

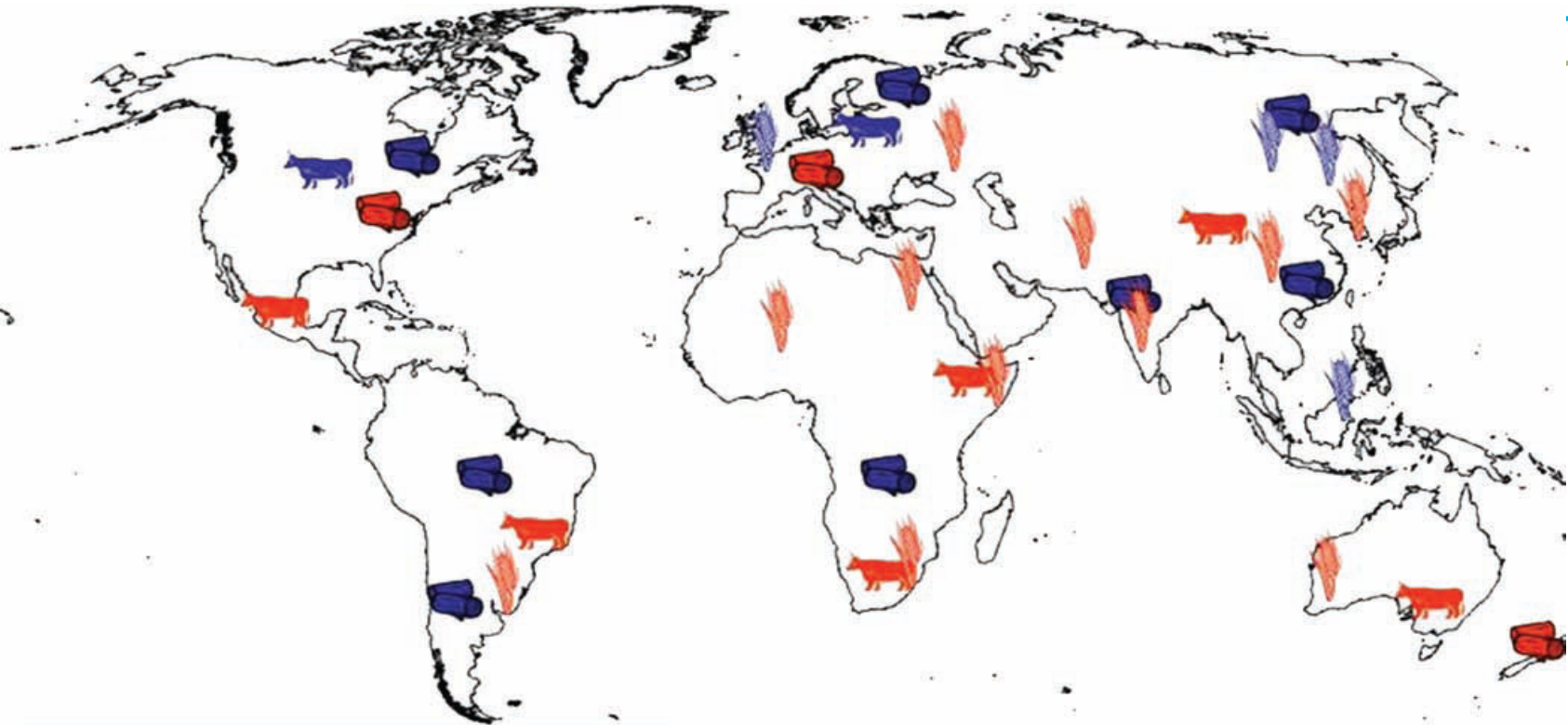
Climate change and food systems

Polly Ericksen







Global Environmental Change and Food
Systems (GECAFS)

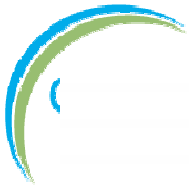
Environmental Change Institute
University of Oxford

Impacts on crop, livestock and forest production IPCC estimates



Increased (blue) or decreased (red):

- | | | |
|---|---|---------------------------|
|  |  | -cereal crop productivity |
|  |  | -livestock productivity |
|  |  | -forestry production |







I only grow this as I'm told
its what others like to eat
and I can get a good price
for it.



Peter Ndivo, Kenyan farmer

Food security...

... exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

(World Food Summit 1996)



Components of Food Security & Key Elements

FOOD UTILISATION

- *Nutritional Value*
- *Social Value*
- *Food Safety*

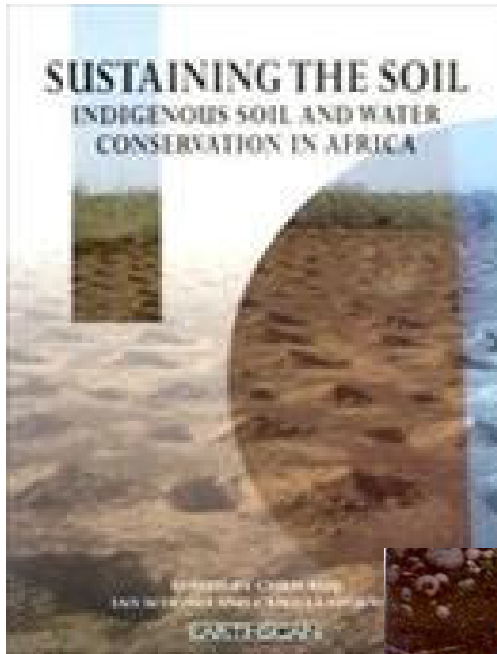
FOOD ACCESS

- *Affordability*
- *Allocation*
- *Preference*

FOOD AVAILABILITY

- *Production*
- *Distribution*
- *Exchange*

People adapt to cope with change



Adaptations




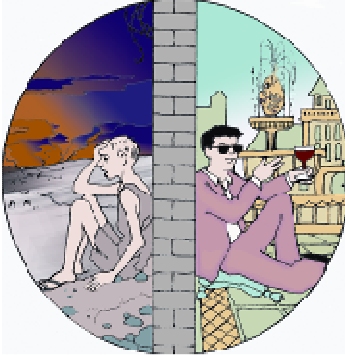


**Commodity prices
continue to sky rocket**

28/08/2007 productiondaily.com

Adaptations



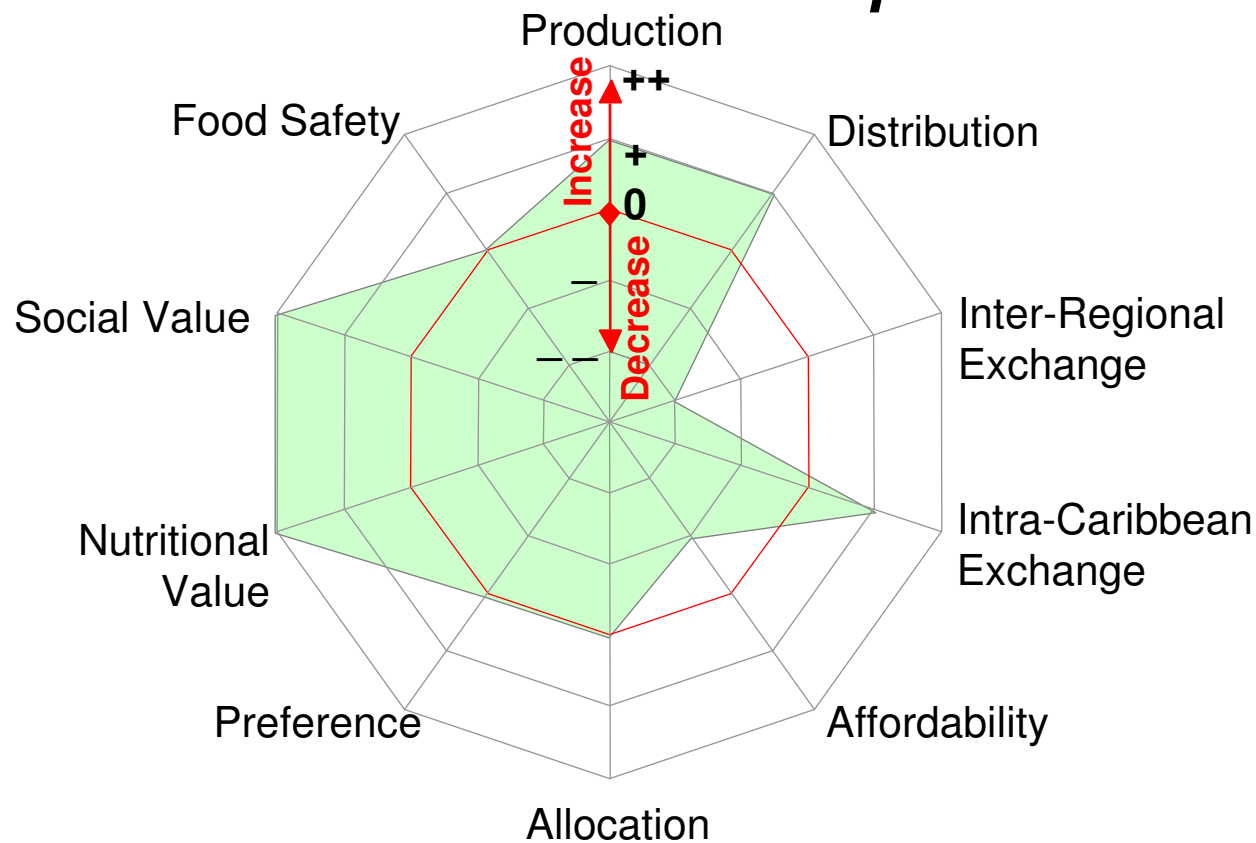
Planning for the future with scenarios

		World Development	
		Globalization	Regionalization
Environmental Management	Reactive	 <p>Global Orchestration</p>	 <p>Order from Strength</p>
	Proactive	 <p>TechnoGarden</p>	 <p>Adapting Mosaic</p>

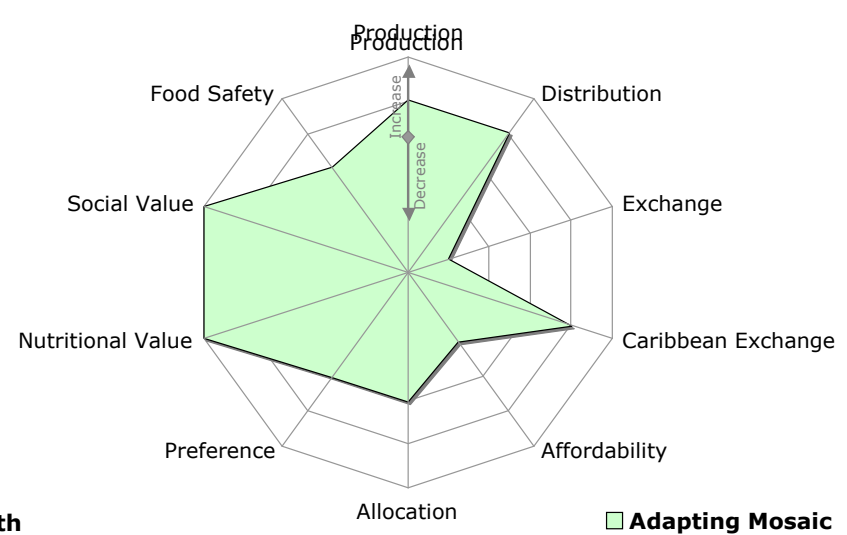
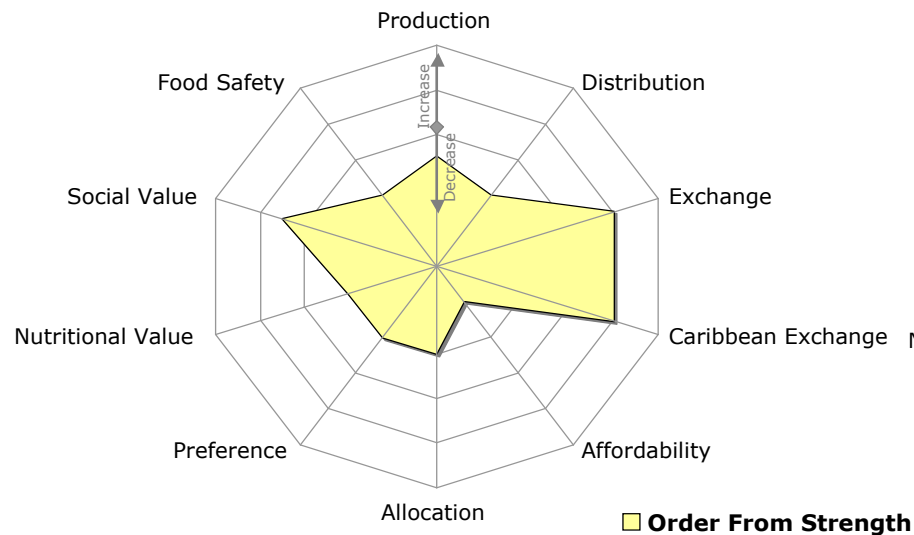
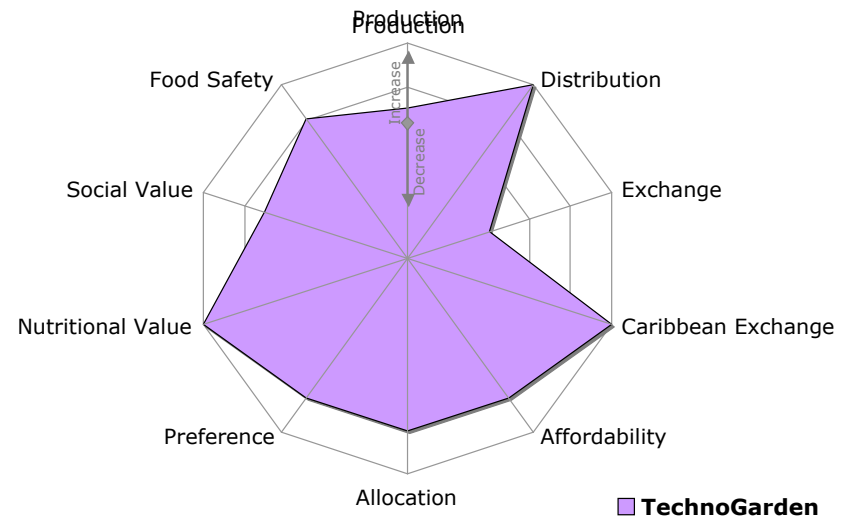
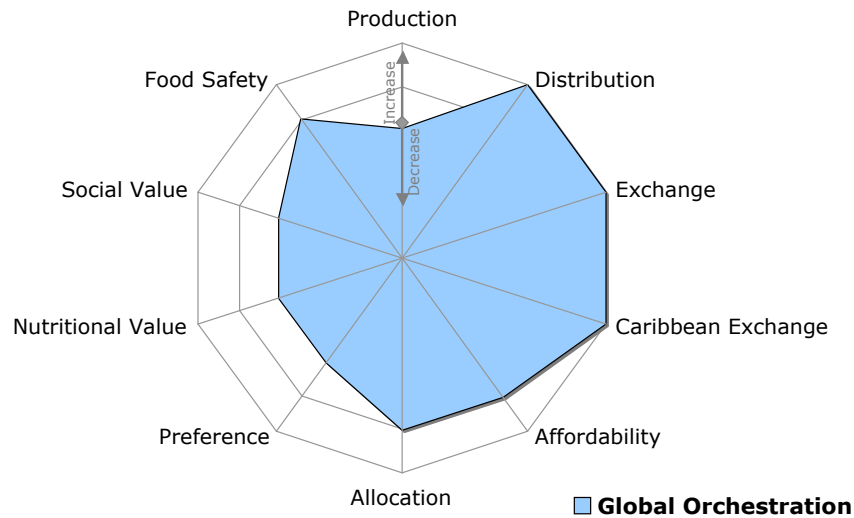
Source: Millennium Ecosystem Assessment (2006)

Food system outcomes in the plausible future

per scenario



Outcomes depend upon the pathway you choose



What would go into your scenario of food systems?

Food security for all?

**SUPERMARKETS
IN EVERY TOWN?**

**GM CROP
TECHNOLOGIES?**

Biofuels?

Vegetable gardens
at every house?

WTO renegotiated?

Aquaculture?

Revitalized agricultural extension?

Payments for agrobiodiversity?