

Session Cross-cutting: April 13th 11.00 hrs

5s4b: : Waste reduction and novel resources for sustainable production of safe food or feed

How to monitor the progress towards a Circular Food Economy: a Delphi study

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Growing economic production and consumption can lead to scarcity and unequal access to resources, which goes along with many sustainability concerns. A circular economy (CE) aims to extend the value and utility of products, and uses waste as a secondary resource, leading to a decrease in environmental impacts. An assessment of the progress towards a CE is needed, but still an issue of ongoing debate. A regional or national CE assessment aims to provide indicators that measure and guide the transition towards a circular economy and give feedback to policy-makers and other decision-makers. Such an assessment should include all major systems that are part of the economy, such as housing, mobility, consumer goods, and food.

This research addresses circularity in the food system. A clear vision on a CE for food is currently missing, which is needed to define a set of appropriate CE indicators to monitor the food system. Therefore, a two-round Delphi study was performed including a brainstorm with experts, and the construction of a consensus ranking of indicator themes to monitor a CE for food, considering both the 'production and processing' and the 'consumption' stage. The first Delphi round resulted in (1) a first sense of what is important to a circular food system according to different stakeholders, and (2) a list of indicator themes that are necessary to assess a circular food system. In a second Delphi round, the selected indicator themes were ranked using best-worst scaling (BWS) exercises, asking the respondents to indicate the most and least relevant indicator themes in a given subset. The Delphi study is applied to the region of Flanders (Belgium), who has put forth the ambition to have a circular economy by 2050.

In general, the results show how the experts reflect upon a CE for food, and which key indicator themes should be present for its monitoring. Future research should consider these results when new CE indicators for food are developed, and data are collected. The Delphi provides a blueprint for researchers and policy-makers on the monitoring of a CE, which can stimulate the progression from a linear to a circular food system.

Keywords: Circular economy, monitor, indicators, food, Delphi study