Sustainable Diets from Sustainable Food Systems: is this too much to ask?

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Paper to Scientific Meeting of the National Institute for Health Research Biomedical Research Unit in Nutrition, Diet and Lifestyle at University Hospitals Bristol NHS Foundation Trust and the University of Bristol - held at Mshed, Bristol, October 2, 2013
The problem

• The food system is in trouble for different reasons: over-, under- and mal-consumption
• The food security debate focusses on production as though under-consumption is the sole/main problem.....
• ....Yet the global nutrition transition co-exists with:
  – non-communicable disease and healthcare costs
  – heavy environmental impact
  – huge inequalities in and between countries
• The 21st century is surely about addressing complexity:
  – The ‘how not just what is to be produced/eaten’ challenge?
  – Shift from human focus to Ecological Public Health framework?
  – The whole mix of food systems, society and economy?
  – Reassessing what a good diet is (eco-nutrition)? Fish - yes or no?
• New goal: sustainable diets from sustainable food systems
There is enough food to feed the world

• ...if measured by calories
• The problem is *not just mal-distribution*
• The food system now faces multiple crises:
  • Environment: climate, H2O, land, biodiversity, etc
  • Health: hunger, obesity, etc
  • Economics: prices, labour, healthcare, etc
  • Social inequality: life chances, demography, etc
• ie the problem of sustainability
Hunger: the food system is already failing

It costs on average just US 25 cents a day to feed a hungry child and change her life forever.

While food is the most basic of human needs required for survival, on average, 1 in 8 people go to bed hungry each night.

Hunger kills, maims, reduces IQ, towers wages, reduces school attendance and undermines economic growth.

Hunger Map 2012

Proportion of total population undernourished, 2010-12

WFP World Food Programme
Food’s environmental impact

sources see: Rayner & Lang World Nutrition April 2012
http://www.wphna.org/2012_apr_wn3_commentary_public_health.htm

• Modern agriculture = c14% greenhouse gas (GHG) (UN)
• Of agriculture-related GHGs (Stern 2007)
  – animals are responsible for 31%
  – fertilizers (nitrous oxide: N2O) for 38%.
• Meat & dairy = 24% of EU consumers’ impact (EIPRO 2009)
• 40- 50% cereals fed to animals. (Steinfeld/FAO 2008)
• 15 / 24 world ecosystem services = degraded or unsustainably used
  – Food is a major source of this degradation (MEA 2005)
• Global agriculture uses 70% of all freshwater extracted for human use (WWF Thirsty Crops)
More....

• “Intensive livestock production is probably the largest sector-specific source of water pollution” (UN World Economic and Social Survey 2011)

• Intensive water use for food products:  
  (Chapagain Hoekstra 2007):
  – 200 litres water to produce 200ml milk
  – 2400 litres water to produce a 150g hamburger

• C20th lost c75% genetic diversity of domestic agricultural crops (FAO 1995)

• 52% of global wild fish stocks ‘fully exploited’
  FAO SOFA 2007
Planetary Boundaries already exceeded?
Food and NCDs (a familiar story)

WHO (2010) *Global Status Report on NCDs*


- Tobacco
- Alcohol
- Salt
- Saturated fats
- Trans fats
- etc
- Blood pressure
- Overweight
- Social gradient
- Raised cholesterol
- etc
Diet and cancers: factors → advice

WCRF/AIRC 2007 report

- **Body fatness**
  - Be as lean as possible within the normal range of body weight.
- **Physical activity**
  - Be physically active as part of everyday life.
- **Foods and drink that promote weight gain**
  - Limit consumption of energy-dense foods. Avoid sugary drinks.
- **Eat mostly foods of plant origin**
  - Eat mostly foods of plant origin.
- **Animal foods**
  - Limit intake of red meat and avoid processed meat.
- **Alcoholic drinks**
  - Limit alcoholic drinks.
- **Preservation, processing, preparation**
  - Limit consumption of salt. Avoid mouldy cereals (grains) or pulses (legumes).
- **Dietary supplements**
  - Aim to meet nutritional needs through diet alone.
- **Breastfeeding**
  - Mothers to breastfeed; children to be breastfed.
- **Cancer survivors**
  - Follow the recommendations for cancer prevention.
There is a cultural dimension to the health and environmental impact

- 20th century food revolution
- Aspirations undermine health
- Economic development shifts waste from farm to consumers
The 20th century food revolution

• What we eat: from simple to ‘ultra-processed’ (C Monteiro et al)
• How it is made: local → global
• Where we buy it: ‘supermarketisation’
• Logistics / transport
• How and where we consume
• Food’s meanings: aspirations, ‘modernity’
• Education: where we learn
• The ‘consciousness industries’: advertising
• Progress: redefining what it meant in food
‘Modern’ supply chains spread new culture

(photo G Rayner - Tesco in Thailand)


Note: figures for 1980 and 1990 shares are not shown for sake of clarity.
Figure 2. Per capita food losses and waste, at consumption and pre-consumptions stages, in different regions

Per capita food losses and waste (kg/year)

Source: Gustavsson et al/FAO 2011
http://www.fao.org/docrep/014/mb060e/mb060e00.pdf
So what can we do?

Weak government / strong companies
Unclear messages about good diets
How to link health + environment
Goals for C 21st policy processes:

• The Goals
  • Sustainable Diets from Sustainable Food Systems
  • Priority to reducing Evidence-Policy gap in food policy
  • Reshape consumer aspirations around sustainable diets
  • New frameworks for whole chain sustainability

• This requires:
  • Integrated food chain analysis:
    o Agri-food-health-environment- society-economy etc
  • Rationalisation of initiatives (end policy cacophony)
  • Stop being frightened of consumers
    o World cannot eat like the West; nor should it!

  o We need a new Hot Springs framework (1943)!
http://www.fao.org/docrep/009/p4228e/P4228E04.htm
Need to mainstream and to redefine what a good diet is / revise FBDGs

• Food-Based Dietary Guidelines (FBDGs) no longer an adequate policy bedrock: 

• FBDGs are environment blind (and Environmentalists not interested in NCDs)

• We need new ‘cultural’ pointers:
  I. To link health to environment in food policy
  II. To create new cultural ‘rules’ for everyday eating
  III. To set indicators for judging a good food system
What would food systems look like if built for health and eco-systems?

• Contract & converge (Royal Society 2012 People & Planet report):
  – Rich societies cut and Poor societies eat more
  – All restructured around low impact diets

• Rebalanced financial flows (growers get too little):
  – UK (agric 8%, manuf 28%, retail 29%, catering 25%)
  – Shift incentives (biofuels, commodities, ecosystems)

• More focus on horticulture within ‘nutrition-sensitive agriculture’:
  – Biodiversity in field and to the stomach (FAO&Bioversity 2012)
  – 2x Fruit & Veg = 180k jobs in USA (UCS 2012)
The Emerging Discourse

The good news....
Some signs of change
What is the current policy situation?

• Strong evidence of need to change yet slow / little behaviour change
• An example of wide Evidence-Policy-Behaviour gap
• Lack of high-level political engagement
• Focus on consumers (ie a moral appeal)
• Focus on waste (more than CO2 or H2O reduction)
• Growing but uneven interest in some policy sectors:
  – Some interest at the UN (WHO, FAO, UNEPO)
  – No full engagement in any national government
  – Tentative steps by some countries but no complete position
  – Growing interest among scientists and NGOs
Pointers for new Policy Frameworks:

- Intergovernmental:
  - EU SCP, World Bank, FAO (IAASTD, 2008)
- Government:
  - S, D, UK, F, etc
- Business:
  - WEF/ McKinsey (2010)
- Science
- Academics:
- NGOs:
  - Livewell Europe (2012)
Definitions of SDs are emerging:
FAO & Bioversity International,
International Scientific Symposium, Final Doc, 3-5 Nov 2010
http://www.fao.org/ag/humannutrition/23781-0e8d8dc364ee46865d5841c48976e9980.pdf

Sustainable Diets are those diets with low
environmental impacts which contribute to food
and nutrition security and to healthy life for
present and future generations. Sustainable
diets are protective and respectful of biodiversity
and ecosystems, culturally acceptable,
accessible, economically fair and affordable;
nutritionally adequate, safe and healthy; while
optimizing natural and human resources’.
## Examples of policy development (N Europe)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>AGENCY</th>
<th>POLICY / PROJECT</th>
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<tbody>
<tr>
<td>UK 2006</td>
<td>Sustainable Development Commission (SDC) &amp; National Consumer Council</td>
<td>Sustainable Consumption “I will if you will” – generic</td>
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<tr>
<td>Germany 2008</td>
<td>German Council for Sustainable Development</td>
<td>Sustainable Shopping Basket : includes food – lists labels and schemes</td>
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<tr>
<td>EU 2008</td>
<td>Sustainable Consumption-Production &amp; Sustainable Industrial Policy Action Plan</td>
<td>Voluntary initiatives – but little food focus</td>
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<td>Netherlands 2009</td>
<td>LNV Ministry – Policy outline for achieving Sustainable Food</td>
<td>Sustainable food production &amp; consumer educ. campaigns</td>
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<tr>
<td>Sweden 2009</td>
<td>National Food Administration (&amp; Swedish EPA) – notification to EU (withdrawn 2011)</td>
<td>Environmentally friendly food choices</td>
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<tr>
<td>UK 2009</td>
<td>SDC, Council of Food Policy Advisors → Dept Environment Food Rural Affairs (Defra)</td>
<td>Recommend defining low impact (sustainable) healthy diet</td>
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<tr>
<td>Finland 2010</td>
<td>Ministry of Agriculture &amp; Forestry</td>
<td>Food for Tomorrow</td>
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<tr>
<td>France 2012 ff</td>
<td>INRA-CIRAD &amp; National Research Agency</td>
<td>ALID sustainable food systems</td>
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Why delay? Sustainability threatens:

• Consumer choice culture
  – Expectations of lower price food
  – Sustainability requires re-internalisation of externalised costs (health, environment, etc)

• 20th century model of food and agriculture
  – Redefines productivity, efficiency, benefit, Progress
  – Requires a new ‘level playing field’ for markets
  – Redefines the goal of progress

• Divides actors in the food world:
  – Public goods not just private goods
  – How to achieve structural change? And who can do it?
The position in Nutrition Sciences (NSs)

- NSs have weak policy leverage (sad but true)
  - Nutrition is seen as ‘worthy’ but not important
  - Offering some technical thoughts
  - Dangerous terrain of NCDs associated with public health

- NSs offer split policy solutions:
  - Life sciences: → personalised medicine / food
  - Social → societal change (redistribution)
  - Eco-nutrition → live simply (one planet diet)

- Pioneers:
  - Herrin & Gussow (1989) Regional diet for Montana
  - Am Dietetic Assoc (2007): sustainable food (not diet)
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<tr>
<th>Quality</th>
<th>Social values</th>
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<tr>
<td>• Taste</td>
<td>• Pleasure</td>
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<tr>
<td>• Seasonality</td>
<td>• Identity</td>
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<tr>
<td>• Cosmetic</td>
<td>• Animal welfare</td>
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<tr>
<td>• Fresh (where appropriate)</td>
<td>• Equality &amp; justice</td>
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<tr>
<td>• Authenticity</td>
<td>• Trust</td>
</tr>
<tr>
<td></td>
<td>• Choice</td>
</tr>
<tr>
<td></td>
<td>• Skills (citizenship)</td>
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<table>
<thead>
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<th>Environment</th>
<th>Health</th>
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<td>• Climate change</td>
<td>• Safety</td>
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<tr>
<td>• Energy use</td>
<td>• Nutrition</td>
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<tr>
<td>• Water</td>
<td>• Equal access</td>
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<td>• Land use</td>
<td>• Availability</td>
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<tr>
<td>• Soil</td>
<td>• Social status/ affordability</td>
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<tr>
<td>• Biodiversity</td>
<td>• Information &amp; education</td>
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<td>• Waste reduction</td>
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Which policy actors might do what?

Signs of some movement....
A previous generations?
linking food, health, income & justice

John Boyd Orr
(1880-1971)
public health
1st D-G of FAO

Elsie Widdowson
(1908-2000)
nutritionist

George Stapledon
(1882-1960)
soil scientist
Where now? What needs to happen?

• A coherent position
• Summation of evidence
• Unified voice and intervention: multi-partners
• Strategy:
  – debate whether to pursue multi-criteria (omni-standards) or simple (eg CO2+Kcal)
  – Assess ‘enemies’, ‘friends’, costs
  – Agree policy entry points / schedule
Actions to improve public policy? [Is this likely?]

• WHO, FAO, UNEP do a joint high-level report? [feasible but long-term]
• Intergovernmental Panel on Sustainable Diets like IPCC? [expensive and hard]
• A consortium of governments eg north EU consortium? [feasible; some ground already]
• Agency consortium? [feasible but low impact]
What could Commerce do?

• put SustDiet into Corporate Responsibility:
  – Do this sectorally or consortia, eg via FDE, B20, SAI,
  – Create measures for Annual Reports to International Finance Reporting Standards (IFRS)
  – Single company leads: Barilla Centre (It), Marks & Spencer Plan A (UK)

• Labelling and consumer education:
  – Develop carbon + H2O labels integrated with nutrients

• Research:
Barilla Centre: combining nutrition with environment gains

What could professions & sciences do?

• Build up the discussion:
  – Events like this!
  – Professional meetings and special conferences

• Create a SustDiet taskforce, eg WPHNA?

• Create models with policy options

• Create an Interdisciplinary Working Group:
  – natural & social sciences
What could Civil Society do?

• Campaigns
  – To alter consumer culture eg WWF One Planet Diet
    http://www.oneplanetliving.org/index.html
  – To pressurise political / governmental processes

• Do more Education across the NGO sector
  – Eg UK’s new Eating Better coalition http://www.eating-better.org/

• Continue ‘democratic experimentation’:
  – Eg Fife Diet: http://www.fifediet.co.uk/, Vancouver Diet
    (relocalisation) http://www.vancouverislanddiet.com/

• Audit company behaviour
Conclusions

Sustainable diet issue is becoming ‘hot’
There are counter arguments

- **Sectoral**: SDs are Trojan horse for anti-meat & dairy lobby
- **Economic**: Let markets/prices/information resolve all this
- **Disciplinary**: environment is not nutrition’s problem
- **Methodological**: stick to what life cycle analysis (LCA) can measure.
  - Broad sustainability gets too complex.
  - Measure food products not total diets
- **Pragmatic**: don’t undermine Food Based Dietary Guidelines (FBDGs) which are:
  - hard fought for and recognised tool in policy-making
  - backed by WHO and FAO (bridge between them)
  - symbolise scientific knowledge’s triumph over ‘unscientific’ cultural knowledge
- **These suggest the issue is getting hot, but are not reasons to avoid the challenge of addressing Sustainable Diets**
Core Policy questions

• Sustainable Foods Products *or* Sustainable Diets?
• Danger of EU/food co.s settling on waste as core/sole issue?
• Individual *or* Population approach?
• Target food supply (upstream) *or* consumer (downstream)?
• Single foci (eg CO2 + calories) *or* Complex (eg SDC omni-standards)?
• Responsibilities: State? Company? Citizen?
• Policy Measures: ‘hard’ (regulation) *or* ‘soft’ (labels)?
• Guidelines: merge *or* separate nutrition + enviro?
• Guidelines at what level: national *or* international?
• Leadership and change agents?
We have much to do!

Thanks!

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