



# How Can Food Supply Chains Become More Sustainable?



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 **Quick read**

## Introduction

The concept of sustainability is based upon three pillars; environmental, social and economic sustainability. For the purpose of this exercise, we can assume that food chains are already economically viable. It is worth mentioning however, that introducing environmental and social aspects to operations can also improve profitability. Food supply chains include every part of the value chain, from primary producers, to processors and distributors, to retailers and finally, to the consumer.

## Environmental Sustainability:

Environmental sustainability is one of the hottest topics concerning food production in modern times. Given that food production must increase by 50% to meet growing populations, and that we are facing imminent irreversible consequences of climate change, an environmentally sustainable approach to the way in which we produce food is vital. Every stage of the supply chain has responsibilities to uphold.

## Primary Production

- **The overuse of pesticides and fertilisers:** Alternative, sustainable methods of crop production include crop rotations and cover crops to increase soil organic matter, and integrated pest management (IPM) to avoid the use of environmentally harmful insecticides. Organic farming is also a sustainable option
- **Reduction of post-harvest losses:** Up to 70% of produce is lost at the post-harvest stage in Africa. Investments in storage and transport infrastructures through public-private partnerships could greatly reduce this
- **Water management:** Freshwater is one of the scarcest resources on the planet. Through careful management, the use of drip instead of flood irrigation, and wastewater reuse, farmers can greatly reduce the volumes of water used in production
- **Soil preservation:** Preventing deforestation and using cover crops, minimum tillage and agro-forestry practices are all ways that soil erosion can be prevented, and soil organic matter increased

- If food waste was a country, it would be the third largest carbon emitter on the planet behind only the US and China
- Environmental, social and economic issues could all be met through tackling this problem at each position in the supply chain
- Water and energy resource management and consumers and retailers consciously sourcing produce have large roles to play in a sustainable future
- Society is increasingly rewarding ethical practice in food supply chains, where environmental, social and economically sustainable practices are demonstrated
- Expert knowledge of the supply chain and how to contribute to sustainable practices is vital for business, investors and the overall health of the planet

## Processing and Distribution

- **Waste reduction:** Waste reduction includes repurposing food that may otherwise go to waste, for animal feed, for example, and reducing and recycling the packaging used where possible
- **Renewable energy:** Companies are increasingly looking to source energy from renewable sources for use in processing and manufacturing as this can greatly reduce carbon emissions
- **Distribution channels:** Businesses may review and redesign distribution channels, so that food can be delivered more efficiently or travel shorter distances to market
- **Technologies:** New technology is constantly changing the processes within value chains. Adopting these technologies can mean reducing carbon emissions and costs, by using electric powered delivery vans, for example



## Retail

- **Cosmetic Standards of Food:** Millions of tonnes of food waste occur every year due to the cosmetic standards expected of fresh produce. Supermarkets can combat this by committing to selling fresh produce, regardless of its size or shape.
- **Waste:** Close-to or past sell-by date produce should be sold at discounted prices, donated to food charities or composted.
- **Sourcing:** Retailers can buy produce from sustainably produced sources and omit suppliers with poor environmental track records. Sourcing food locally also reduces environmental impact.

## Consumer

- **Waste:** In the UK, over 70% of post-farm gate food waste occurs in the household. This can be reduced by shopping smartly and realistically, treating expiration dates as guidelines, storing food in the right places and by saving leftovers
- **Sourcing:** Consumers need to consider the environmental cost of the production of the food they eat, and source food locally to reduce their environmental footprint

## Conclusion

There is scope to enhance sustainable practices at every stage of the food value chain and doing so is vital to ensure sustainable growth. If food waste was a country, it would be the third largest carbon emitter on the planet behind only the US and China. Environmental, social and economic issues could all be met through tackling this problem at each position in the supply chain. Water and energy resource management and consumers and retailers consciously sourcing produce have large roles to play in a sustainable future.

## Social Sustainability

In this case, social sustainability relates to the impact that value chains have on people. Social aspects to consider include quality of life, equity, diversity, social cohesion and democracy and governance. Oftentimes, environmental and social sustainability are linked. For example, sourcing food locally helps the local community while simultaneously reducing food miles. At every stage of the value chain, it is important that all stakeholders' interests are taken into account before decisions are made.

- **Primary Production:** Employing people from the local community and paying fair wages can contribute greatly to a socially sustainable practice, especially in developing countries
- **Processing and Distribution:** Processors are frequently the most culpable entity in the value chain when it comes to unequal distribution of incomes. From beef farmers in Ireland to cocoa farmers in Ghana, it is vital that producers receive a fair price for their produce in order to ensure social sustainability
- **Retail:** Sourcing food from the likes of Fairtrade or local suppliers is central to retailers' social responsibility, while also demonstrating diversity among employees, labour conditions and employee rights
- **Consumer:** Consumers have the power to boycott retailers with poor track records in labour relations and diversity, as well as those who exploit vulnerable food producers



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