



# FOOD SYSTEMS

Systemic intervention for healthier, more sustainable and ethical food systems



## UQ'S GLOBAL CHANGE INSTITUTE

**Established in 2010, the Global Change Institute is an independent source of innovative research, ideas and advice for addressing the challenges of a changing world. GCI works to address the global impacts of climate change using technological innovation.**

A key component of GCI's role is to engage with government, industry and the community to promote research

and discovery, to advocate the importance of coordinated and integrated approaches to finding solutions, and to transfer knowledge and technologies to the public.

GCI concentrates its activities across four key research areas: Food Systems; Sustainable Water; Healthy Oceans, and Clean Energy.

## FOOD SYSTEMS

**There is growing recognition of the need to re-examine the interconnections and linkages between food activities and food outcomes – food systems.**

We need to better understand the role food systems play under the influence of climate change – within the limits of finite production resources (such as energy, water, and land), rising demographic pressures, and the challenges of the double nutrition burden (over and under-nutrition).

### **Key issues include:**

- how food systems can be better managed to improve food and nutrition security
- how to achieve better health outcomes with a lower environmental 'footprint', while maintaining vibrant enterprises, and
- livelihood opportunities under different environments.

To address these challenges, the GCI Food Systems program is promoting transdisciplinary research underpinned by the theoretical foundations of systems approaches that encompasses activities, outcomes, linkages and drivers.

In so doing, this will catalyse and support transformative changes in food systems through joint stakeholder activities.

**Existing projects reflect this game-changing model, including:**

### **THE AFRICA DEMAND-LED PLANT VARIETY DESIGN PROJECT**

The Alliance for Agricultural R&D for Food (comprising the Commonwealth of Australia, Syngenta Foundation, The Crawford Fund and GCI) has been working collaboratively with researchers in Africa to contribute to the transformation of that continent's agriculture through high-performing plant varieties and improved market access.

### **THE CAPTURING CORAL REEF AND RELATED ECOSYSTEM SERVICES (CCRES) PROJECT**

This is a regional technical support project that seeks to unlock new, sustainable income streams for coastal communities in the tropics. It is an inter-disciplinary technical project, featuring collaboration between leading centres of discovery, learning and engagement from North America, Australia and the east Asia-Pacific region (see [gci.uq.edu.au/ccres](http://gci.uq.edu.au/ccres)).

Through this project, we are building unique opportunities to advance knowledge and problem-solving in food systems.

## RESEARCH PURSUITS

We are also pursuing opportunities to promote the outputs of innovative approaches and findings to policy-makers, practitioners and academics, as well as brokering collective action on critical food issues.

**This is being actioned through three current innovative research pursuits:**

- Field testing a food systems framework through three case studies (Pacific Islands, Indigenous Communities and Urban Food Systems)
- Nudging stakeholders towards sustainable diets
- Governance of Australia's food system.

The pursuits bring together UQ researchers with industry, government agencies and community organisations. UQ academics are drawn from a range of disciplinary expertise in a community of practice comprising more than 40 academics from areas such as agricultural science, public health, business and economics, policy, biological sciences, geography, planning and environmental management.



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**Mandatory labels**

*Made in' country of origin claims*



*'Grown in' country of origin claims*



*'Packed in' statements*



*'Packed in' statements must refer to a country of origin (made in or grown in) - note*

Informative food labels are just one tool in supporting more literate consumers.



**BILL BELLOTTI**

Professor Bill Bellotti has more than 30 years' experience in leading agricultural production system research in southern Australia, western China, and eastern India. His expertise includes agronomy, climate variability and change, farming systems and integrated approaches to food systems. His research interests include the application of Life Cycle Assessment methodologies to Australian food systems, including the development of concepts such as sustainable diets and food footprints, and the promotion of healthier, sustainable and equitable food systems.



**GRACE MURIUKI**

Grace is trained in spatial science (GIS and Remote Sensing), human geography, and agricultural science, with a PhD from The University of Queensland, Masters and Bachelor's degrees from the University of Nairobi, Kenya. She has wide experience in research and development in the Queensland Government and CSIRO, plus more than 15 years in sub-Saharan Africa. Her interests include food and nutrition security, urban sustainability, and the application of inter-disciplinary approaches to food systems issues.





Above: Fish traps, Selayar, Indonesia. Above Right: Drying Cloves, Selayar, Indonesia. The Capturing Coral Reef and Related Ecosystem Services Project (CCRES) seeks to unlock new, sustainable income streams for coastal communities in the tropics.

Photos courtesy of Melanie King, Senior Advisor, The Capturing Coral Reef and Related Ecosystem Services Project.

## CONTACT

**Food Systems Program**  
Global Change Institute  
The University of Queensland

**T** +61 7 3443 3100  
**F** +61 7 3443 3101  
**W** [gci.uq.edu.au/food-systems](http://gci.uq.edu.au/food-systems)

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