Redefining Food Security - links equity, health, and sustainability globally

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Energy crisis

Food crisis

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Food Policy

- Influences the set of relationships and activities that interact to determine what, how much, by what method and for whom food is produced, distributed and consumed

Revised from OECD, *Food Policy*, 1981
‘The food crisis of the past two years has drawn attention dramatically to both the interdependence of production, trade, stocks and prices and the serious unpreparedness of the world as a whole to meet the vagaries of the weather.’
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*Assessment of the World Food Situation Present and Future*, prepared for the UN World Food Conference, Rome, November 1974, Quoted in *Food Policy*, Vol 1, No1, November 1975, p2
Food security focus in 1970s

‘The concept of food security is broad and complex but its cornerstone is a system of grain reserves that will protect the world against the effects of violent fluctuations in food production and food prices.’

Food security - FAO 1996

- A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life

- Accessibility
- Availability
- Affordability

Absence of fear
Food security as
genuinely sustainable food systems:
• where the core goal is to feed everyone sustainably, equitably and healthily;
• which addresses needs for availability, affordability and accessibility;
• which is diverse, ecologically-sound and resilient;
• which builds the capabilities and skills necessary for future generations.
And beyond to food sovereignty:

‘the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.’ (Declaration of Nyéléni, 2007)
A dysfunctional system

- 925 million undernourished in 2010, down from 1bn
- 2 billion micronutrient deficient
- About 1.6 billion overweight - 300 million obese
- Affects poor most, N & S
  - US Supplemental Nutrition Assistance Program (Food Stamps) - $37.7bn, 2008(prov)
- 2.5bn people in agriculture (1.3bn smallholders)
  - 75% of poor (<$2/day) in rural areas
  - Women most badly affected but also major food producers

Sources: FAO, USDA, WHO & World Bank
Global wealth distribution, 2000

- 10% of adults own 86% global household wealth
- 50% own barely 1%
- Average person in top 10% owns nearly 3000 times wealth of average person in bottom 10%

Source: WIDER Angle, 2/2006
Today’s context
- the real threats to our world

• Climate change
• Competition over resources
• Marginalisation of the majority world
  – Inequality increased in most countries
• Global militarisation
  – BTWC, dual use & bio-weapons

Sources: Abbott, Rogers and Sloboda, Oxford Research Group; Richard Jolly; Malcolm Dando
Alternative futures, differing visions

- Collapse (still a real danger: eg economic, nuclear war, disease, environmental disasters)
- techno-dominance / corporate feudalism
  - Bifurcation (rich 2 billion use all tech available to enhance / maintain their lifestyles, rest contained by technologies of control or killed off in disasters - the “Liddism” of Paul Rogers)
- ecological balance / diverse / equitable

Source: Abbott, Rogers and Sloboda, Oxford Research Group
Food system basics

- Biological - ecological
- History - global restructuring
- Human needs - multi-dimensional
  - physiological
  - psychological
  - social
  - cultural
Key words

- Power
- Control
- Risk
- Benefits
Food System actors

- Input suppliers
- Farmers
- Traders
- Workers
- Processors / manufacturers
- Wholesalers / retailers
- Caterers
- Consumers / citizens
- Governments, policy makers, lobbyists
Limited demand
- saturated markets

• Increased competition
• Technology
• Increased productivity
• Diversification

*Food Policy*, OECD, 1981
Key trends

• Economic Concentration
• Global markets
• Control
• Geo-political shifts

Revised, *Food Policy*, OECD, 1981
Tools for control

• Political, military & economic power
  – Historically shaped today’s system

• Science

• Technology

• Information

• Management

• Laws, rules, regulations
  – From national to regional to global
1990s - global food rules change

- Convention on Biological Diversity (UN)
  - Conserve, sustain, share benefits
  - Traditional & indigenous knowledge

- International Treaty on Plant Genetic Resources for Food and Agriculture (UN)
  - Farmers’ Rights, IPRs, sharing benefits, managed commons

- World Trade Organisation
  - Trade liberalisation, agriculture, TRIPS, SPS
Importance of Intellectual Property

- Underpins
  - ‘knowledge economy’
  - media & entertainment, software
  - pharmaceuticals / biotechnology
  - brand power

- Means to
  - Exclude others, capture and appropriate benefits
Reality

- monopoly (or exclusionary) privileges given for societal benefits
- BUT embedded in WTO / hard law
- Patents regime facilitates form of private taxation (Peter Drahos)
Costs of granting these privileges

- Shift market power
- Higher consumer prices
- Increase cost of knowledge acquisition

Facilitate anti-competitive practices
- cross-licensing
- tie-in sales
- buy-up patents
- threaten law suits
Changing face of research and development

- Access to knowledge
- Freedom to operate
- Skewing questions asked, solutions sought
- Going the wrong way?
  - Open access, distributed innovation, ecologically supportive or the pharma model
What kind of innovation do we need to secure our future food?

• institutional / political / social / economic / legal
• not just technological / production
  – What kind of innovation do we induce?
• Sustainable production, sustainable and equitable consumption
Excess innovation?

We are in our current fix because of an excess of financial innovation, driven by ever-increasing thirst for short-term profit.

…. We now need to rewrite the rules of finance and global business.

Angel Gurría,
OECD Secretary General,
27 January 2009,
Beyond current assumptions

- In the future will we in Europe be able to eat / consume what we want, when we want, from wherever we want?
- Should we be able to?
Questions of historical & contemporary responsibility

- GHG emissions
- Ecological debt
Three systemic crises

- **Systemic multiple crises**
  - finance/real economy, energy/climate, ecosystem/biodiversity, social

- **Trust crisis**
  - exposure of concealed debts (including ecological debt which is not even recorded in accounting books)

- **Governance crisis**
  - responses are a series of untested rescue packages and trial and error solutions

Earthwatch lecture, Oxford, 16 Feb 2009,
Prof Jacqueline McGlade, Executive Director
Common features of these 3 systemic crises

- Making money from money
- Over consumption
- Capital destruction
Common features of all three

• Capital Destroyed
  – Financial
  – Human
  – Social
  – Natural

• Risks/debts passed on to current and future ‘others’
Common features of financial, climate, natural resources crises

<table>
<thead>
<tr>
<th>Feature</th>
<th>No</th>
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<tr>
<td>Market prices cover all costs?</td>
<td>No</td>
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<tr>
<td>Market prices reflect real risks?</td>
<td>No</td>
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<tr>
<td>Transparent transactions</td>
<td>No</td>
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<tr>
<td>Accounting for what matters?</td>
<td>No</td>
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<td>Early warnings heeded</td>
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<td>Robust and sustainable systems</td>
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Earthwatch lecture, Oxford, 16 Feb 2009, Prof Jacqueline McGlade, Executive Director
Thinking about systems

and how to change them

See: Donella H. Meadows, Thinking in Systems - A Primer, Earthscan, 2009
Leverage points

- **Rules, incentives, punishments, constraints**
  - Who has power over them
- **Self organisation** - power to add, change, evolve system structure
  - Diversity, variability, experimentation
    - Losing control
- **Goals** - purpose or function of system
  - Core issue, who can change
- **Paradigm** - mind set
  - Shifting changes rest
Changing Paradigms

- A new ecological economics
  - SDC - prosperity without growth in N, different growth in S
  - NEF - The Great Transition
  - Worldwatch - Transforming Cultures
  - Sarkozy Commission - beyond GDP / GNP
  - And many more
Changing paradigms & practices

• To agro-ecological farming from industrial, fossil fuel based model
  – IAASTD
  – Millennium Ecosystem Assess
  – National Academy of Sciences

• Beyond reductionist R&D
  – Understanding complexity
  – ecosystems approaches
Agro-ecology

• Achieving natural ecosystem-like characteristics while maintaining harvest output (Gleissman)

• considers interactions of all important biophysical, technical and socioeconomic components of farming systems (Altieri)
Innovation in agricultural research

• Anticipatory
  – Immediate & future ecological and social impacts
• Promote long-term systems-level research at multiple scales
• Better integrate natural and social sciences
• Integrate scientific innovations with traditional knowledge and local innovations
• Use sustainability analysis as guiding principle

Source: Gliessman, Agroecology; Yiching Song
Innovation in agricultural education

• Interdisciplinary curricula
  – Integrate complex elements of food systems
  – Include goals of food security and equity
• Change emphasis
  – From maximising single crop production to maintaining complex food systems
• Include experiential learning in farming communities

Source: Gliessman, Agroecology
Why R&D fails small farmers

• too technocratic
  – failed to take account of the political and economic conditions in which such farmers found themselves

• way such R&D is conceived
  – arrogant and contemptuous attitudes among ‘experts’

• opposition from commercial entities
  – to R&D that farmers could easily copy or breed from and which reduced the market for their products.

• reductionist approach to science
  – simplistic focus of R&D on specific disciplinary aspects, linked to the input-output industrial approach

Source: Jonathan Harwood, Centre for the History of Science, Technology & Medicine, Univ Manchester
Shifting power in interdependent relationships

• Social, economic, geo-political, commercial, gender
• Land - access and use - what is land for?
• Property - real vs imaginary
  – The rise of IP, insecurity of poor producers
• Food Sovereignty / democracy movements / Transition towns etc
Rewriting rules, laws, incentives

• Linking nutritional well-being to farming
  – Sustainable production, sustainable and healthy consumption
  – Marketing and advertising controls
  – Waste avoidance and minimisation

• Governance systems
  – Multilateral, national & local
    • CFS vs Global Partnership
  – Commodity trading - food not a speculative asset class; neither is agriculture / soil carbon
  – Stocks - grain reserves
Rewriting rules, laws, incentives

• On the framework for the actors
  – R&D
    • Plant Variety Protection (UPOV), patents & seed laws
      – Permit farmers varieties, non-uniformity, new ABS, restrict patents
  – Private actors - corporations etc
    • Corporate law, shareholder requirements; not treat as human persons, not got human rights
    • Oligopolies, Anti-trust, competition rules
    • Liability & redress
      – curb reckless innovations, reframe limited liability
  – Rights to Food / Health etc
    • from soft to hard law, with enforcement?
Ethical principles -
www.foodethicscouncil.org

• Wellbeing
  – do no harm (nonmaleficence)
  – do good /effect cure (beneficience)

• Autonomy
  – choice, freedom of action

• Justice
  – Fairness, equity
Food Justice
The report of the Food and Fairness Inquiry

Fair shares
Fair play
Fair say
Food is a lens, connector and opportunity

Sustainability
Climate change
Health
Social Justice
Gender

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