

Title

The Role of Considering Environmental Impact on Food Policy-making: A Life Cycle Assessment Study Applied on Alternative Plant-based Meat

Authors

Nichole Eunice Lalas, Harlene Baron Cardos, Atsushi Izumi, Koji Ochiai, Norihiro Itsubo, Hiroki Okubo

Abstract

As the issues of climate change and sustainability continue to arise, there have been several development and innovations in food technology, one of which is alternative plant-based meat products. After the pandemic, consumers become more conscious about their lifestyle and food consumption which made plant-based meat gain significant attention. The aim of this research is to determine the significant role of conducting life cycle assessment (LCA) on food specifically, alternative meat options, in food policymaking.

The LCA study evaluated the environmental burdens associated with the cradle-to-distributor life cycle of plant-based meat. The study further identifies the hotspots within the life cycle stages of plant-based meat to highlight where significant improvements can be applied to lessen its environmental impact. This vital information can support future research and development innovations in the food industry by minimizing resource use, optimizing supply chain transport, and reducing energy use for a more sustainable and efficient production system.

Insights and findings in the LCA study can also inform food policymakers about the potential environmental benefits and drawbacks of alternative plant-based meat production. With the help of LCA methodology and incorporating it in policy-making decisions, policymakers can develop more effective strategies to promote sustainable dietary choices and address both environmental and social issues on food consumption, production, and system. This can especially serve as support for carbon reduction initiatives, subsidies, incentives, and awareness campaigns for individuals, universities, private and public sectors, and communities.

In summary, by considering the LCA results and implementing evidence-based policies, decision-makers can smoothen the transition towards more sustainable and environmentally friendly food choices and systems, and in the long-term, contribute to local, national, and global efforts for a more sustainable future.