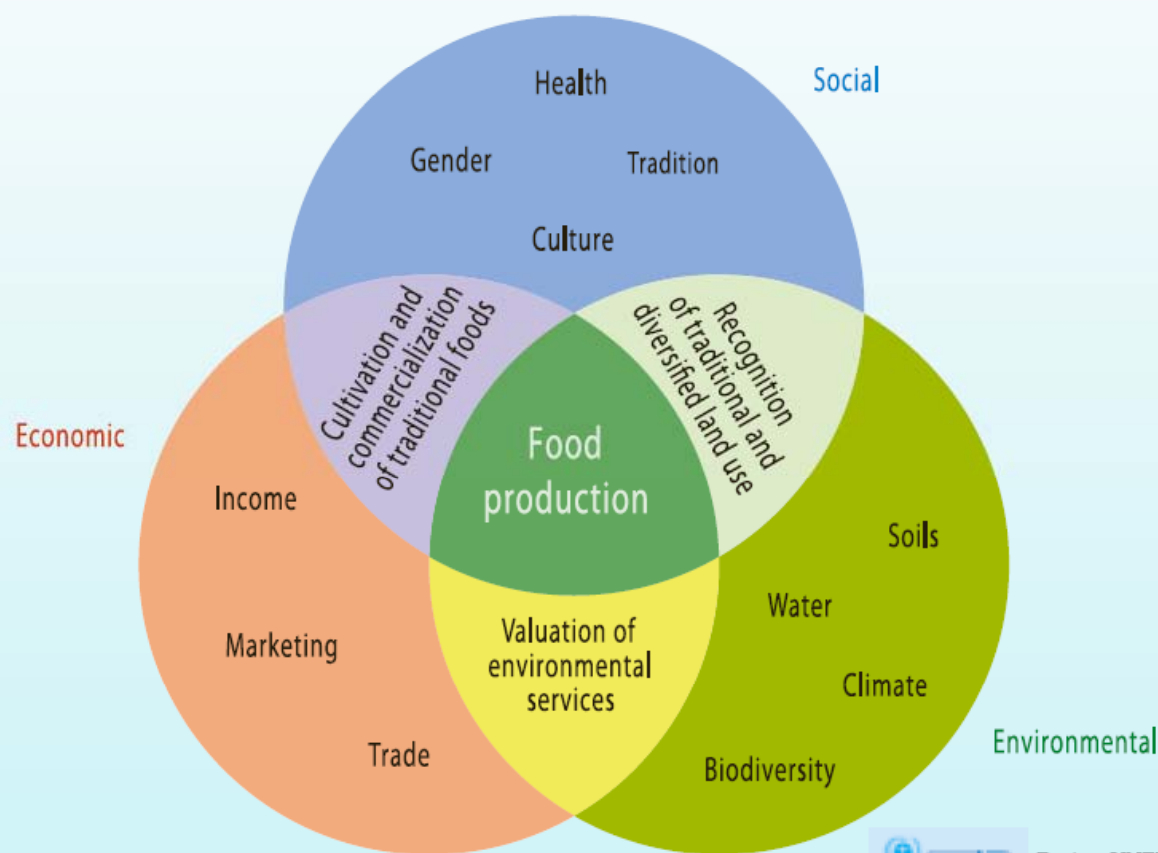


Many Crises, Many Meetings, NO CONNECTIONS

- **World Water Forum – March**
- **UNCSD – May**
- **FAO Food Crisis - November**
- **UNFCCC – December**
- **Global Economic Crisis – Many!**



Multifunctionality: the inescapable interconnectedness of agriculture's different roles and functions



Design: UNEP/GRID-Arendal, Ketill Berger



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Ignoring Multifunctionality

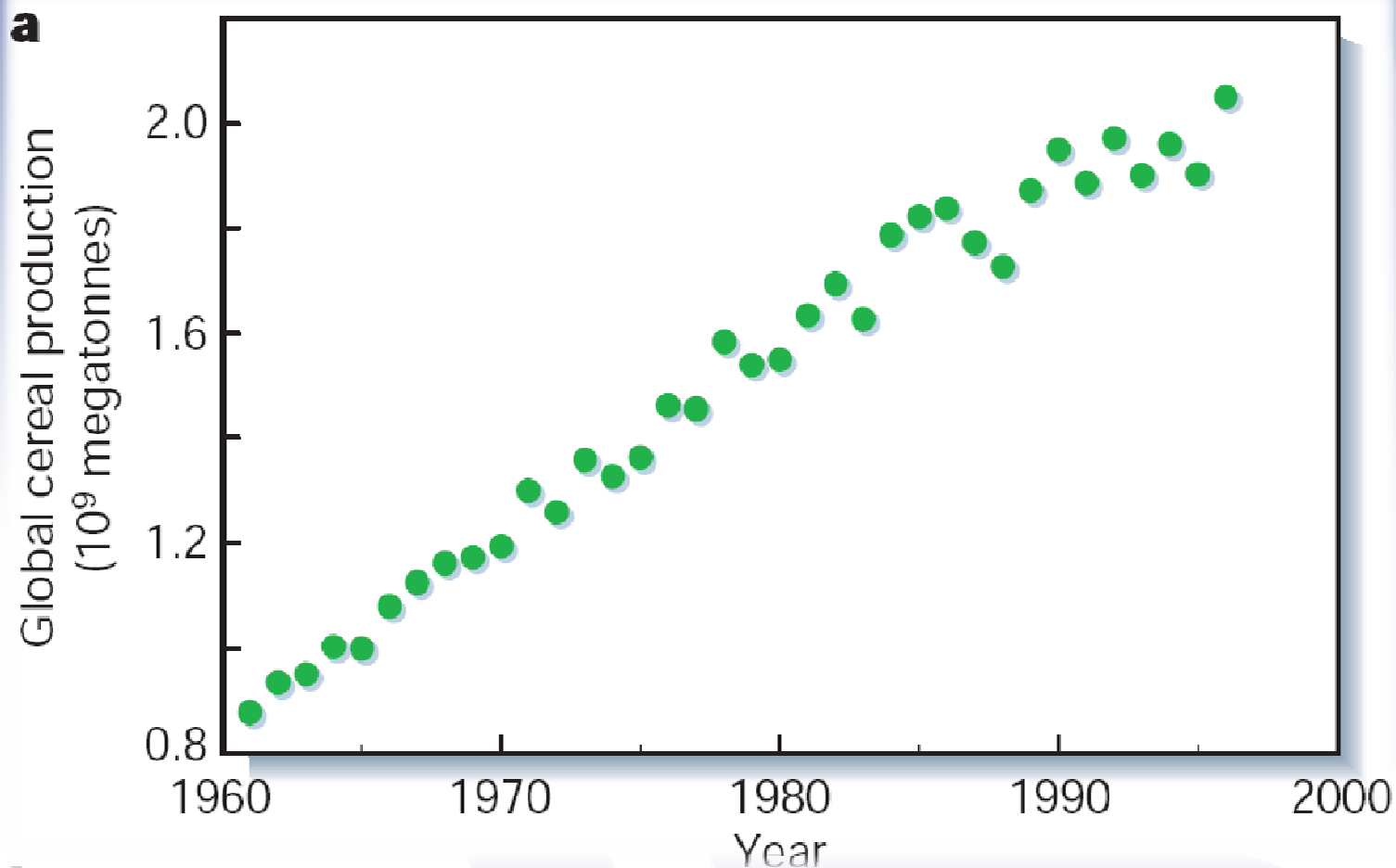
Technology as Solution

Markets as Solution



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Doubling of world cereal production

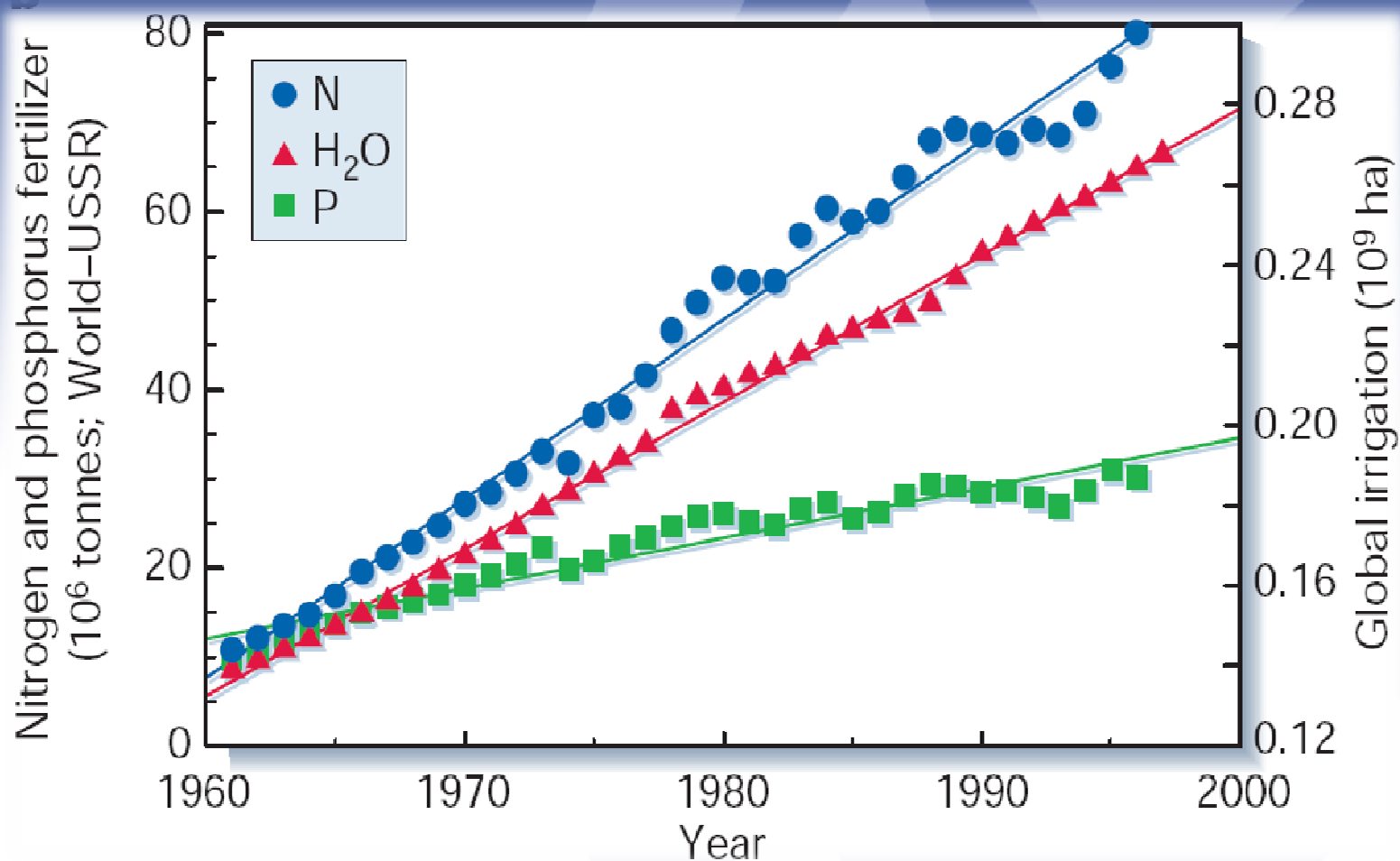


Source: IAASTD from David Tilman et. Al, Agricultural sustainability and intensive production practices, Nature 2002

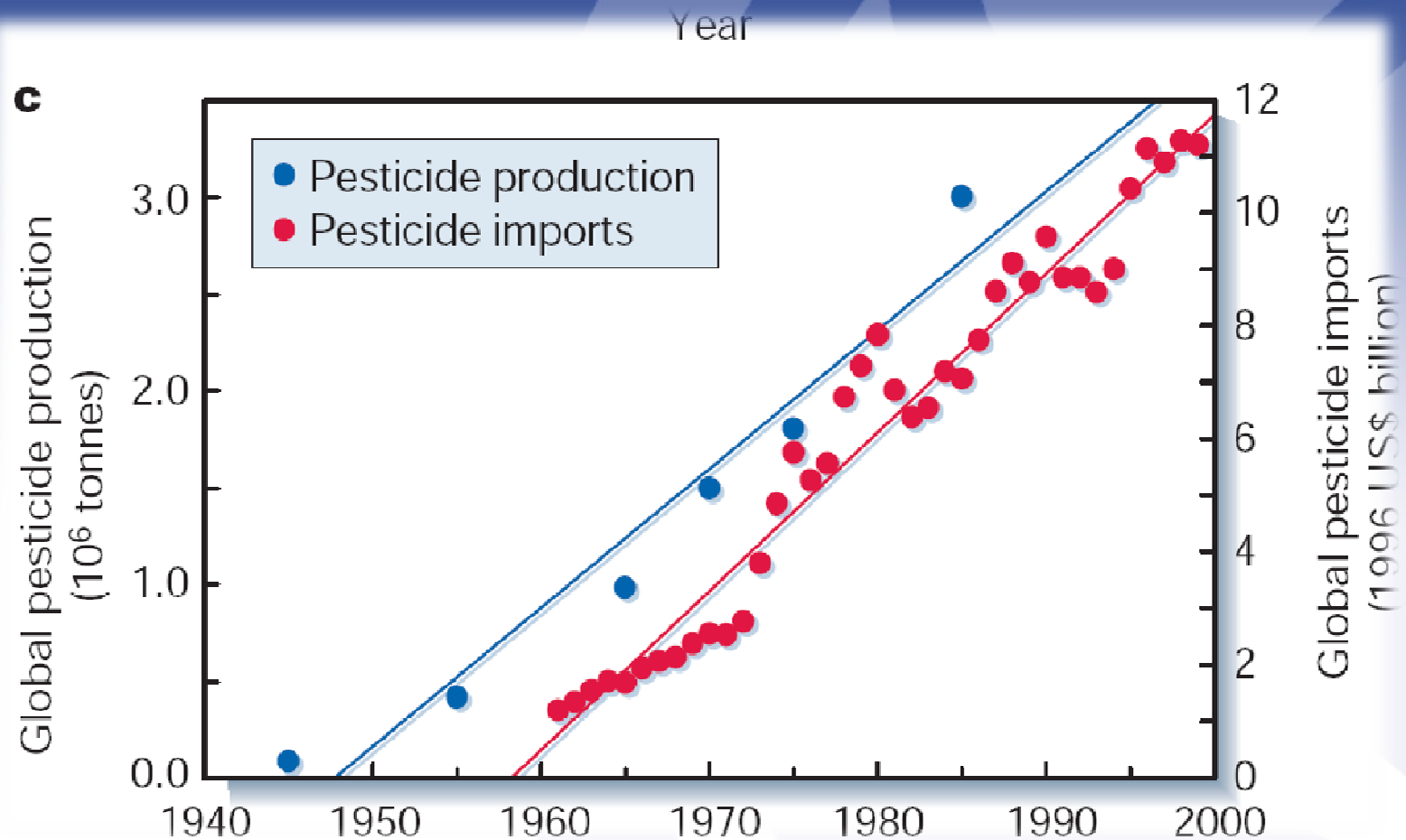


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By quadrupling freshwater use and input of artificial fertilizer



and tripling pesticide application



1980s-2000s: Freeing Food Trade

U.S., IMF/World Bank use Structural Adjustment and Trade Agreements to:

- Eliminate “trade distorting” food reserves
- De-fund domestic food sectors
- Encourage food imports, cash crop exports

1980: fewer than half of developing countries dependent of food imports

2007: two-thirds of developing countries dependent on food imports



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As of 2007...

Extreme weather events

Farmer Indebtedness

Food Stocks at Historic Lows

Market Concentration

End of Green Revolution



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2007-2008 Food Crisis

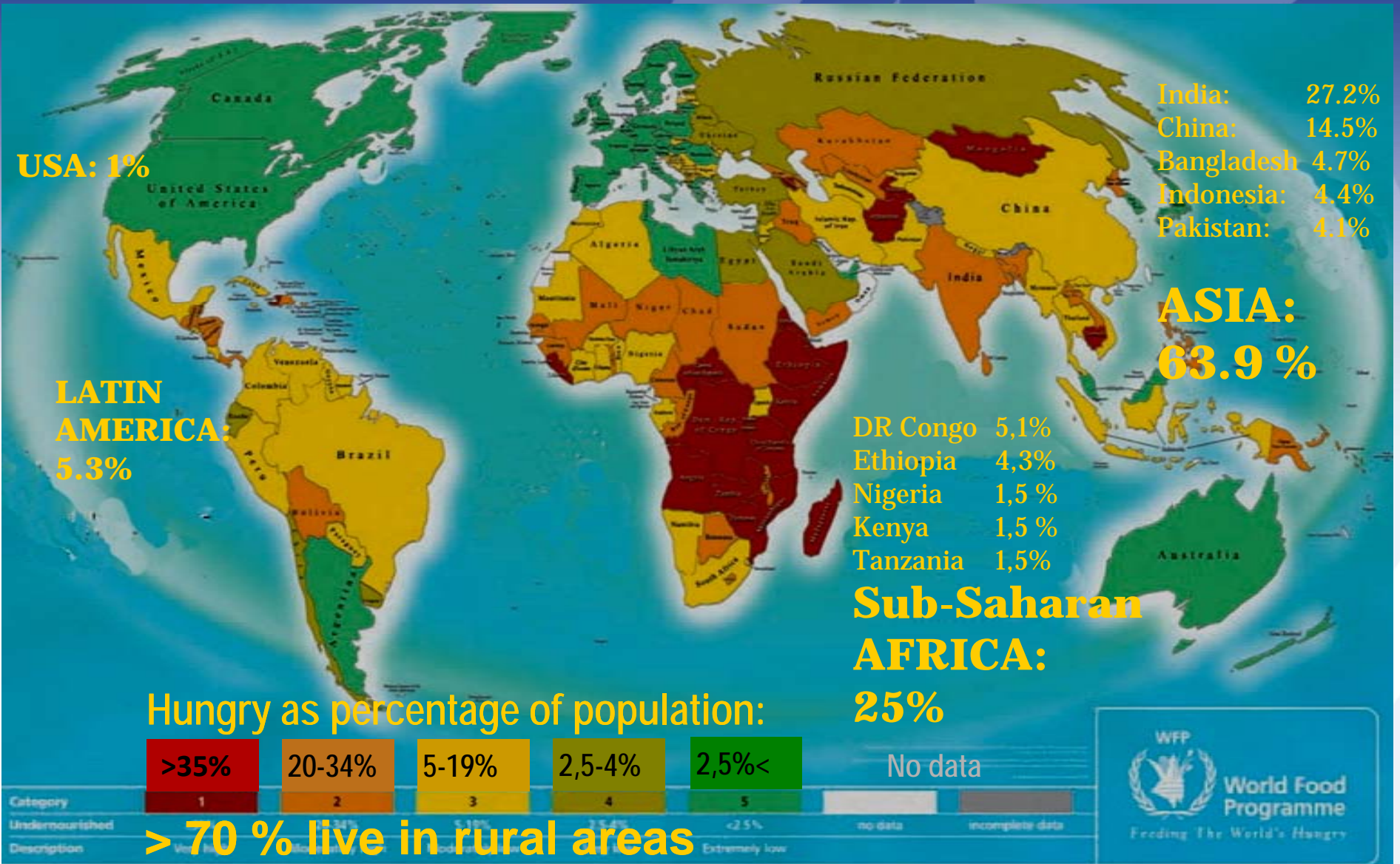
Triggers: Oil Prices, Biofuels, Speculation

**Cause: long-term undermining of
ecological, social and economic
underpinnings of agriculture**



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More than 963 million hungry world wide



Ag and Climate Solutions

Beware of narrow market or technical solutions!

- **Moral unacceptability**
- **Political Risk**



Ag Mitigation in Annex 1 Countries: Why?

- **16% of population**
- **26% of ag emissions**
- **Major importer food, feed, fuel**
- **Political, economic, cultural home of energy intensive food systems**
- **Political and moral necessity**



1. US Production Ag Policies and Climate Change

Offsets as a solution?

- General problems of offsets
- Uncertainty/non-equivalence
- Volatility of markets



US Ag Policies and Climate Change

Another approach:

- **Cap Emissions**
- **Set Performance Standards**
- **Fund through existing mechanisms**
- **Shift Subsidies**



Advantages

- **Simplicity**
- **Predictability**
- **Multifunctionality/Co-Benefits**

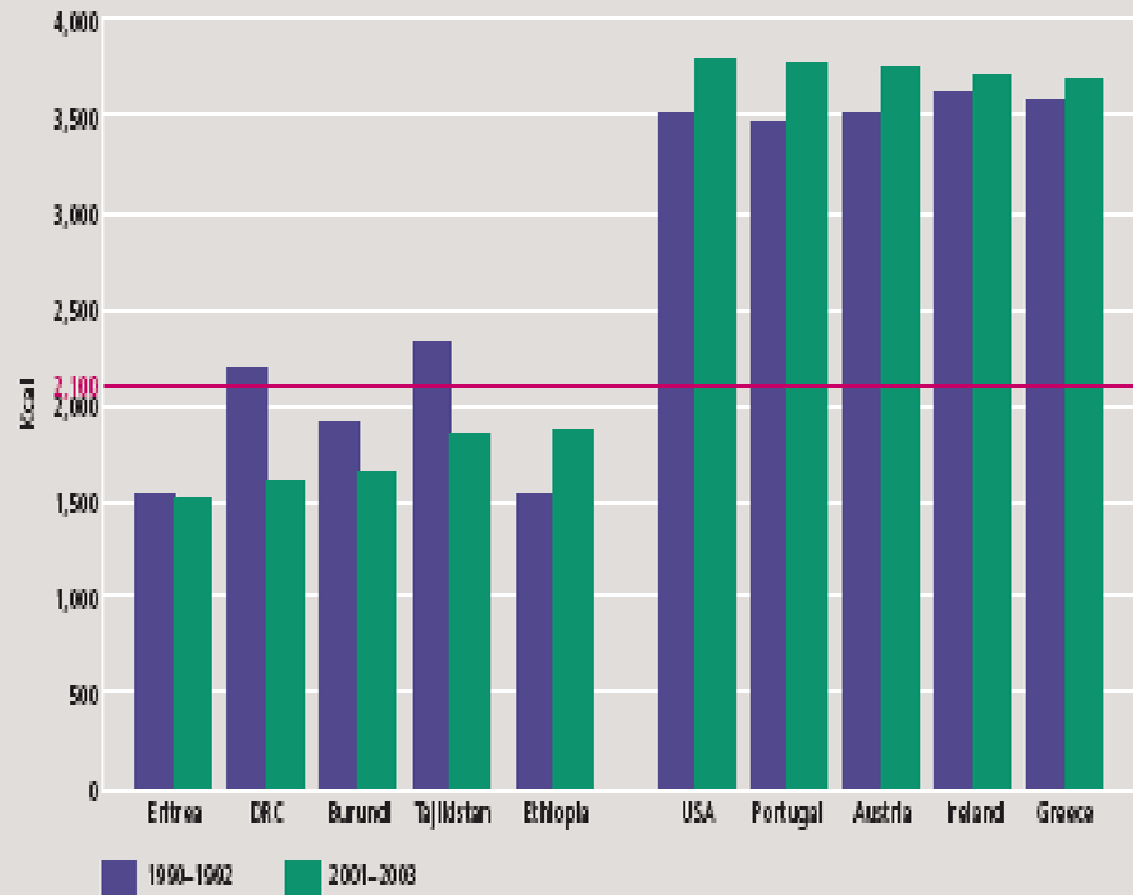


2. Re-Balancing the Western Diet

Impossible?

If we do it for the sake of reducing GHGs, then definitely!

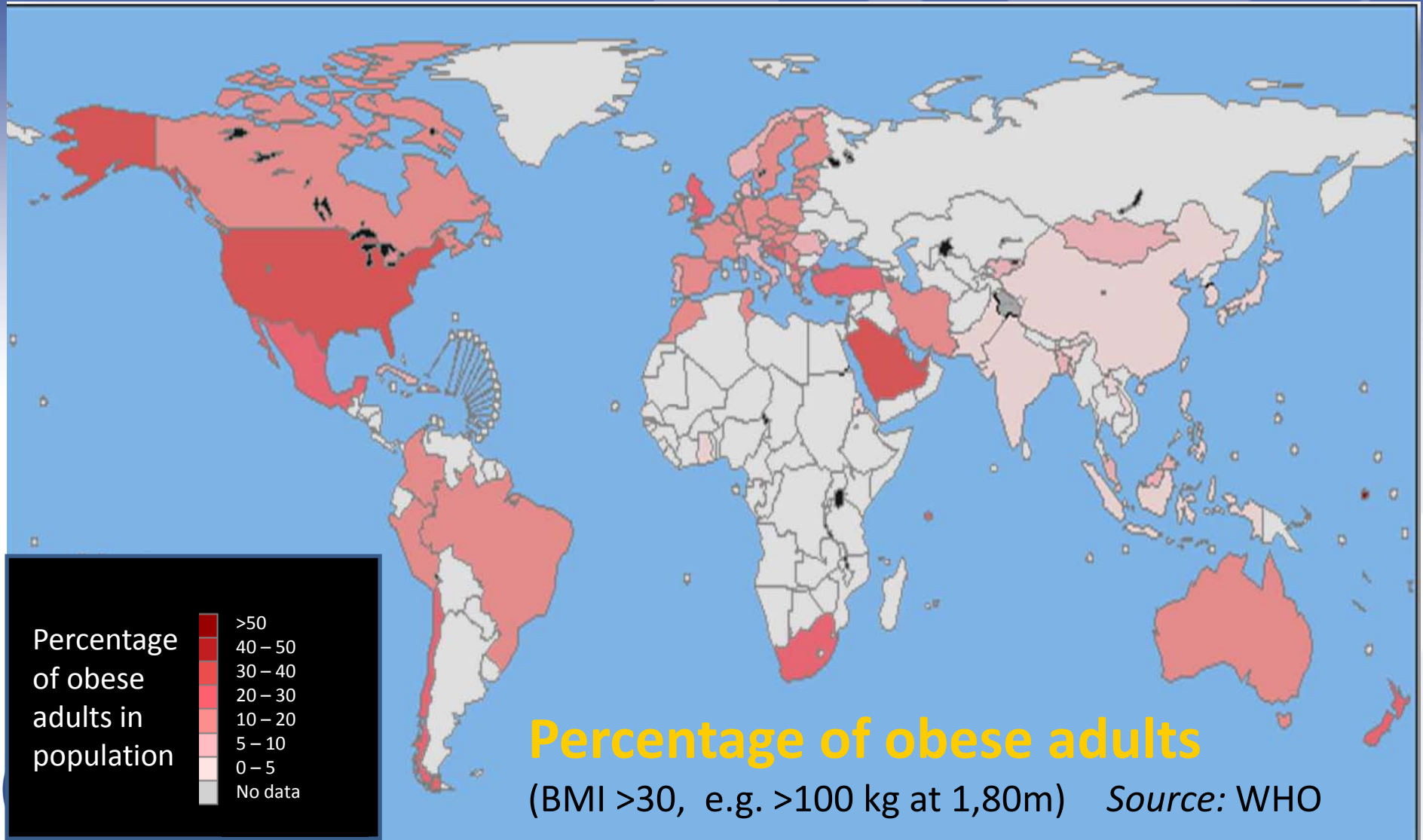
Figure 2 – Per capita daily consumption (kcal)



Data source: FAO, 2006a



One Billion Obese



PS: The OTHER crisis

- **Childhood Obesity Epidemic**
- **Non-infectious diseases biggest component of health bill.**

People are beginning to see the connection to cheap food.



Tools for Cooler Diets

- Education
- Local legislation (bans, codes)
- Health and welfare programs

- Shrink CAFOs and re-diversify row crops



Cooler Diets (cont.)

- **Enforce anti-trust and environmental laws**
- **Eliminate loopholes**
- **Ban non-therapeutic antibiotics**
- **Labeling**
- **Eliminate indirect subsidies**

(\$1.25 bn/yr to broiler industry: GDAE, 2006)



Thank You!

Jim Harkness

jharkness@iatp.org

Papers:

“Identifying Our Climate Foodprint”

**“Integrated Solutions to the Water, Climate
and Agriculture Crises”**

Available on the lit table or at www.iatp.org



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Food Safety and Environmental Protection

Reform and Opening Era

SFDA

SEPA



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China Food Safety 2007-08

2007

- March Wu Yi apologizes to NPC
- April Melamine scandal
- June 5 year plan for food safety
- July State Council draft food safety rule
- December US China MOU on food safety

2008

- January Japanese jiaozi case
- March US FDA to post inspectors in China
- April New food safety law announced



2007 China Food Poisoning Deaths



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2007 China Food Poisoning Deaths

258



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Food Safety vs Food System

Death and disease from toxins and contamination

Malnutrition: insufficient calories/nutrients

Malnutrition: Diet-related chronic disease

Ecosystem Impacts

Economic effects



Healthy Food System

Quantity

Access

Quality

Sustainability

Equity

Sovereignty

Resilience



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Healthy Food System

Resilience: the ability of groups or communities to cope with external stresses or disturbances as a result of social, political and environmental change.



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Financial volatility: globalized economy, food prices



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Healthy Food System

Resilience: the ability of groups or communities to cope with external stresses or disturbances as a result of social, political and environmental change.

Financial volatility: globalized economy, food prices

Environmental volatility: climate change, pollution



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Social Science Research Programme

1. Q: How do different actions/actors affect the various aspects of food system health?
2. Critique
3. Alternatives



Critical Analysis

- **Commodity Chain Analysis**
- **Deconstructing Regulations**



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Commodity Chain Analysis

Map the overall activities of all actors who contribute to the production and/or transformation of a given commodity and then identify the flows that link the participants together.



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Commodity Chain Analysis

Track the distribution of:

Inputs

Value added

Environmental impacts

Health risks

Profits

Regulation

Subsidy



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Pesticide Use

- Human health effects (farmer, food system worker, consumer)
- Increased suicide success
- Domestic animal poisonings
- Loss of natural predators
- Pesticide resistance
- Honeybees and pollination loss
- Crop losses
- Fishery losses
- Bird losses
- Surface and Groundwater contamination



Industrial Animal Production

- **Worker health impacts**
- **Air Pollution**
- **Water pollution**
- **Antibiotic resistance**
- **Consumer health impacts from feed additives**
- **Greenhouse gas emissions**
- **Economic losses of small producers**



A Better Approach:

- **Integrates environment, social, economic**
- **Reduce volatility of markets**
- **Build resilience of natural and human systems**

