Strategic decisions in the valorization of subproducts

The recovery of food waste is a trend in the current context of sustainability, circular economy, and waste reduction. For example, it is possible to use peels, seeds, and non-standard fruit to produce new products such as jams, teas, flour, or transform them into animal feed, biofertilizers, or cosmetics. The literature on food waste and losses along the food supply chain is vast, but quantitative studies that support the decision of which are the best valorization solutions for food waste and losses are limited. Based on this literature gap, the main objective of this work is to identify efficient matches between food subproducts and the most suitable recovery strategies. Using multi-criteria decision models, we will analyze viable strategies capable of producing value while guaranteeing relevant logistical constraints. Developing valorization strategies in environmental, operational, and economic terms can contribute directly to reducing food waste and food losses along the production and supply chains.

Authors: SANTOS, Maria João (INESC TEC); LIMA, Simone (INESCTEC)

Presenter: LIMA, Simone (INESCTEC)

Session Classification: Session 3.2 - OR in waste management