

Research Structure

Conceptual and methodological research on:

Food Systems, to improve understanding of the interactions between food systems and global environmental change

Vulnerability, to integrate social and natural science concepts of the vulnerability of food systems to global environmental change

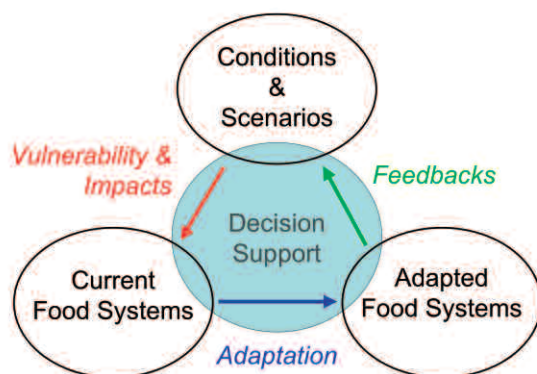
Scenarios, to construct plausible futures of socioeconomic and environmental conditions for food system analyses

Decision Support, to improve dialogue between scientists and policy-makers on the interactions between food security and environment

Regional research:

Conceptual and methodological research is integrated with studies on vulnerability and impacts, adaptation and feedbacks in:

- 1 the Indo-Gangetic Plain
- 1 the Caribbean
- 1 Southern Africa



Getting Involved

Conceptual and methodological research is implemented through thematic international networks. Regional projects integrate research to address policy-relevant issues related to food security and environmental management.

All those interested are invited to participate in either conceptual and methodological research, or the regional projects, or both.

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The GECAFS International Project Office is hosted by the Environmental Change Institute at the Oxford University Centre for the Environment.



Environmental
Change Institute
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Earth System
Science Partnership



A food-secure future for those most vulnerable to environmental stress

Goal and Aims

To determine strategies to cope with the impacts of global environmental change on food systems and to assess the environmental and socio-economic consequences of adaptive responses aimed at improving food security.

This goal will be achieved by improving understanding of the interactions between food systems and the Earth System's key socioeconomic and biogeophysical components. The research agenda is specifically targeted towards delivering the new science necessary to underpin policy formulation for improving food security in the face of global environmental change.

GECAFS aims to:

- 1 Investigate how global environmental change affects food security at regional scale;
- 1 Determine options to adapt regional food systems to cope with both global environmental change and changing demands for food;
- 1 Assess how potential adaptation options will affect the environment, societies and economies;
- 1 Engage the international global environmental change and development communities in policy discussions to improve food security.

Rationale



Food availability: production, distribution and exchange.

There is growing concern that global environmental change will further complicate food security – particularly for more vulnerable sections of society. There are also concerns that meeting society's rising demand for food will further degrade the environment which may, in turn, further undermine food systems and therefore food security. Food security policies need to be developed in the context of these environmental issues.



Food utilisation: nutritional value, social value and food safety.

Research Questions

GECAFS is researching the interactions between global environmental change and food systems.

Global environmental change includes changes in the physical and biogeochemical environment, either caused naturally or influenced by human activities.

Food systems encompass (i) activities related to the production, processing, distribution, preparation and consumption of food; and (ii) the outcomes of these activities which contribute to food security (food availability, food access and food utilisation).



Food access: affordability, allocation and preference.

1. How will global environmental change affect the vulnerability of food systems in different regions?
2. How can we adapt food systems to cope with global environmental change and improve food security?
3. How will various adaptation options feedback on environmental and socioeconomic conditions?