

Supply chains, social externalities and policy responses in the global food economy

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Core arguments

1. **There is conflict in and over food supply chains in the market, society and policy**
2. **The issue of externalities is becoming part of this contestation**
3. **This is not yet fully being translated into, or reflected in, policy but is likely to be → some policy formulations emerging in:**
 - *governmental / intergovernmental fora*
 - *corporate decisions*
 - *supply chain alliances*

Core Argument 1

- **There is conflict in and over food supply chains in the market, society and policy**

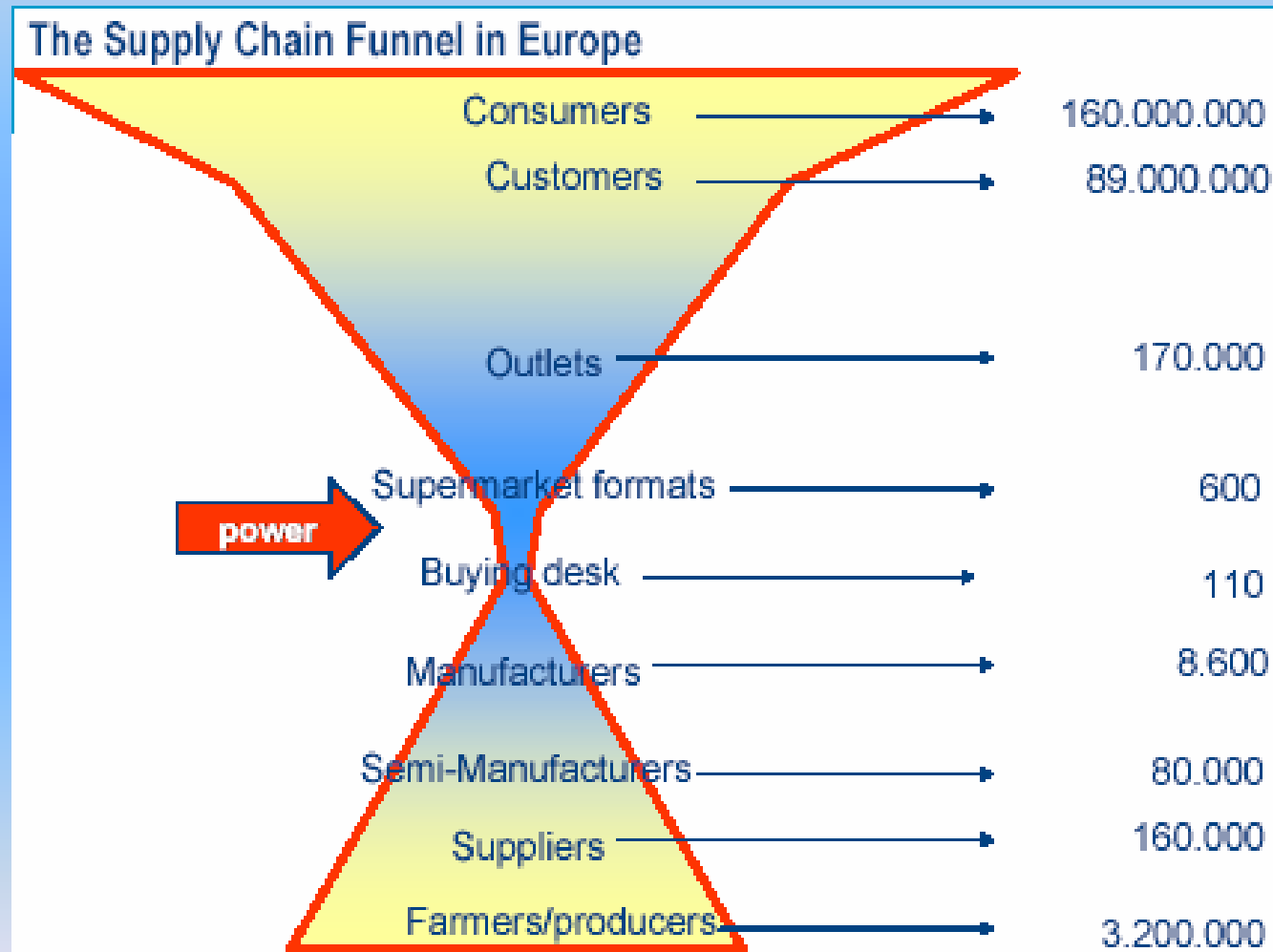
Food is contested space, pulled in different directions by: different interests at multi-levels

State

**Civil
society**

**Supply
chain**

Power shift in the supply chain: Retail increasingly dominate



Source: J-P Grievink, Cap Gemini, OECD 2003

Conflict in supply chains

- **Power shift: from farm to processing and now to retailing & food service**
- **Tensions over:**
 - *Pricing & efficiencies*
 - *Value-adding along food chains*
 - *Risk management*
 - *Quality control and standards setting*
- **Values: ‘free trade’ or ‘fair trade’?**
- **Future see retail v food service tensions**

Core Argument 2

- **The issue of externalities is becoming part of contestation in supply chains**
- **Evidence is beginning to emerge on ‘social’ externalities with regard to...**
 - *Public health*
 - *Environment*

Public health externalities include:

- **Cost of diet-related diseases e.g. CHD, diabetes, some cancers**
- **Huge healthcare costs**

NB. Burden on rich countries is bad enough, but for developing countries it's serious

The UK food costs crisis

1990s/2000s

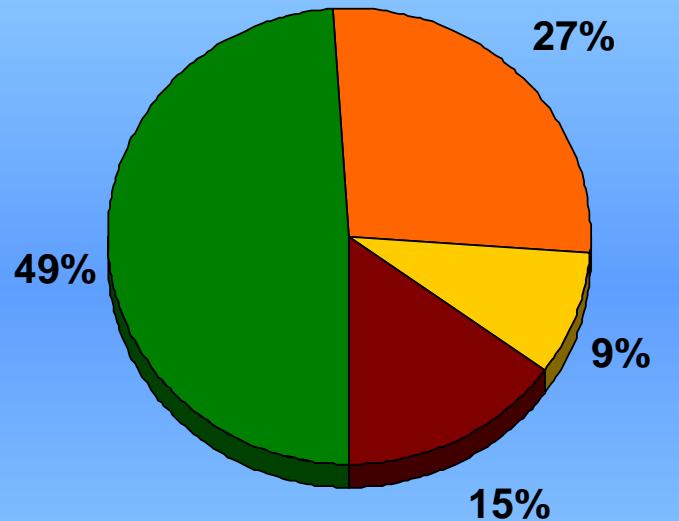
- **BSE (1996-2000) £4 -7 bn** (Phillips Inquiry 2000)
- **Foot & Mouth (2001) £3 bn** (Report Comptroller & Auditor General: HC 939 2001-2)
- **Obesity (in UK) £7.4 bn p.a.** (HC Health Committee Report 2004)
- **Coronary Heart Disease cost to NHS £1.7 bn p.a.** (BHF Oxford Univ. 2002)

EU Diet-related ill-health costs

- **CVD cost EU health care systems of the EU just under €105 billion in 2003 (€230 per cap p.a)**
- **= c. 12% of EU total health care expenditure across the EU (BHF Oxford Univ. Heartstats. 2005)**
- **CVD = 1.5m death p.a. in the EU (42% of all deaths) (EU French Presidency 2000)**
- **PLUS....Years of working life lost (morbidity)**
- **PLUS ...Social-psychological costs in well-being (e.g. 25% of EU women widowed before 65 due to CHD)**

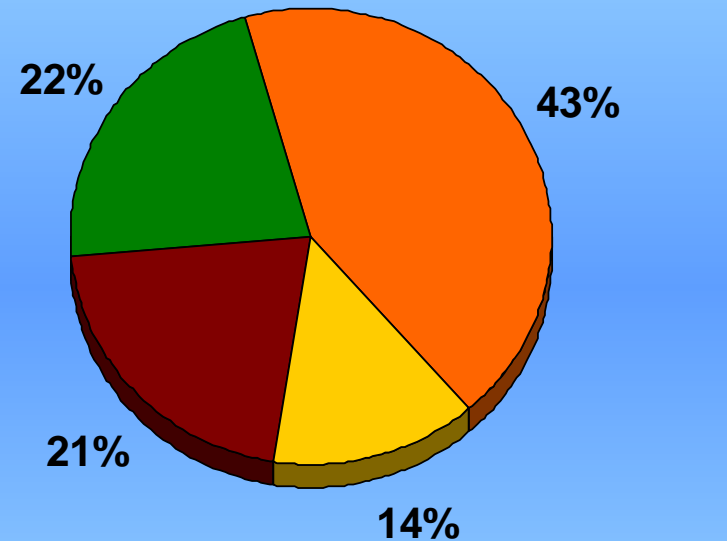
Global burden of disease 1990 - 2020 by disease group in developing countries

1990



Communicable diseases, maternal and perinatal conditions and nutritional deficiencies

2020 (baseline scenario)



Noncommunicable conditions

Neuropsychiatric disorders

Injuries

Source: WHO, Evidence, Information and Policy, 2000

In the Nutrition Transition, populations – shift from restricted to extended choice

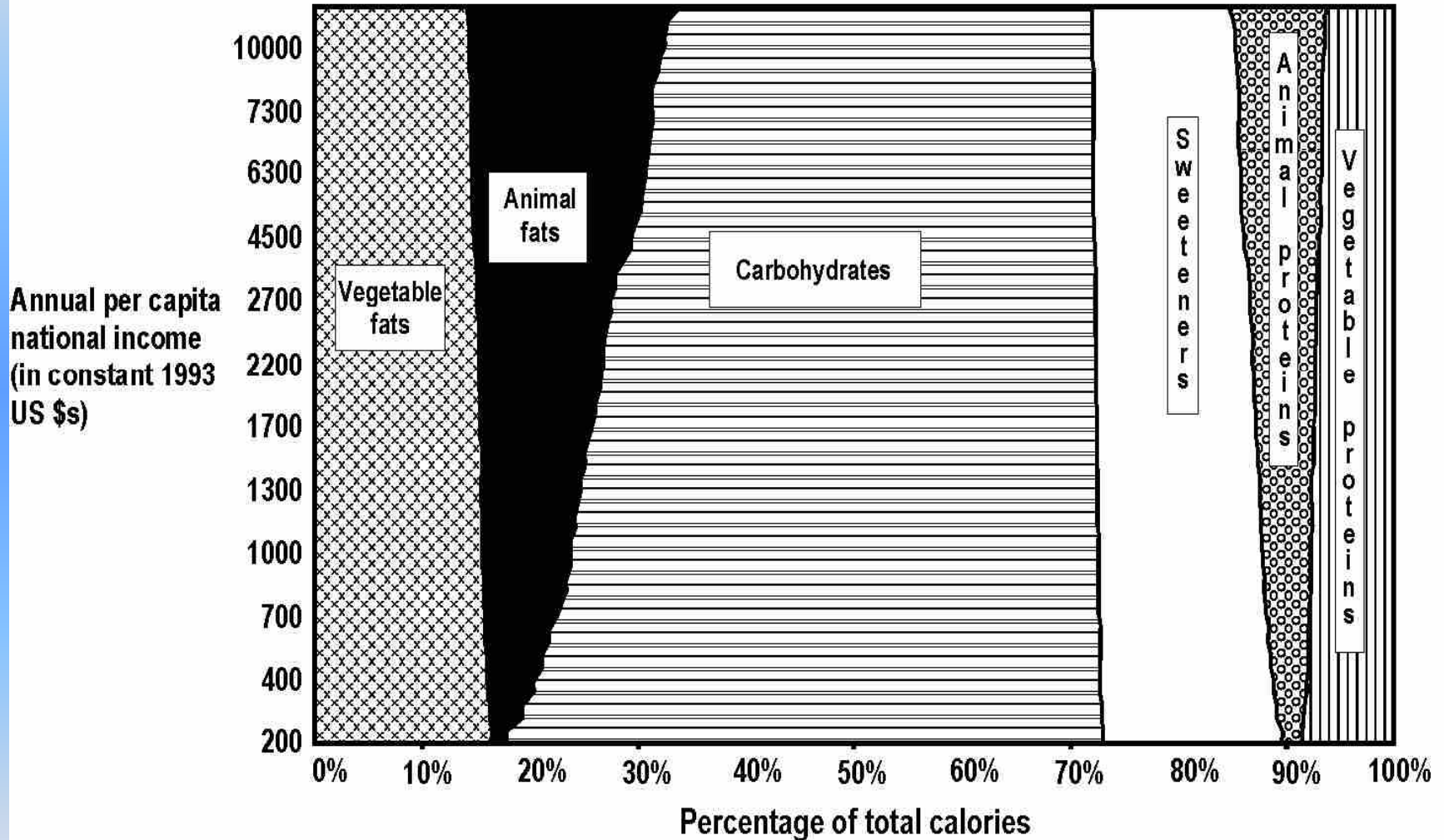
CONSUME MORE

- **Meat**
- **Fats**
- **Sugar**
- **Soft drinks**
- **Energy dense foods**

CONSUME LESS / NOT ENOUGH

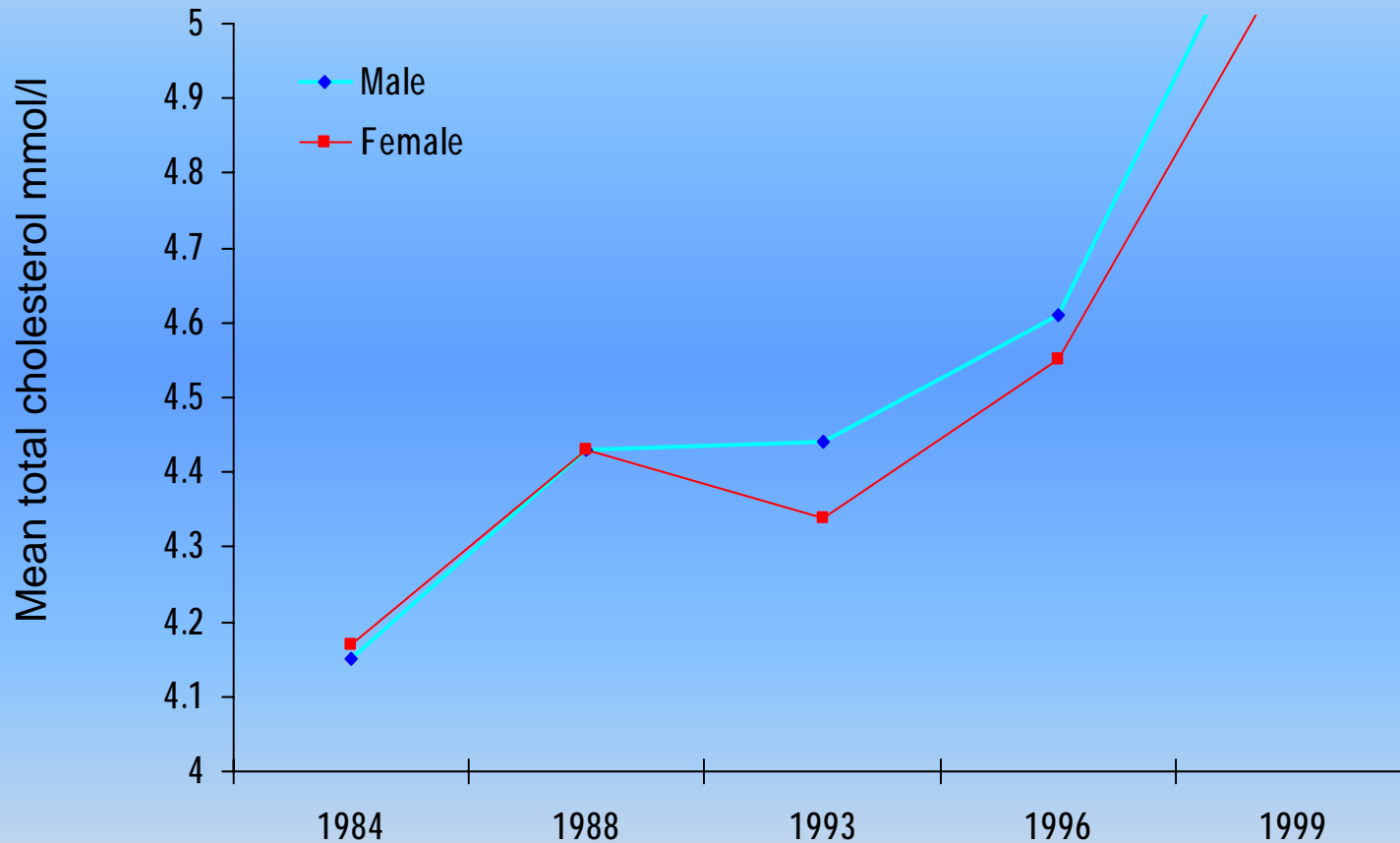
- **Staples**
- **Fruit and vegetables**
- **Fibre**
- **Water**

Figure 2: Relationship Between the Proportion of Energy from each Food Source and Gross National Product per capita with the Proportion of the Population Residing in Urban Areas placed at 75%, 1990



Source: Food balance data from the FAO; GNP data from the World Bank; regression work by UNC-CH

Trends in mean total cholesterol; Beijing China, 25-64



New GLOBAL Types and Effects of Malnutrition

Source: Gardner & Halweil 2000, based on WHO, IFPRI, ACC/SCN data

<i>Type of malnutrition</i>	<i>Effect</i>	<i>No. people affected (bn)</i>
Hunger	Deficiency of calories & protein	At least 1.2bn
Micro-nutrient deficiency	Deficiency of vitamins and minerals	2.0-3.5bn
Over-consumption	Excess of calories, often accompanied by deficiency of vitamins and minerals	1.2-1.7bn

Environmental externalities

Examples are numerous (e.g. soil, climate change, waste etc).

Here look at:

- **Water**
- **Agrichemicals**
- **Assessment of externalities of the weekly food shopping basket (UK)**

Global Water

Water for human use:

- **Agriculture use = 70%**
- **Industry = 22%**
- **Drinking = 8%**

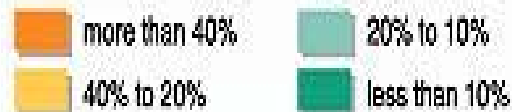
(Stockholm International Water Institute 2001)

→ **Water Stress**

Freshwater stress



water withdrawal as percentage of total available



GRID
Arendal UNEP

GRAPHIC DESIGN: PHILIPPE REKADEWICZ

Source: Global environment outlook 2000 (GEO), UNEP, Earthscan, London, 1999.

Source:<http://www.solcomhouse.com/drought.htm>

Accessed 17 May 2004

Water futures

- **2000-2020 : water availability for humans is expected to drop by *one-third***
- **Water scarcity or stress (having less than 1,700 cubic metres of water per person per year) is estimated to affect 40% of humanity by 2050**

Consequences:

- 1. increased food prices and health threats;*
- 2. poor countries likely to be most heavily affected*

Stockholm International Water Institute (2003). *General water statistics: World Water Week Symposium data sheets*, August 10-16. Stockholm: Stockholm International Water Institute www.siwi.org/waterweek2003
Cosgrave W, Vice-President of the World Water Council, quoted in Houlder V (2003), 'World in drier straits', *Financial Times*, 11 August, p 16

Assessing full costs of pesticide use, US\$ m, p.a.

Pretty J, ed, 2005, *Pesticide Detox*, Earthscan p46

<i>Damage costs</i>	<i>China</i>	<i>Germany</i>	<i>UK</i>	<i>USA</i>
Drinking water treatment	nd	88	182	897
Human health costs	900	14	2	132
Pollution incidents	nd	51	6	128
Biodiversity adverse effects	350	9	64	280
Climate effects from manufacture	148	4	3	55
TOTALS	1398	166	257	1492

UK food's environmental externalities

(Pretty et al, *Food Policy*, 30 (1) 2005)

IF:

- all farms in the UK to turn organic - environmental costs would fall £1.5bn → <£400m = saving £1.1bn pa
- all food sourced from within 20km of where it was consumed, environmental and congestion costs would fall >£2.3bn to <£230m = saving of £2.1bn
- shopping by car were to be replaced by travel by bus, bicycle or walking, environmental and congestion by a further £1.1bn: from £1.3bn → @£100m.

UK weekly food basket → externalities

= @ 12% extra costs

Pretty et al, *Food Policy*, 30 (1), 2005

- **£24.79** spent on food per UK person per week (of which **£7.53** = eating out)

This spend generates additional externalities worth £2.91 (+11.8%):

- **81p** farming externalities
- **76p** on road transportation: farms → shop
- **93p** government subsidies
- **41p** on consumers traveling to/from shops

Core Argument 3

- **Such evidence is not yet fully being translated into, or reflected in, policy**
- **The gap between this evidence and policy is beginning to be acknowledged**
- **Policy formulations emerging at governmental / intergovernmental and corporate levels of policy-making → partly, filling the gap**

Examples of (some) acknowledgement of evidence: intergovernmental

- **Global/international:**

- *WHO & FAO Technical Report 916 - Diet, Nutrition & the Prevention of Chronic Disease*
- *International Panel on Climate Change*
- *UNEP Millennium Environmental Assessment*

- **EU:**

- *CAP reform → environmental (& social/cultural)*
- *DG SANCO Roundtable on Obesity, 2004ff*

Examples of evidence being acknowledged: National

- **UK: Healthcare costs (of technical fixes to CHD)**
 - *Wanless report to UK Treasury (2002 & 2004)*
- **USA: Surgeon General 2002 on obesity**

Full engagement can work e.g. packaging waste & Germany

1991 → tougher recycling regulations put responsibility on manufacturers for their packaging waste and recycling

→ per capita consumption of packaging has declined:

- 94.7kg in 1991**
- to 82kg by 1998**

(INCPEN 2002)

Policy responses: inter-governmental

- **Inter-governmental UN**
 - *WHO Global Strategy on Diet, Physical Activity and Health 2004*
 - *FAO Sustainable Agriculture & Rural Development – SARD Initiative*
- **Inter-governmental EU:**
 - *CAP reform & multifunctional agriculture model*
 - *Food safety reform*
 - *New supply chain governance- EU Food Law general principles & traceability*
 - *European Commission's Roundtable on obesity*

EU Round table on obesity: different policy actions?

- **Stakeholders (at Obesity roundtable 2004):**
 - *NGO alliances EPHA & European Heart Network; increased focus for consumer groups*
 - *Industry responses (CIAA, Euro Commerce)? Differentiated responses: winners and losers?*
- **Voluntary v regulatory approach**
- **Public authorities direct a voluntary response OR threat of regulation**

Emerging formulation of national governmental policy responses

- **Adding *social* value *in situ*: State support for national/local food supply chains**
- **National State-led voluntary initiatives:**
 - *Pesticide reduction*
 - *Signposting (based on nutrient profiles)*
- **New role for food taxes?**

Adding *social* value to supply chains

- **Through national/regional social supports:**
- **most recent CAP reform → single farm payment signals**
- **But...Special & Differential Treatment for LDCs (Doha Round)**
- **capacity building for LDCs to add value**

Adding social value *in situ*

- Policy supports for local and national based producers to capture supply chain value:
 - *Infrastructure support e.g. supply chain to benefit local producers*
 - *Thus, recognition of the social elements of food production*
 - *Creative public procurement policy*
 - *Promotion of brand and provenance designation existing & new (Assured Farm Standards)*

The above policy responses are accompanied by corporate moves

- **Marine Stewardship Council: NZ, Mexico, Scotland, Alaska, S Africa, UK, Australia**
- **Sustainable Agriculture Initiative: e.g. Unilever, Dole, McDonalds, Kraft, Nestlé**
- **CIES: global food safety standards**
- **EUREP-GAP: from Europe → USA → global**
- **New product lines (e.g. functional foods & nutrigenomic products)**

Future?

- **Continuing debate about forms of governmental action**
- **Continuing corporate activity**
- **Continuing tension over values**
- **Continued battle for hearts and minds of consumers**