SUSTAINICUM COLLECTION
LEHRMATERIALIEN FÜR BILDUNG ZUR NACHHALTIGKEIT

# Brewery Wastes – Strategies for Sustainability 1 (Short Version - Part 1)

(Resource ID: 383)

**Samantha Prior**
samantha.prior(at)ul.ie
This teaching resource is allocated to following University:
**UL - University of Limerick**

Institution:
**University of Limerick**

http://www.sustainicum.at/en/modules/view/383.Brewery-Wastes-Strategies-for-Sustainability-1-Short-Version-Part-1

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**Individual work**
**Group work**

**11 to 30 students**

**Up to 3 lecture units**

**Internet connection necessary**

**English, Shqip**

The teaching resource outline Brewery Wastes – Strategies for Sustainability (Short Version - Part 1, 2 and 3) describes the draft of a teaching resource consisting of 3 parts, that has been developed to demonstrate the effects that brewery wastes are having on the environment because they are not being disposed of correctly. Students will be introduced to stakeholders and look in depth at how their brewing companies are being run, it will be the job of the students to look at what sustainable strategies can be implemented to improve the disposal of these brewery wastes, and suggest alternative uses for the wastes in order to make the company more sustainable. These teaching resources will incorporate but are not

limited to the following methods: · Mental Mapping · Researching · Sustainability Bingo · Interview with Stakeholders · Fieldwork Visit · Discussion · Presentation The teaching set describes three independent teaching resources, which are designed to be completed one after another (but not necessarily), these include: 1. Mental Map of the Brewery Industry and Wastes and Research on a Brewing Industry 2. Sustainability Bingo during Stakeholder Presentation of their Company and an Interview 3. Fieldwork Visit and a Presentation Brewery Wastes – Strategies for Sustainability (Short Version - Part 1, 2 and 3) is based (and slightly modified) on the Teaching Resource, "Brewery wastes - Strategies for sustainability". The original teaching resource was split into several parts to introduce new innovative teaching methods into lectures, and encourage the involvement of stakeholders, giving students the opportunity to see the realities of the theory they are learning about in food technology lectures.

**Part 1 – Mental Map of the Brewery Industry and Wastes and Research on a Brewing Industry**

Before beginning the lesson, the students will be asked to work individually and create a mental map of what they already know about the brewing industry and their wastes. This teaching method helps determine the level of previous knowledge the students have on the brewing industry. The students and lecturer will have an open discussion on the mental maps sharing their ideas and making alternative suggestions to each other's mental maps. Afterwards, the students will be asked to research 2 brewing industry companies before the stakeholders visit in part 2, and create a list of interview questions based on this research.

**Main Text:**

Students are introduced to the sustainable management of brewery wastes. They have the opportunity to discuss sustainability in the food production sector in Albania, particularly in the brewing industry.

The brewing industry represents one of the major sectors of food production in the internal Albanian market. Their production meets a big part of the Albanian consumers' demand for beer. However, the level of beer production in Albania brings about a multitude of interrelated

environmental issues, of which most consumers are not aware. The brewing industry produces both organic and inorganic waste, which currently is not disposed of correctly.

Students will be presented with the management systems traditionally used in the sector for the organic waste disposal (solid and liquid waste), but will also be introduced to the idea of alternative sustainable uses of the brewery wastes. Brewing industry stakeholders will present the waste management system they apply in their own companies so that students will also have the opportunity to interact with the stakeholders asking about practical industrial applications of the strategies.

The students will also be allowed to visit a brewing company and get to shadow the employees, learning about the industry and also having the opportunity to critique the current practices. Students and stakeholders can exchange experiences and the students have the chance to propose new innovative ideas for uses of brewery wastes. Stakeholders may benefit from this information when deciding to apply new sustainable strategies in their own companies.

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## Teaching Tools & Methods


Mini-project


Written material

## Integration of Social Stakeholders

Brewing companies are involved as active partners presenting their own company strategies, and students have the opportunity to get in direct contact the employees that experience challenges in implementing the sustainable management of brewery wastes every day. The stakeholders from the businesses profit from the collaboration, as they receive external and innovative perspectives on their activities from the students' recommendations.

## Strength

· Active learning experience for students
· Mutual learning for students and business stakeholders
· Stakeholders and students benefit from network building

· Students think about their own responsibility in the context of global change

## Weakness

· Occasional issues of confidentiality.
· Stakeholders must agree to discuss their own business plans and problems with students.
· It is important to work with motivated and well prepared students

## Learning Outcomes

· Create a mental map of their previous knowledge of the Brewing Industry
· Compare and contrast their mental maps in groups
· Research Brewing Industries
· Create a set of key questions for the stakeholders

## Relevance for Sustainability

· It encourages the sustainable management of wastes in the food industry.
· It gives the students a sense of personal responsibility
· It is directly related to the protection of the environment
· It inspires the students to promote the recycling of wastes

## Related Teaching Resources

No specific previous knowledge / related resources required

## Preparation Efforts

Low

## Preparation Efforts Description

N/A

## Access

Free

## Assessment

N/A

## Credit/Certification Description

N/A

## Sources and Links

Original Teaching Resource - http://sustainicum.at/en/modules/view/330

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