

## **Water reuse in the industry - legal, safety and quality challenges**

**Lisbeth Truelstrup Hansen**

National Food Institute, Technical University of Denmark

Water serves numerous essential functions in the food and beverage industry, where cleaning of the processing equipment and the raw materials consumes large amounts of water. Also, water is used as a major ingredient in many food products as well as a cooking or cooling medium in the processing of foods.

In recent years, the food processing industry has become increasingly aware of their water consumption both from a financial and environmental perspective, for example in light of direct emissions from wastewater treatment plants. Adding to this is the growing worldwide issue of water scarcity, which now affects many regions with an intense food production. These water resource issues have stimulated an interest in exploring alternative sources of water and water reuse scenarios, which may range from adjustments to equipment design or usage to reduce consumption, uses of recirculated water to applications of advanced treatment technologies to reclaim or upgrade alternative water sources to “clean water”.

This talk will take a look at specific cases of water reuse in the food industry and the related resolved and unresolved challenges from a legal, food safety and quality perspective.