For this reason, "to sustain" can be considered homologous to traditional artisanal breweries. For a long time, the fact that breweries were rapidly vanishing was a central theme of the industry. Actually, in the prevailing climate of the price wars in the beer market, there is no place for values that have nothing to do with earnings and profitability. However, a rebellion precisely against this attitude is gaining steam consisting of brewers, who espouse the traditional "art" of brewing, conduct business regionally and value their employees. The customer, then, "senses" the quality inherent in these products and is prepared to pay for it.

As for the Weihenstephan-Triesdorf University of Applied Sciences, I am pleased that we have been given the opportunity to contribute knowledge to this set of guidelines and one of our students who participated in the preparation of this document within the framework of a semester internship.

Weihenstephan, July 2014

Prof. Dr.-Ing. Winfried Ruß

## Forward by the Authors

To whom is this set of guidelines addressed? We were often confronted with this question in the run-up to writing the guidelines. What is a craft brewery, a brewpub? What constitutes a small, mid-sized or large brewery? What do such capacity descriptions mean in Europe, in the US, in other countries? Is the upper limit for annual output 6,000, 60,000 or 6 million hl?

Or, how does one define a craft brewery with regard to content? Would it be a brewer of characterful beer who uses natural raw materials without any kind of processing aids?

We do not want to attempt this definition here in our forward to the guidelines; however, we would like to address everyone who considers themselves to be craft brewers and who want to follow sustainable practices. We hope, that in this set of guidelines that there are helpful ideas for everyone, though to be sure not all of the concepts presented here will be useful in every brewery.

These guidelines should be understood as an incitement for breweries to become sustainable. That's the point.

Siegsdorf, July 2014

Katharina Landerer and Manfred Mödinger

## Preface

The term “sustainability” is logical and therefore it would appear to be simple to fulfill.

It comprises not only competent business practices, such as the optimal utilization of raw materials, energy and water as a criterion for orderly brewery management, but also the acquisition of raw materials, operating materials and processing aids. These points must be heeded by each of the suppliers as well. As the most significant component relating to climate, CO<sub>2</sub> emissions serve as a good index for measurement. Naturally, the transport and allocation of expendable materials as well as services performed for one’s own clientele are also included in this index.

Beer sales, their growth, the work performed by sales personnel and marketing must also be assessed in terms of sustainability. Even the area required for the floor plan of a facility’s operations and the quality of the building (thermal and noise insulation) are essential elements in meeting the requirements of sustainability. The social aspect also serves as a measure and is even of decisive importance. This includes the “working environment” in its broadest sense. Finally, the public image of the company and its business conduct plays a considerable role – even how it is perceived ethically.

The conditions required for sustainable methods of operation presented in these guidelines go into great detail and yet are very clear. They apply not only to the aforementioned craft breweries but also to industrial production facilities of any size.

The issue of “sustainability” cannot simply be thrust upon the technical personnel for them to implement. The entrepreneurs themselves – or the management and board of directors in a corporation – must embody a business philosophy that provides the scope for fulfilling the requirements for this entire “strategic vision”.

With this in mind, I hope that these guidelines receive a well-deserved, enthusiastic reception in the industry.

Freising, May 2014

Prof. Dr. Ludwig Narziß

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# 1. Introduction

## 1.1 Defining the Problem

Almost everywhere around the world temperatures are rising, while natural disasters are becoming more severe. Heat waves, floods, storms and droughts are not only more destructive than ever before, they are becoming part and parcel of our daily lives. Humans burn ten million tons of oil, almost 13 million tons of coal and eight million cubic meters of natural gas daily. Despite the fact that ways to exploit new fossil fuel supplies are under development, fossil fuels will be depleted in the foreseeable future.

By continuing to burn these oil, coal and natural gas reserves, which in turn are fueling the fires of climate change, averting catastrophe will not be an easy task.

In addition to climate change, among the most prevalent topics in the news is a range of other topics on the world political agenda – from lack of water to securing ample food supplies. Largely from 1987 to 1992, a concept known as “sustainability” was developed in order to confront a whole host of problems now facing the world on an international scale.

The trouble with this is that efforts to instill sustainable behavior in both individuals and companies have hardly borne any fruit. Even if individual citizens were to reduce their greenhouse gas emissions to zero, this would not be noticeable on a global scale. Sustainability has rarely served as the sole means by which a brewery can stand out from its competition, and likewise customers are generally not willing to pay significantly more for such products. “Nevertheless, it is becoming increasingly risky for companies to disregard sustainability. If a company’s products are not perceived as sustainable, they are also likely to be punished by the customer in the future.”<sup>1</sup>

On the other hand, the performance of the economy thus far has sown seeds of doubt even among 1,000 leaders of the world’s top corporations. “The global economy is following the wrong course, and corporations are doing far too little for a sustainable future,” is the surprising conclusion reached by CEOs in a survey conducted by the United Nations, up to now the world’s largest of its kind on sustainability.<sup>2</sup>

“Corporate social responsibility”, “sustainability” and “corporate citizenship” – these have become modern bywords for a style of corporate governance, which takes the entire environment into consideration. As the European consumer initiative Rank a Brand has noted – to name just one example – German breweries are clearly lagging behind with respect to sustainable management compared to breweries around the world.

With their outstanding dedication to sustainability, certain subsidiaries of international brewing groups and the owners and management boards of several medium-sized breweries within Germany are shining examples for the industry. There is a risk that, generally speaking, the small and medium-sized breweries of Germany will understand perhaps belatedly or not at all what challenges sustainable management holds

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<sup>1</sup> Rüdiger Ruoss: “Vorwärts wir müssen zurück” (2013), in Getränkefachgroßhandel, no. 9, p.15

<sup>2</sup> United Nations Global Compact – Accenture CEO Study (2013), in Süddeutsche Zeitung, 20.09.2013, Wirtschaft section



for them, thus causing not only their competitiveness to suffer but also their social and political acceptance.

## 1.2 The Value of Craft Breweries

The boom in sustainability is concurrent with a new wave of business startups in the international brewing industry. Driven by a desire to brew unique beers and to develop a new market, oriented towards quality and flavor, young brewers, beer lovers from outside the industry and investors are founding new breweries, which often rapidly gain acceptance with consumers. A movement has been gaining steam around the world for years now in countries such as the USA, Italy and the Czech Republic. It has even reached Germany's shores and is quickly spreading.

As the saying goes, "Variety is the spice of life". A variety of flavors are just as welcome as a variety of exciting new jobs and the benefits decentralized businesses contribute to society. These are basic elements of sustainable development and emphatically speak for further expansion of the craft beer movement. But this is not enough.

The central issue in today's international brewing industry – that of sustainable economic business development – is being ignored by fledgling companies almost everywhere. The risk is high that especially these breweries will not seize this opportunity to start on the path towards a sustainable future. A cohesive approach is absent for the topic of "sustainability in craft breweries". No one has ever even defined what sustainable trade would actually entail for the craft brewing industry, but it would be a good start.

## 1.3 Project Goals

To fill this void, the following set of guidelines has been developed:

1. Derived from international concepts of sustainability based in ecology and regional economics along with social and ethical aspects, the general concepts of sustainability were first adapted in theory to those areas of trade and other activities involved in running a medium-sized and craft brewery. The criteria for sustainable trade in all areas of a brewery have been defined, extensively and in great detail.

This includes acquisition and handling of raw materials, processing aids and operating materials, energy supply, engineering and technology, packaging, logistics, consumer transparency and communication.

2. Some breweries have been singled out for the sake of example, because in individual areas of the overall concept of a "sustainable craft brewery" they are particularly active and are known as industry leaders.

The conduct of these companies and the data obtained about them were analyzed, in order to define for every single aspect of sustainable business what could be regarded as the epitome of a "best practice". The theoretical concepts thus collected were then evaluated regarding their practical feasibility, in order to develop valuable recommendations for all craft breweries.

3. From the entirety of the practical findings, this general set of guidelines “Sustainability for Craft Breweries” was assembled. Additionally, for well-known problems inherent to sustainable business, solutions should be specified.

This research project was conducted under the auspices of the consulting firm m.möding in Siegsdorf, Germany. The University of Weihenstephan-Triesdorf and the Private Breweries of Bavaria actively supported the project. The project would not have been possible without the support of BierConvent International.

## 2. Sustainability – Agenda 21 as an Action Plan for the World

### 2.1 History of Sustainability, 1713-2013

The term “sustainable” was created by Hans Carl von Carlowitz (1645-1714) and first employed in a work of his published in 1713 called “*Sylvicultura Oeconomica*” in which he describes the concept of sustainability with reference to forestry.

His efforts focused on forest management, and he writes that the amount of wood to be harvested from a particular area should be equal to the amount that can be cultivated over the same period of time. Europe found itself in an energy crisis and thus also a “wood shortage”, because wood was the only available energy source at the time. With his writings, he sought to prevent the overexploitation of the forest and to ensure that it was sustainably managed in harmony with nature.

This approach in the field of forestry eventually led to the central idea “to live off the interest and not the capital”<sup>3</sup>. These words get to the heart of the matter in their description of sustainable practices.

Through the World Commission on the Environment and Development, the Brundtland Commission and their report “Our Common Future” published in 1987, the term “sustainability” entered the awareness of the world at large.

The report contained the following definition: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>4</sup> In this definition they united two key concepts: the needs of the poor of the world with the idea of limited natural resources to provide for the population’s current and future needs.

The goal of sustainability is consequently to prevent mishandling and overuse of the earth’s resources, so that future generations are also able to satisfy their basic needs.

Since the Brundtland Commission primarily relied on the field of ecology, the principle of the “three pillars” was devised at the World Summit in Rio de Janeiro in 1992. This principle refers to the fact that sustainability is evenly based on the pillars of economy, ecology and society. A total of 178 participating countries signed the agreement in Rio and agreed to follow its resolutions for common and sustainable business practices, while simultaneously combating poverty in developing countries. It was deemed most appropriate that the implementation of Agenda 21 be carried out at the local level in each country. The Federal Republic of Germany anchored the principle of sustainability in its Constitution, in Article 20a:

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<sup>3</sup> Aachener Stiftung Kathy Beys: Hans Carl von Carlowitz, 1713 (2013), in [http://www.nachhaltigkeit.info/artikel/hans\\_carl\\_von\\_carlowitz\\_1713\\_1393.htm](http://www.nachhaltigkeit.info/artikel/hans_carl_von_carlowitz_1713_1393.htm)

<sup>4</sup> United Nations: Report of the World Commission on Environment and Development (1987), p. 51, paragraph 49 and p. 54, paragraph 1