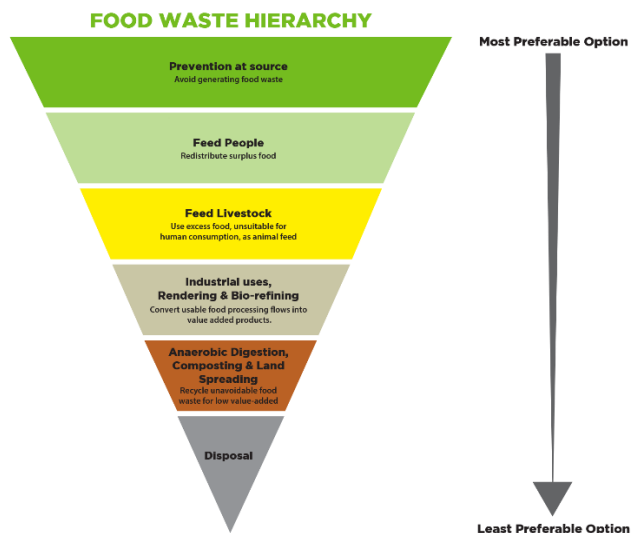


SFI Public Service Fellowship 2023

1. Name of Governmental Department or Agency
Environmental Protection Agency
2. Title of the Project
EPA1 A natural capital approach to consider integrated decision-making towards tackling food waste and creating a sustainable bioeconomy
3. Description of the Project
<p>Globally, more than 25% of food produced is wasted. Food waste is also a significant contributor to climate change. It is estimated that food waste generates about 8% to 10% of global greenhouse gas emissions. Reducing food waste is therefore an effective climate action. In Ireland we waste about 800,000 tonnes of food each year, according to current best estimates. Growing, processing and transporting food uses a huge amount of resources, such as land, water, energy and fertiliser.</p> <p>The Government's Climate Action Plan and Waste Action Plan for a Circular Economy include food waste as a priority waste stream and articulate a 50% reduction, reflecting the EU Circular Economy Package and the UN Sustainable Development Goal 12.3 which states: <i>"By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains"</i>. In the National Food Waste Prevention Roadmap 2023-2025, the Government has set out its strategy and identified key actions to meet Ireland's commitment to reduce food waste by 50% by 2030, in line with United Nations Sustainable Development Goal 12.3.</p> <p>As well as a focus on delivering circular economy, there is also a national focus on delivering bioeconomy opportunities. A Bioeconomy Action Plan will be published in the short-term. The aim of the Action Plan will be to progress Ireland beyond the phase of development since the publication of the National Bioeconomy Policy Statement in 2018, to address the challenges and opportunities identified for bioeconomy development and to socialise these issues at a public level. As stated in the draft Action Plan "Improved integration and coherence are also required between bioeconomy and waste, energy, and chemicals systems transformation."</p> <p>This project builds on the Natural Capital approach. There is potential tension between management options for food waste and preventing it – the bioeconomy uses food waste to use as fuel, for nutrient recycling and valorisation; increased food waste recycling will help Ireland meet municipal waste recycling targets; while EU targets require prevention of food waste in the first place. Any measure related to food waste that is introduced will have wider environmental, economic and social implications, with the potential for unintended consequences that can be positive or negative. These costs and benefits can be considered through the lens of the impacts on the supply of ecosystem services. The feasibility of implementation of measures also needs to be considered. Decision makers implementing management measures must weigh up these trade-offs, often without having the evidence to support the full picture.</p>

This project is about carrying out an integrated, interdisciplinary assessment that can provide this evidence to support decision makers to weigh up the costs and benefits associated with the potential tension between bioeconomy/circular management of food waste for energy (e.g. anaerobic digestion) and in terms of following the food waste hierarchy (see figure below).



4. Project Scope

- Develop/identify a framework that allows consideration of natural capital and ecosystem services, and the associated environmental, economic and social costs and benefits of management options to put in the context of the wider social-ecological system
- In collaboration with EPA and other stakeholders, co-develop management options which aim to meet objectives around food waste
- Assess the proposed food waste management options holistically to produce fully informed evidence to support decision makers in weighing up options
- Evaluate the evidence produced with decision makers to explore opportunities and barriers

5. Skills/Expertise Required

A researcher with experience in carrying out interdisciplinary work with a background in ecology, ecological economics, agriculture, bioeconomy, environmental science, geography, waste management, resource management or other relevant discipline.

6. Expected Outputs of Project

- A greater understanding of the interdependencies of food waste with the environment, economy and society.
- Innovative management options associated with food waste.
- Improved sustainable management of food waste in Ireland.
- Greater understanding of the decision-making process around management options that aim to meet objectives for reducing food waste
- Improved decision-making tools/approach for consideration of waste management options.

7. Working Arrangements

The EPA Circular Economy Programme is located in the EPA Offices in Wexford and Dublin. Fellows may elect to be based in either of these offices. Blended working arrangements can be accommodated.

8. Expected Timeline

12 months full-time or 24 months part-time

9. Contact Details

Dr Fiona Culhane, Office of Environmental Sustainability