



Sources	UKRI		
Date	May 2021		
Potential scale of impact	Certainty of outcome	Impact horizon	
★★★★☆	★★☆☆	H1	H2 H3

UKRI's Global Food Security (GFS) programme has set out [four scenarios that explore how the UK food system could be transformed](#) to meet the Paris Agreement and UN Sustainable Development Goals (SDGs). The scenarios set out four possible futures:

- The carbon-neutral food system describes a low emission future where domestic food production is boosted by ultra-efficient, low-carbon technology. Mega farms producing food and energy dominate the countryside.
- The communal food system describes a local-production-for-local-consumption ethos. Local markets encourage seasonal eating and creative ways to use food excess. Public policy is designed to make nutritious, climate-friendly food accessible to everyone.
- The commercial food system envisages a system where most agricultural land has been replaced with plantation forests and renewable energy farms to meet climate mitigation targets. The UK is largely dependent on food imports. High-carbon foods such as red meat, dairy and rice are inaccessible for most people.
- The collaborative food system describes a global governance system for determining which foods are grown in which parts of the world to maximise yields and improve sustainability. The UK's primary export is red meat, with a world-class livestock system that emits minimal greenhouse gases while supporting biodiversity and reforestation

The scenario analysis offers a number of key messages:

- meeting global agreements on climate mitigation and sustainable development requires the radical transformation of the current food system
- future food systems must deliver against wider metrics of sustainability alongside ambitious climate mitigation
- transforming the food system to meet global agreements requires the development and implementation of a range of systems approaches and systemic technologies
- strategies to meet global agreements will vary greatly depending on a country's reliance on global trade
- radical action must be taken today to ensure future food security

