

**Bob Doherty** The York Management School bob.doherty@york.ac.uk

## Integrating knowledge for food systems resilience

By 2050 the United Nations expects global demand for food to increase by 60%, driven largely by population growth and changing dietary patterns among the burgeoning middle class in China, India and other large developing countries. At the same time, food production is under severe pressure from a variety of different sources, including climate change, extreme weather, water depletion, soil degradation, resource conflict and political instability. These pressures are seen in the growing incidence of food insecurity in both developing and developed countries, which in many cases has gone hand in hand with escalating problems of obesity, nutritional deficiency and diet-related health problems. In response, IKnowFood is a four year interdisciplinary project, led by Professor Bob Doherty at the University of York as part of a wider collaboration (the UKRI Global Food Security Programme).

## The research

Systems of food production, trade and consumption are increasingly vulnerable to interconnected political, economic and ecological shocks and stresses, associated with climate and environmental changes, shifts in farming practices, uneven power dynamics, and consumer lifestyle changes. IKnowFood takes an interdisciplinary multi-stakeholder approach to developing a unifying understanding of 'food system resilience', using tools and methods to integrate the knowledge and perspectives of hitherto disparate food system actors. Food system resilience is the ability of the system, over time, to learn, adapt and transform, as well as to cope at multiple levels with external and internal stresses and shocks, in order to provide supplies of food that are economically, environmentally and nutritionally sustainable.

## The outcome

Through integrating knowledge from both the natural sciences and the social sciences, the project seeks to remove the significant disconnect between a range of actors in the global food system, and enhance overall food system resilience. Overall, IKnowfood aims to: identify structural, informational and institutional obstacles to food system resilience; produce new datasets, information resources, and appropriate technological tools for farmers; provide decision making tools for business and consumer mobile technologies; and identify resilient behaviours across all socio-demographic groups. The programme will produce ground-breaking scientific papers, alongside policy briefs for industry and government. These will be coupled with a series of collective intelligence events.









