

Sustainable Diets and Biodiversity: The challenge for policy, evidence and behaviour change

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Diets: united against hunger,
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**Food systems
with
'Poly-values'
to deliver
'Omni-standards'**

Issues to address in food

T Lang (2010) *Environment & Planning A*, August

Quality:

- Taste
- Seasonality
- Cosmetic
- Fresh (?)
- Identity / authenticity

Social values:

- Pleasure
- Localness (identity)
- Animal welfare
- Working conditions
- Equality
- Cost internalisation
- Trust

Environmental:

- Climate change
- Water
- Land use
- Soil
- Biodiversity
- Waste reduction

Health:

- Safety
- Nutrition
- Access / affordability
- Information & education

The need to define Sustainable Diets

Possible processes:

Expert Study Group?

Commission?

Advisory Code?

Guidelines?

Convention?

Evolution of Food Rights

- 1948: Universal Declaration of Human Rights
- 1989: UN study 'Right to Adequate Food'
- 1999: NGO Code of Conduct
- 1999: UN ESCR General Comment 12
- 2000: UN Special Rapporteur created
- 2004: Voluntary Guidelines on Right to Food

Source: Lang, Barling, Caraher 2009 *Food Policy* Oxford University Press chapt 8

Biodiversity protection *versus* Food?

Or

**can Biodiversity be
incorporated into food?**

We eat genetic diversity

- 1000s plant species historically used as food ⁽¹⁾
- 146 country study found 103 species gave 90% of world's plant food supply ⁽²⁾
- Gene pool decline also within individual crops: FAO estimate c 75% genetic diversity of agric crops lost in C20th ⁽³⁾
- RAFI survey: US crop species found 97% varieties listed in old USDA catalogues now extinct ⁽⁴⁾
- Studies in Germany found c90% historical diversity of crops is lost & in S Italy c75% crop varieties gone ⁽⁵⁾

1 Stolten S, et al (2005). Food Stores. WWF UK

2 Prescott-Allen, R and C Prescott-Allen (1990); How Many Plants Feed the World?, *Conservation Biology*, 4:4, 365-374

3 FAO (1998) *Special: Biodiversity for Food and Agriculture*, Rome <http://www.fao.org/sd/EPdirect/EPre0039.htm>

4 Fowler C, Mooney P(1990); *The Threatened Gene* Lutworth Press

5. K Hammer, T Gladis , A Diederichsen (2002) 'In situ and on-farm management of plant genetic resources, *Europ. J. Agronomy* 19, 509-517

**Do we eat for health?
Or eat what we like?
Or within cultural rules?
Or within environmental limits?

Or try to merge all these?**

Some Government Initiatives

- Sweden: *Environmentally Effective Food Choices* (2009)
- D: CSD (2008) *Sustainable Shopping Basket*
- NL: *Towards Sustainable Production & Consumption* (June 2008):
- UK: *Food Matters* (2008) → *Food 2030* (2010)
- France (2009-11): INRA-CIRAD project
- Australia: Climate Change / Water crises

some NGOs on Sustainable Diets

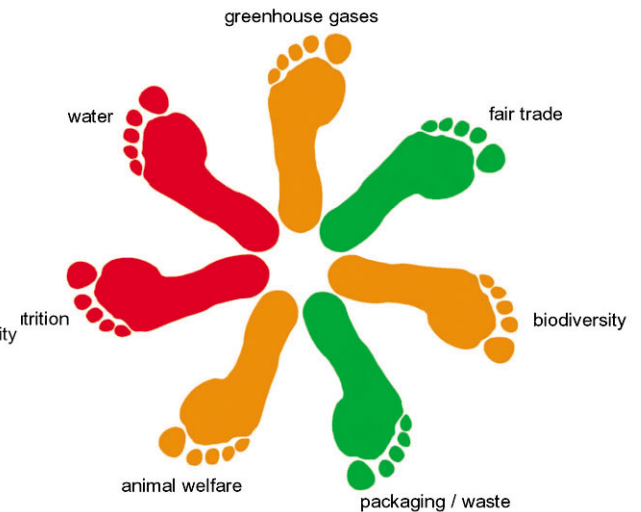
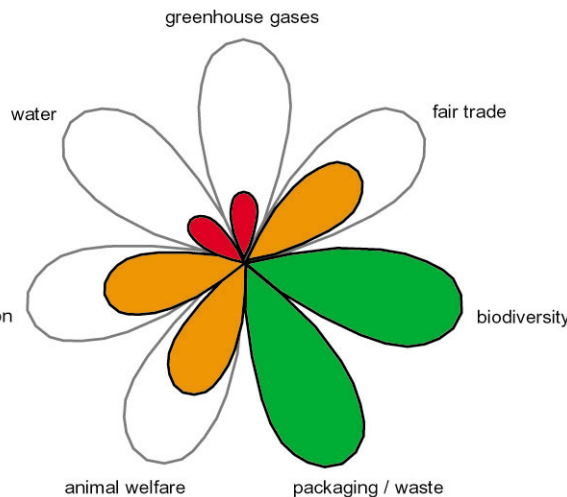
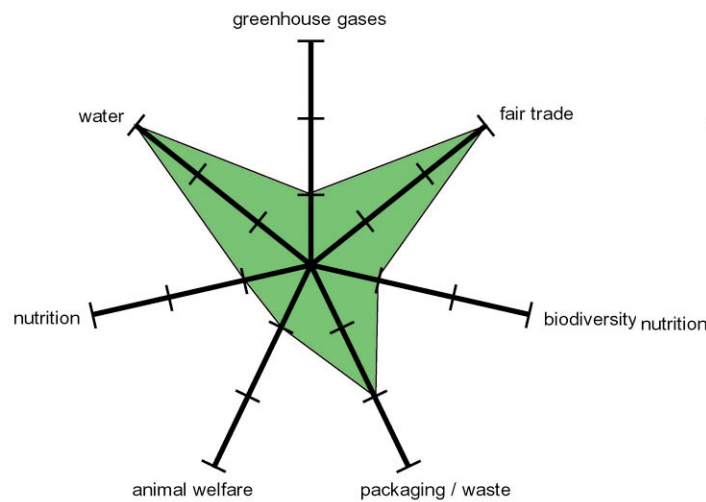
WWF: One Planet Diet

Sustain: label

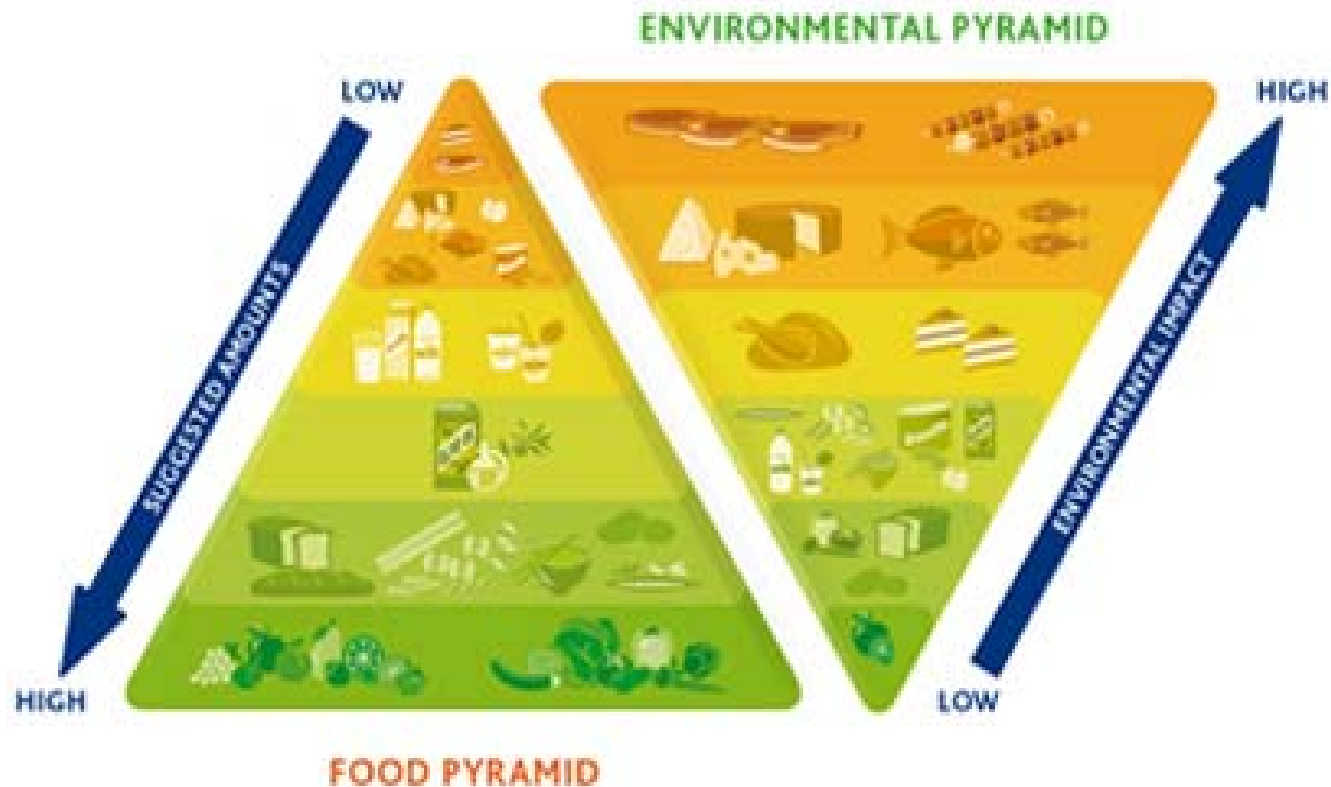
FCRN: How low can we go?

CSPI: 6 arguments for greener diet

Vancouver Diet / Fife Diet (localism)



Corporation initiatives: eg Barilla



- Source: Barilla Centre for Food & Nutrition
<http://www.barillacfn.com/en> Nov 2010

More company actions

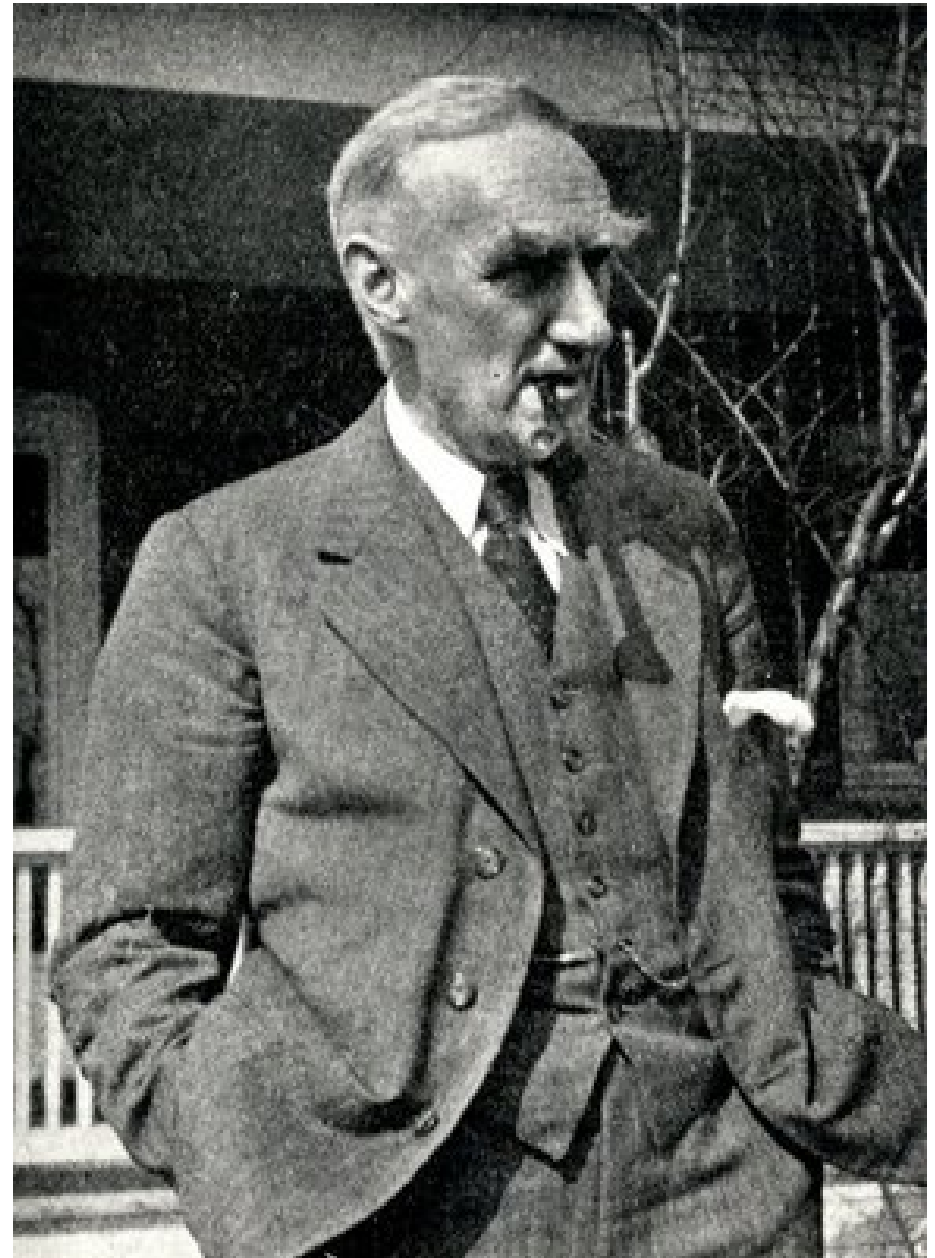
- International companies get organised:
 - 2002: SAI launched Groupe Danone, Nestlé, Unilever
 - 2009 (Oct 16): G30 top TNCs initiative Coca-Cola, Tesco, Unilever, News International
- UK's big food companies get active too:
 - 2007: IGD Food Industry Sustainability Strategy Champions Group focus on low carbon + ethics
 - 2008: Tesco gives £25m to University of Manchester Sustainable Consumption Institute
 - 3 retailers adopt 'choice-editing' policy eg Marks & Spencer *Plan A*, Co-operative Group, Waitrose
- But... a product approach, not overall diet

3 Traditions of Nutrition Science

- **Life Sciences**
- **Social**
- **Environmental**

Sir John Boyd Orr (1880-1971)

1st D-G of FAO



Their legacy is the Productionist Paradigm (a 1930s model)

after: Lang & Heasman (2004)*Food Wars*

**Science + capital → output
→ distribution - waste →
cheaper food → health**

= progress

**Rev. Dr Thomas
Malthus
(1766-1834)**

An Essay on the Principle of Population
(1798)



10k years of food supply change

- Settled agric (8500 BCE ff)
 - Iron age (5000–6000 BCE)
 - Feudal & peasant agriculture (varies by region & empire)
 - Industrial Revolution (C18th)
 - Chemical Rev'n (C19th)
 - Mendelian genetics (1860s but applied C20th)
 - Oil era (C20th)
 - Green Rev'n (1960s ff)
 - Modern livestock revolution (1980s ff)
- Emerging*
- Ecological (C21st ?)
 - Bio-geno-nano-lifesci-technology (C21st ?)

John D Rockefeller
(1839-1937)

Founder of Standard Oil



C21st 'New Fundamentals'

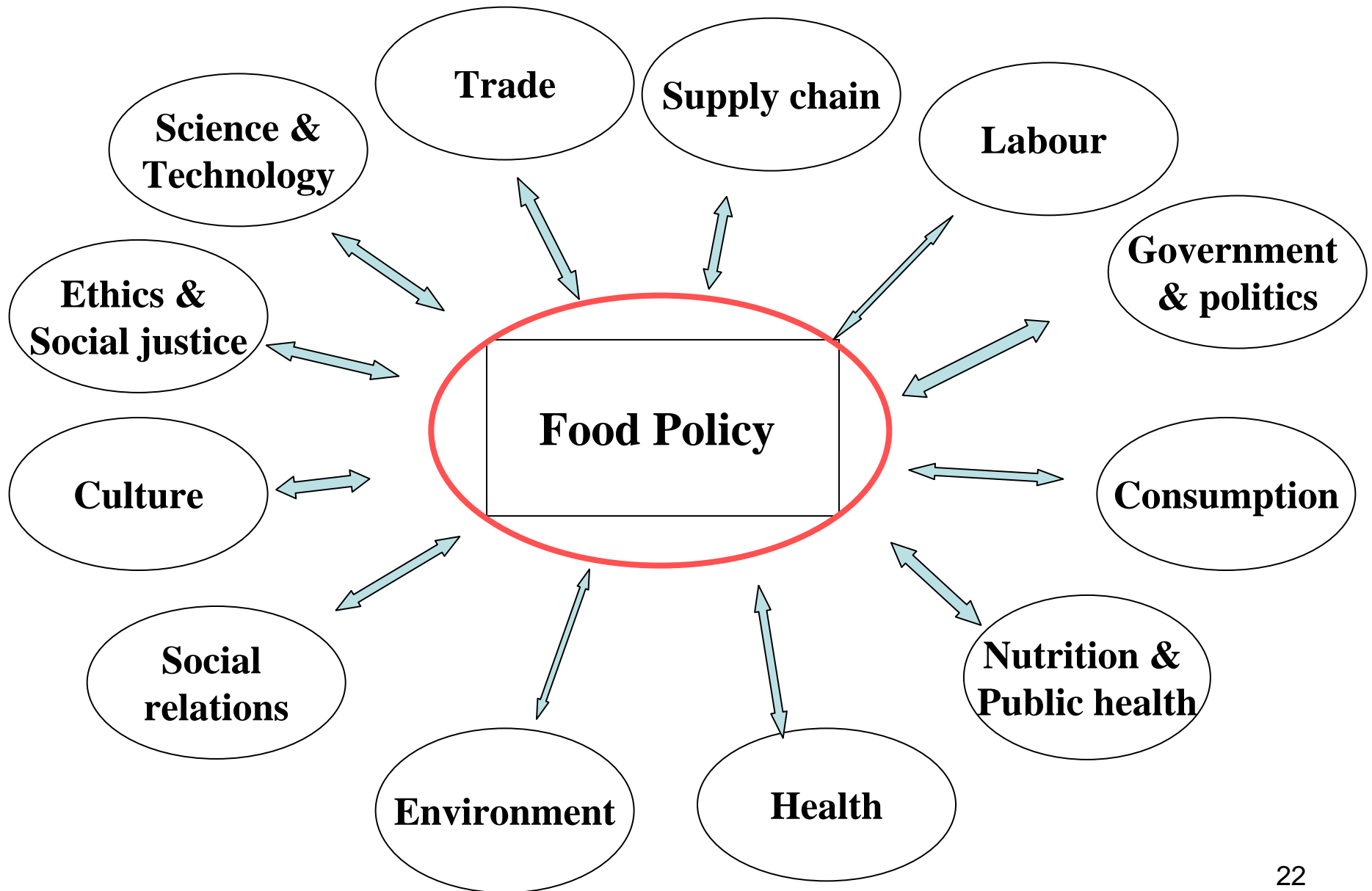
Chatham House Food project 2006-09 etc

- Climate change
- Fuel / oil / energy
- Water
- Land use
- Biodiversity
- Labour
- Population (9bn 2050)
- Urbanisation
- Affluence (BRICs +)
- Inequality
- Nutrition transition
- Healthcare costs
- Waste

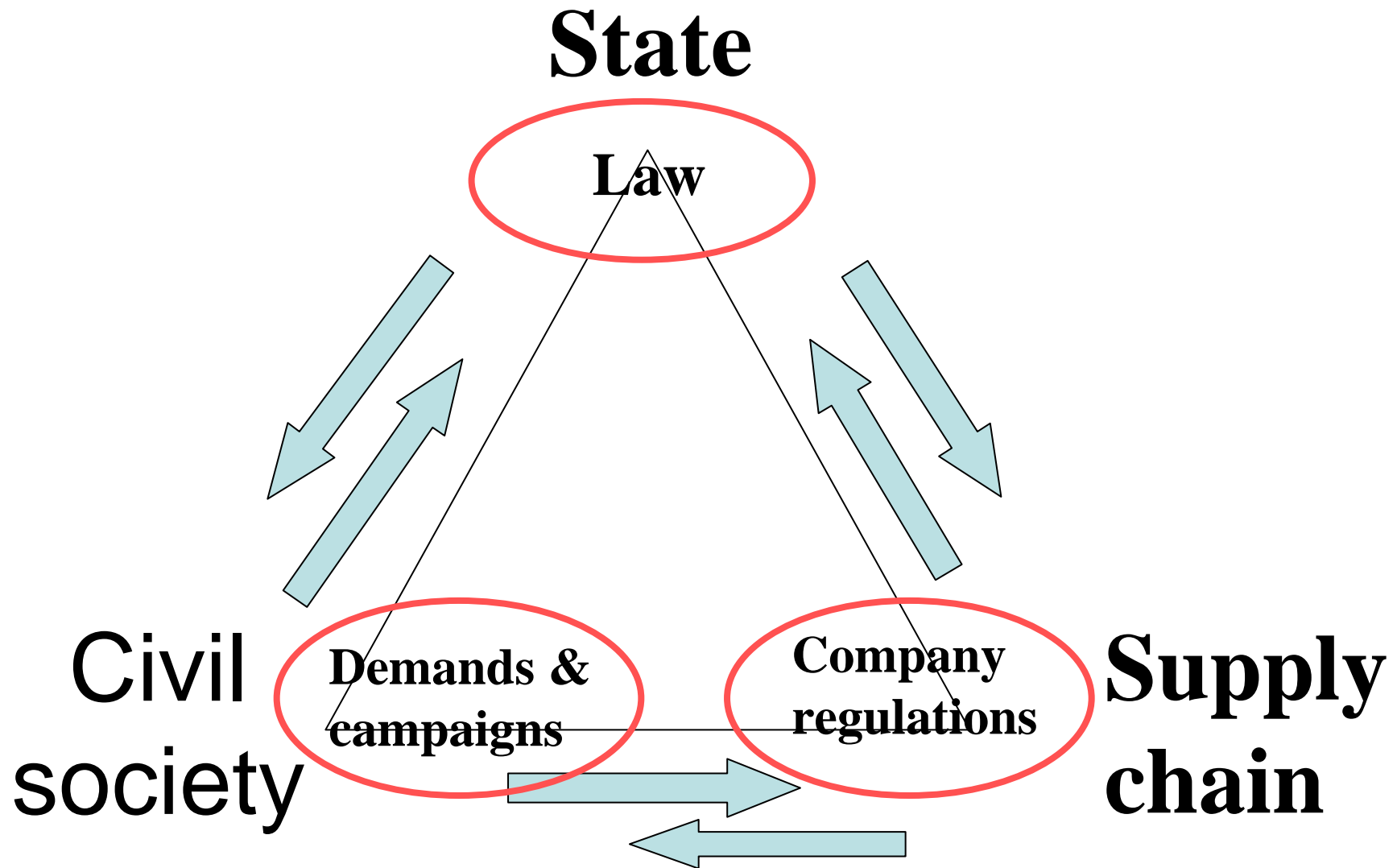
Modern food culture: celebrities, burgerisation, supermarketisation



Food Policy juggles competing demands



Triangular dynamic of food governance



Do we change the menu?

FOOD	ISSUE	WHAT TO DO
Meat	Cancer; water; land use	Offer less; only grass-fed
Coffee / tea	Water; land use	Less; only fair trade; drink water
Fruit	All year round?	Seasonal
Fish	Health vs. fish stock collapse	Eat less; only MSC?; alternatives
Vegetables	Health; water; GHGs; Kenyan beans?	Seasonal greens

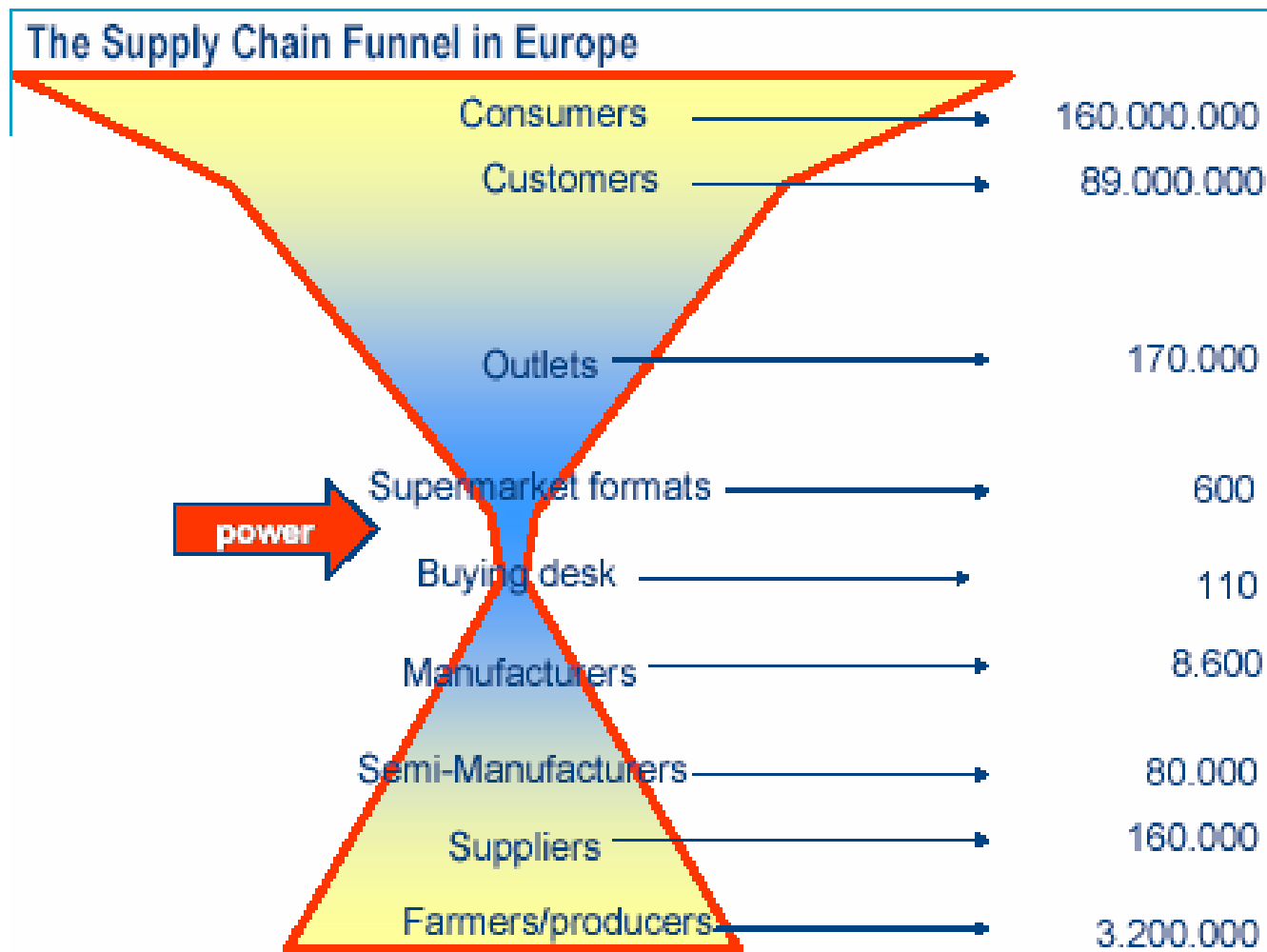
Time for clarification

Tactics for Behaviour Change

- **Education**
- **Threats**
- **Exposés**
- **Financial costs**
- **Cultural appeals**
- **Enlightened self-interest**

Conclusions

Power within the EU supply chain (15 MS)



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

Our Tasks

- 1. Define Sustainable Diets**
- 2. Clarify role of Biodiversity**
- 3. Appropriate institutions**
- 4. Engage with consumerism**
- 5. Create eco-nutrition guidelines**

Thanks!

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