

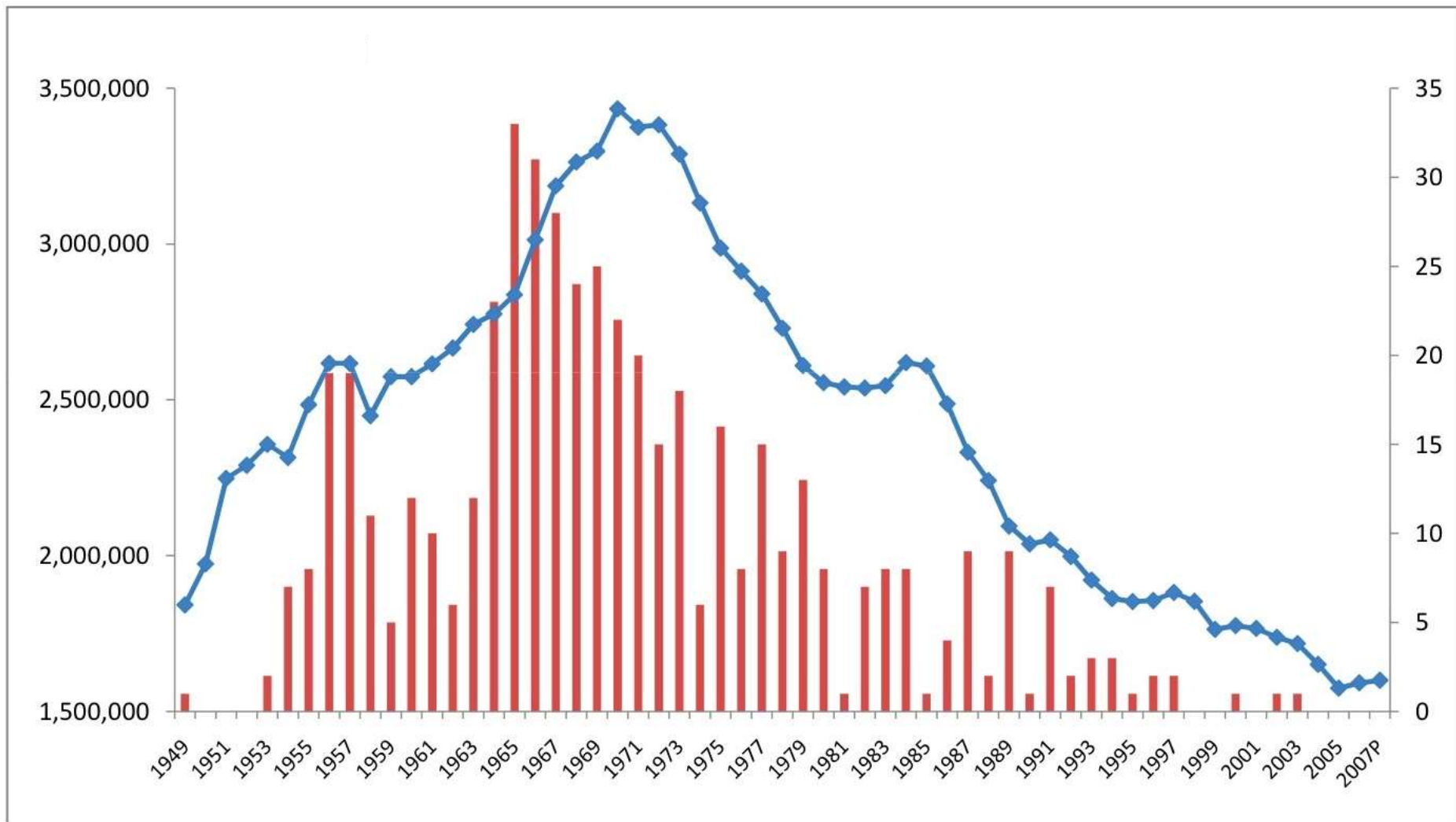
Why this stuff really mattersand is inescapable!

Or....

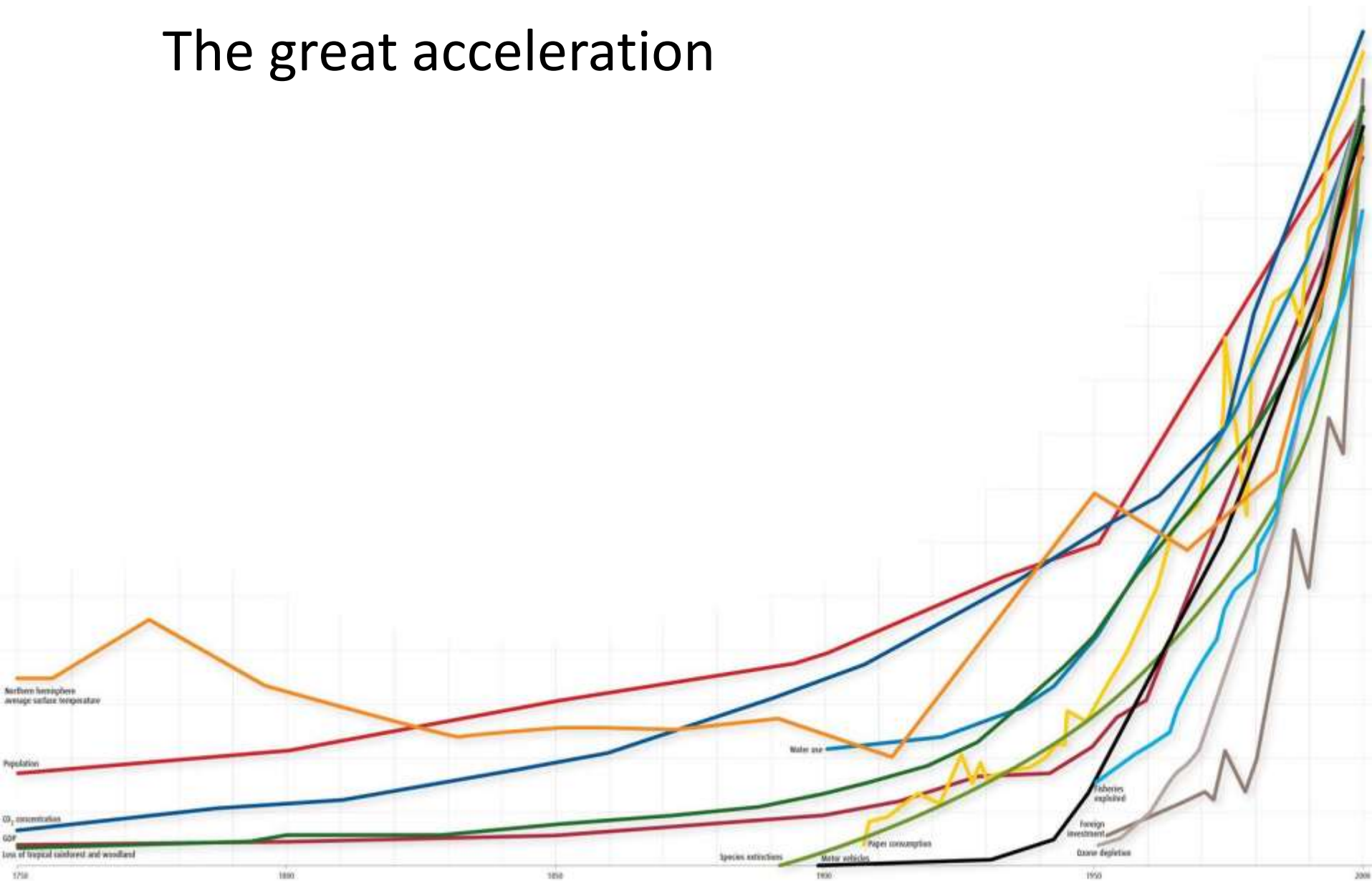
Scale, urgency and connectedness

*‘Prediction is very difficult,
especially about the future.’*

Niels Bohr, Danish physicist (1885 - 1962)



The great acceleration



New Scientist 2008 from Steffen et al 2004



EARTH
OVER
SHOOT
DAY
2012

**August
22nd**





**THE
BIOSPHERE**

**HUMAN
SOCIETY**

THE ECONOMY



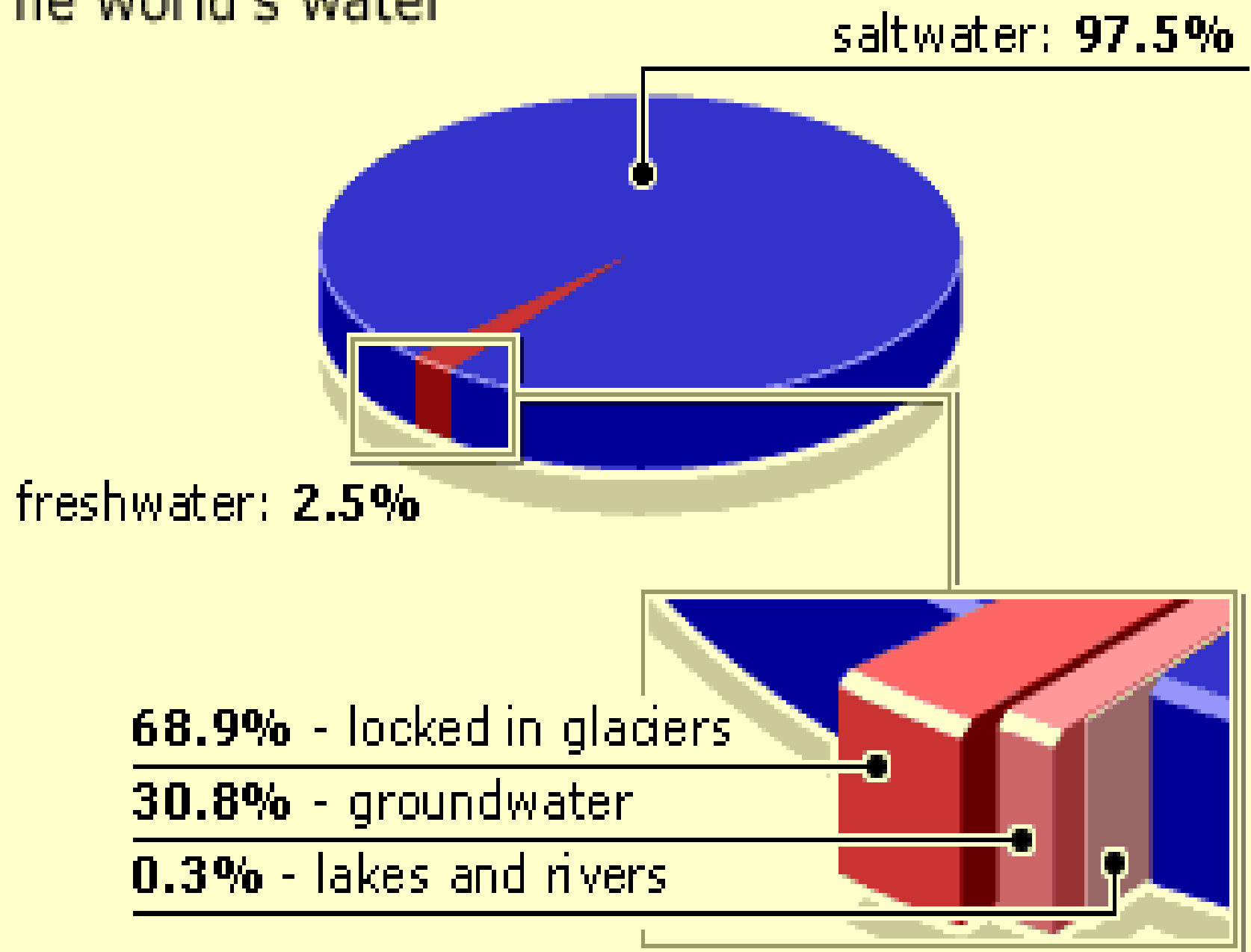
Scarce resources



All the water and air in the world. On the left, all the world's water (some 1.41 billion cubic kilometers) is shown as a ball covering central Europe. On the right, the entire atmosphere (5140 trillion tonnes) at sea level pressure is a slightly larger ball.

Composed by Dr Adam Nieman from topographical data

The world's water



SOURCE : UNEP

How much?

1 pound of lettuce **23** gallons

1 pound of tomatoes **23** gallons

1 pound of potatoes **24** gallons

1 pound of wheat **25** gallons

1 pound of carrots **33** gallons

1 pound of apples **49** gallons

1 pound of chicken **815** gallons

1 pound of pork **1,630** gallons

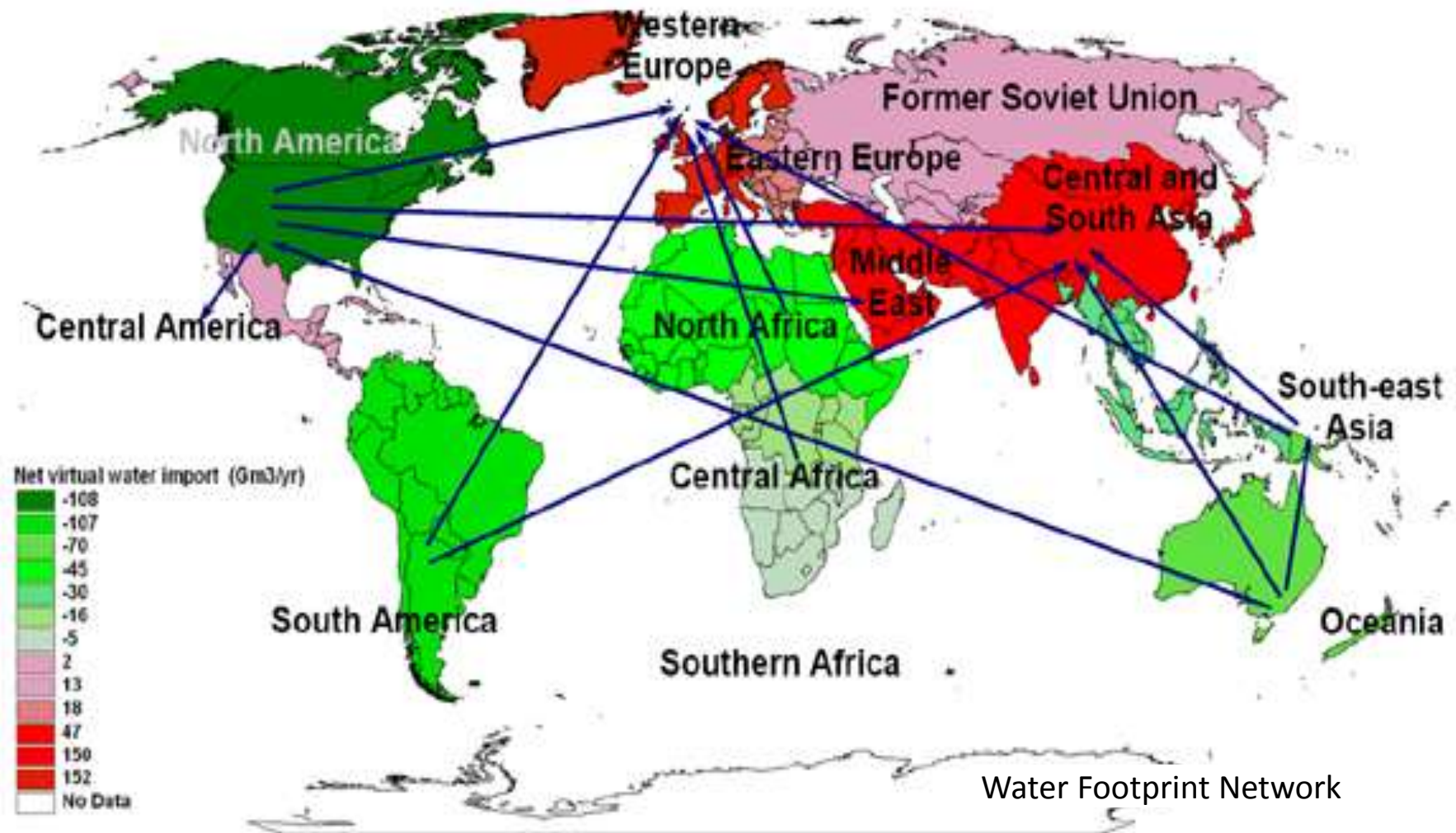
1 pound of grain fed beef at least **3,000** gallons

To meet the increasing demand from a growing population we will need to produce more food in the next 40 years than has been produced in the previous 8,000 years.

Jason Clay, Senior Vice President WWF

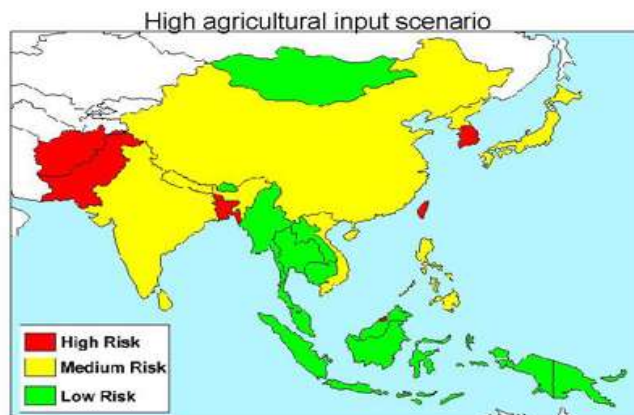
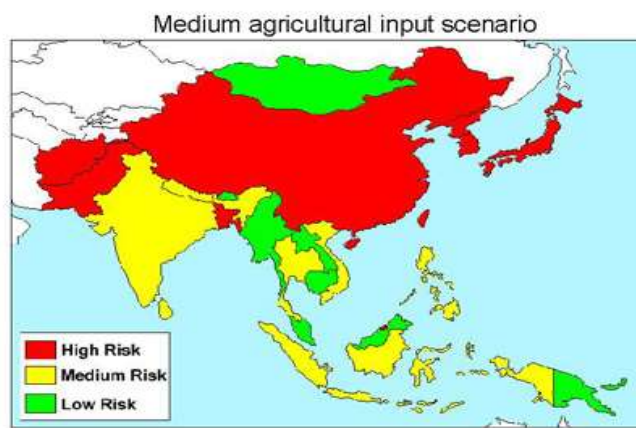
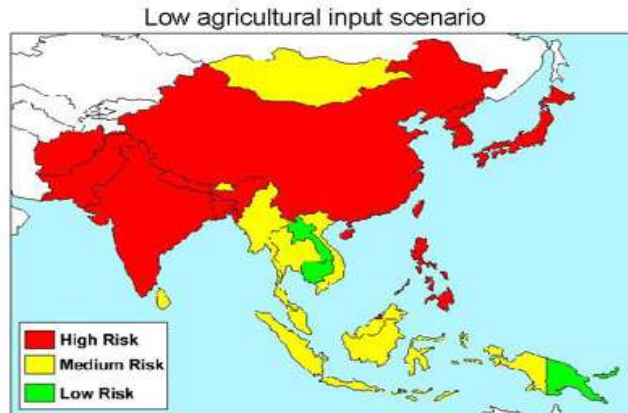
Regional virtual water balances and net interregional virtual water flows related to the trade in agricultural products.

Period: 1997-2001.



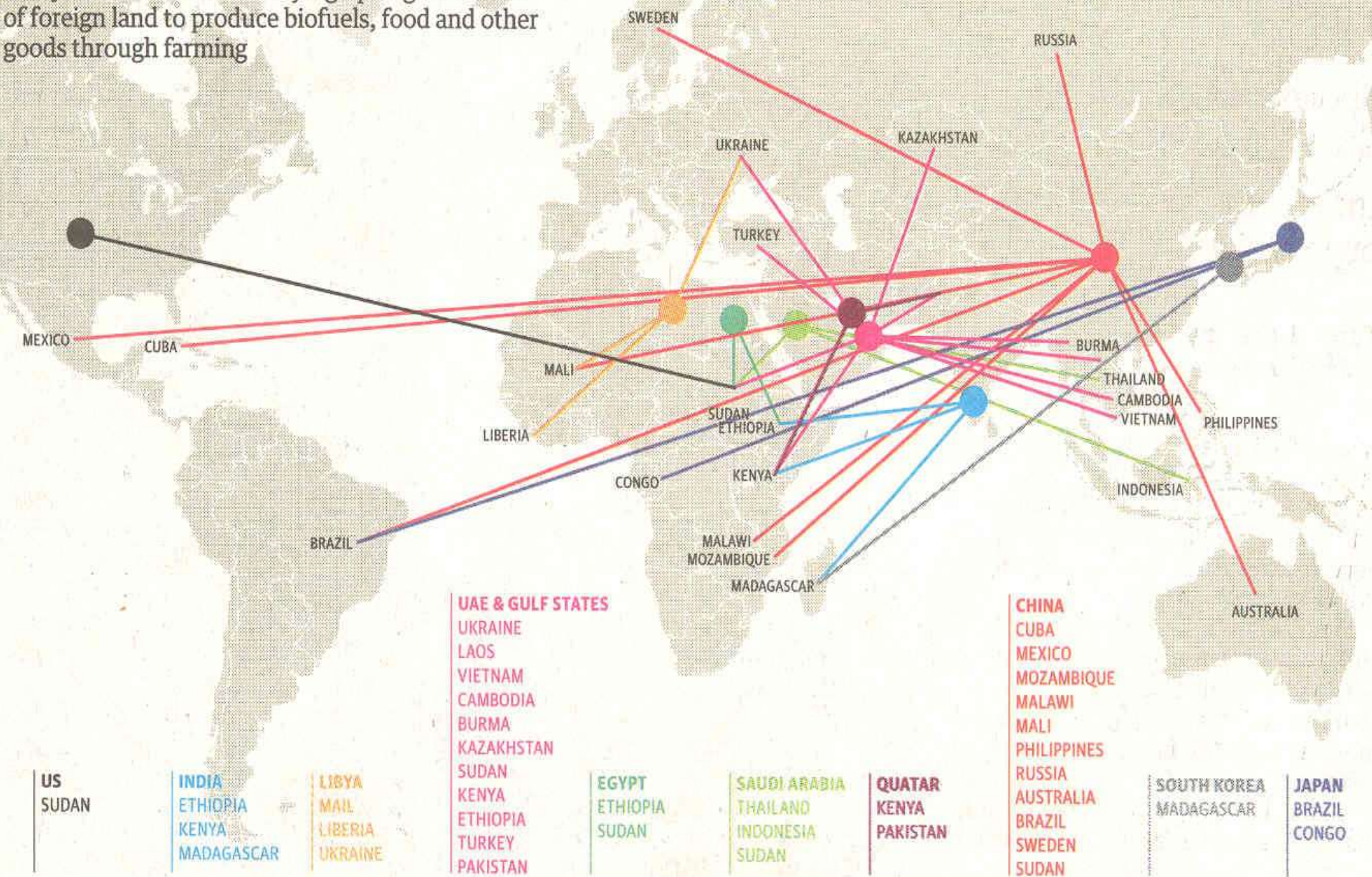
Water Footprint Network

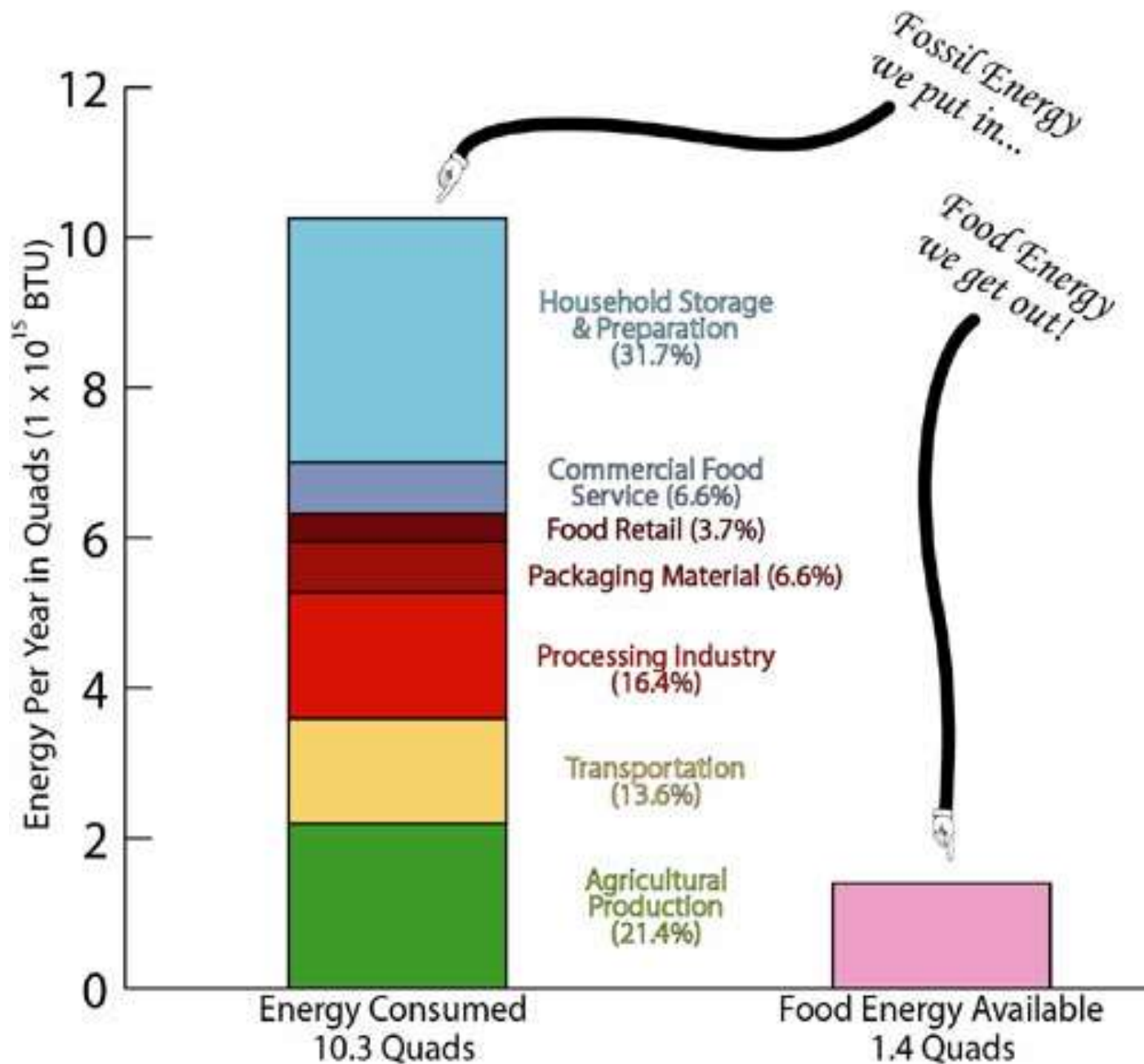
Food security in Asia



Global land grabs

Many countries are now buying up large amounts of foreign land to produce biofuels, food and other goods through farming





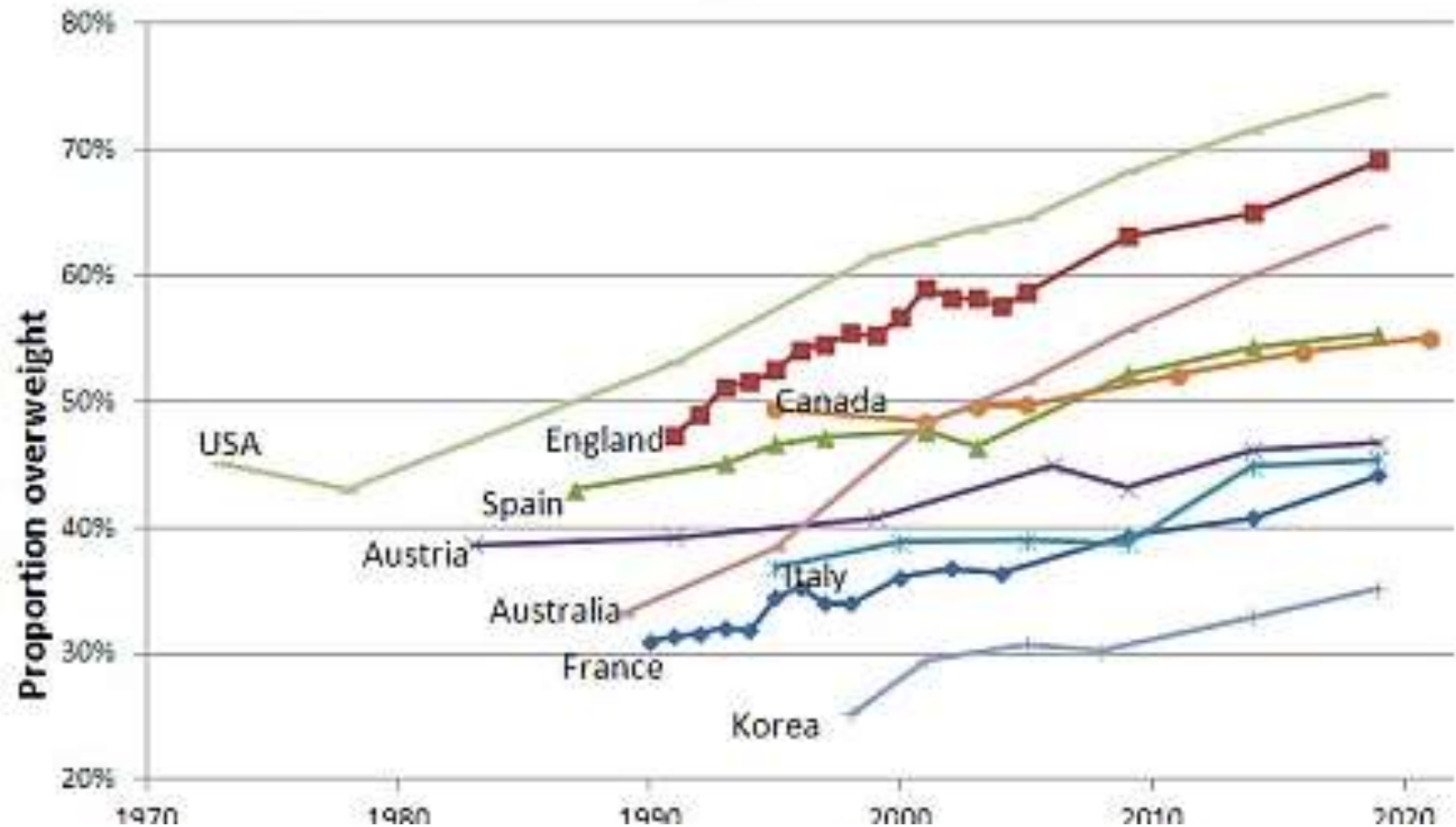
STAPLE PRICES TRIPLE AS MUCH OF THE WORLD'S FOOD SUPPLY IS DIVERTED TOWARDS FUEL CONSUMPTION

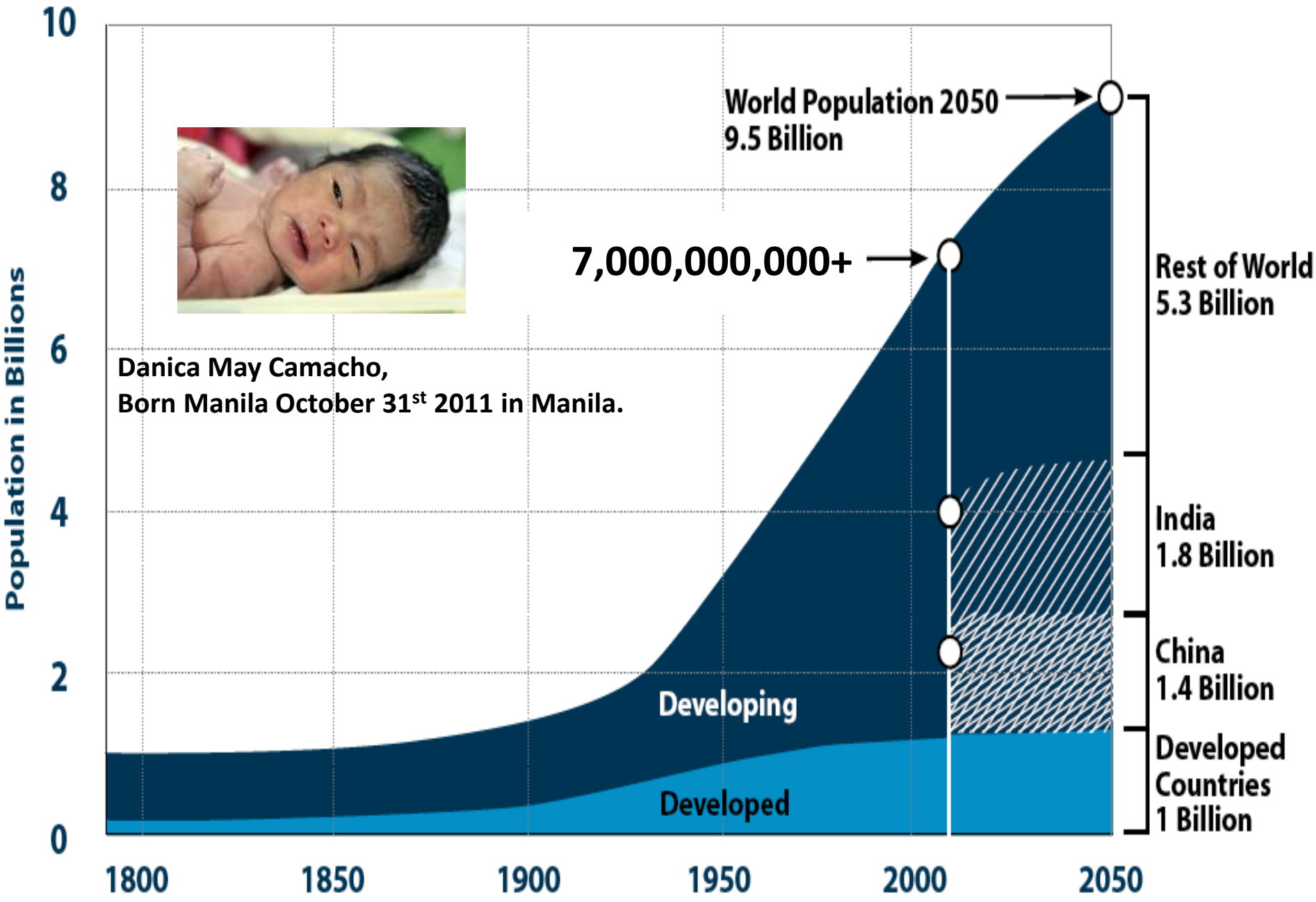


Answer:

**Between
30% and 80%**

Past and projected overweight rates in selected OECD countries

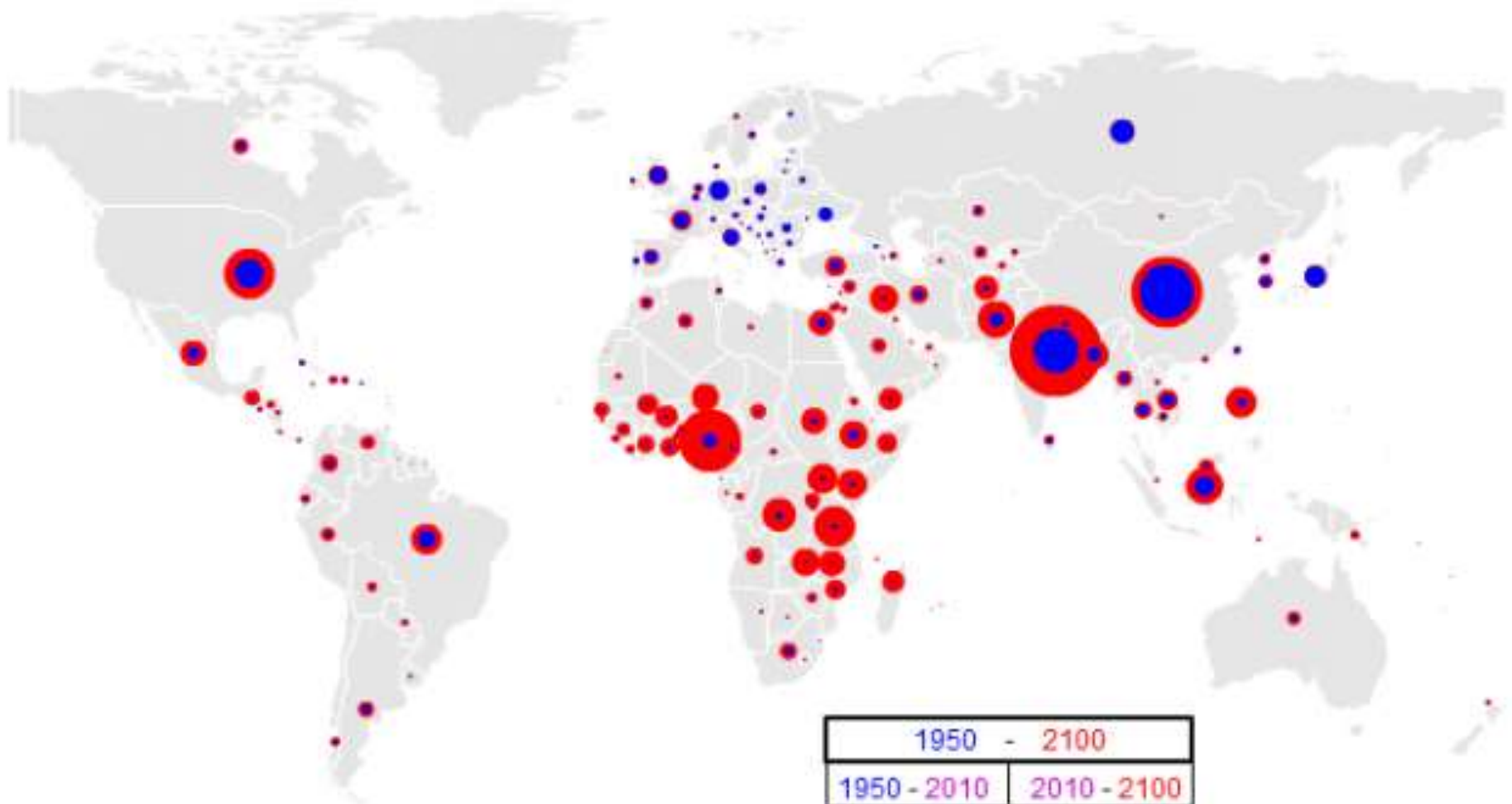




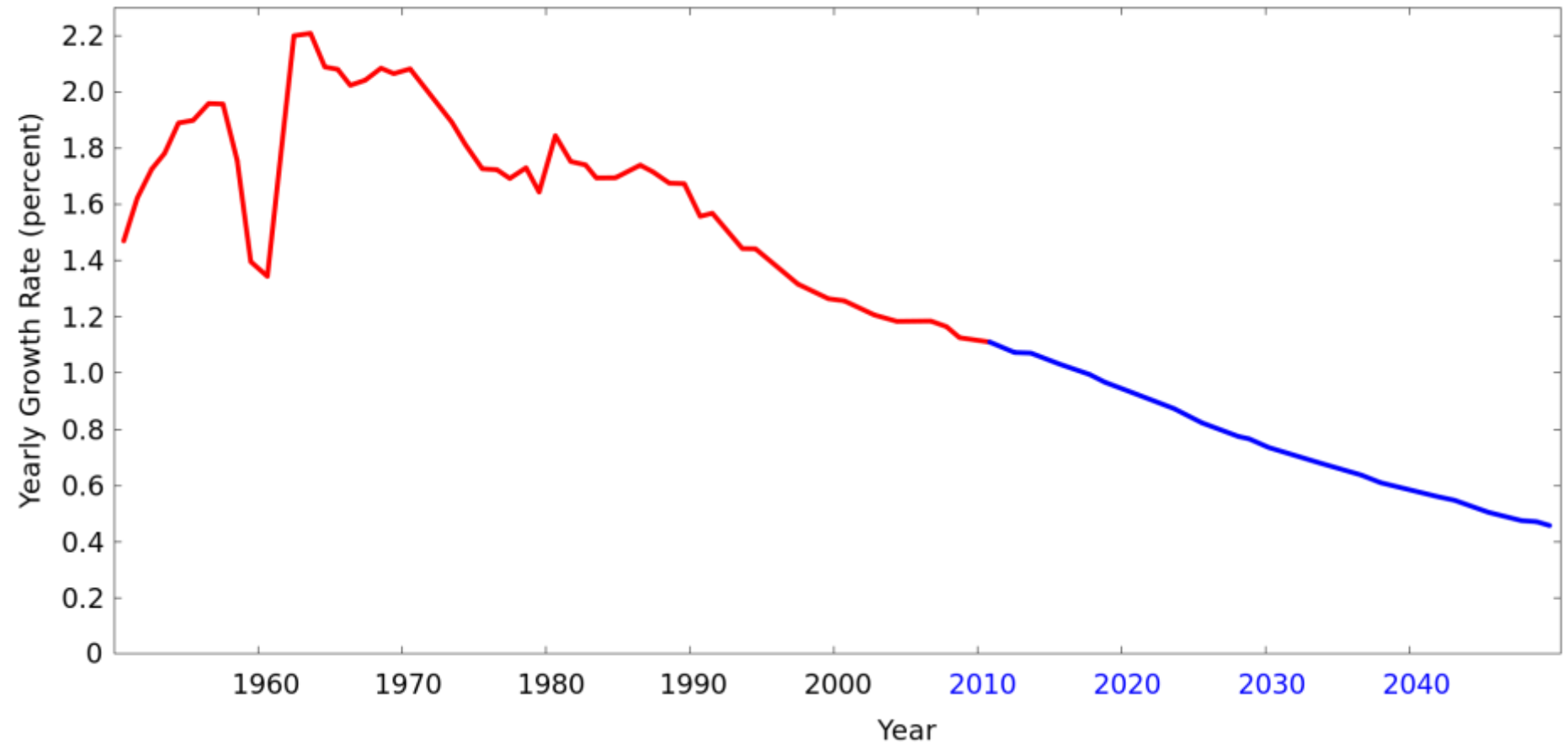
Country population **past**, **present**, **future**

This interactive visualisation depicts dramatic population changes, based on data released by the [UN Department of Economic and Social Affairs/Population Division](#) for 1950-2010 and a projection for 2100.

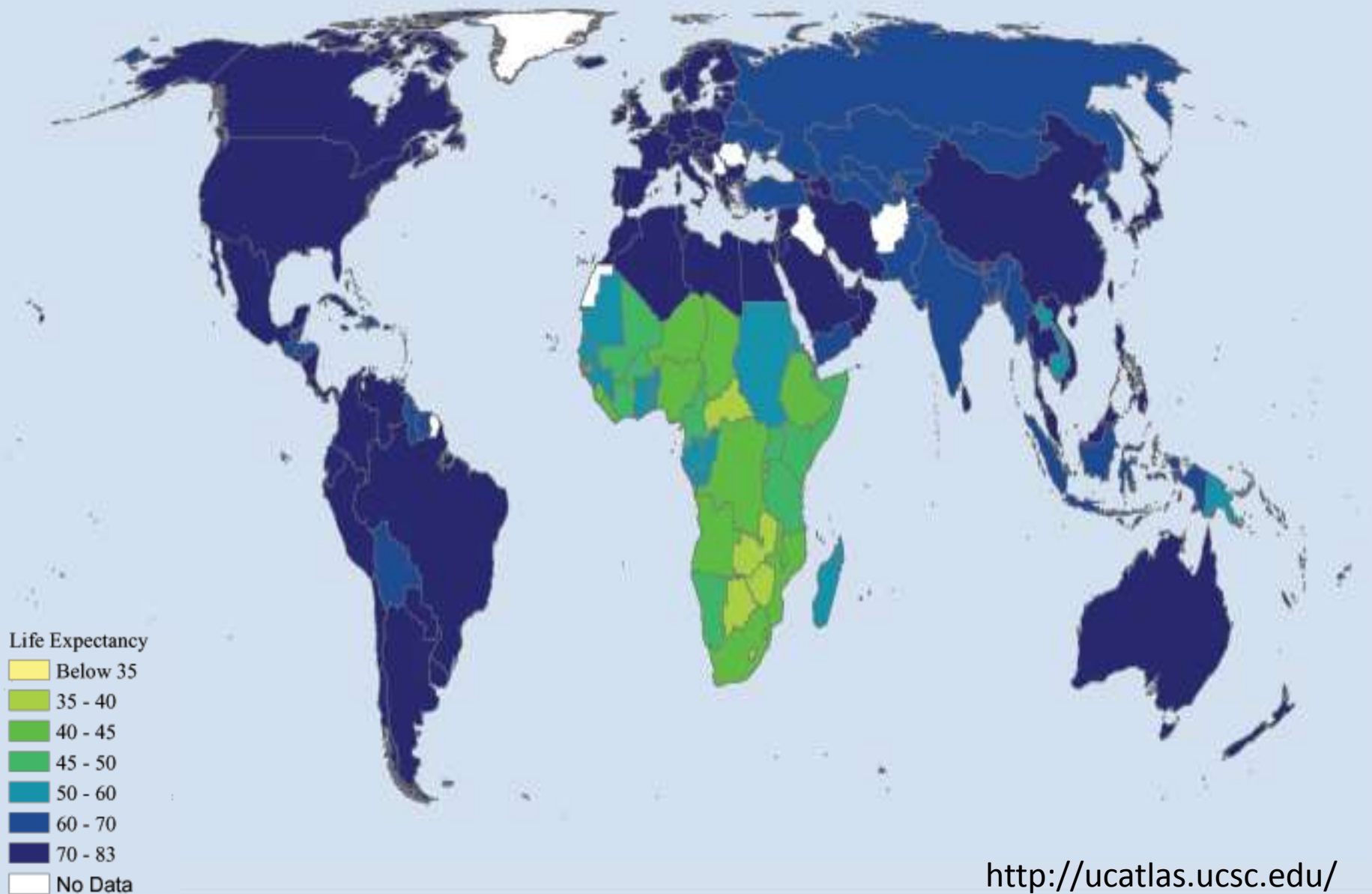
click on countries to select, click again to deselect:



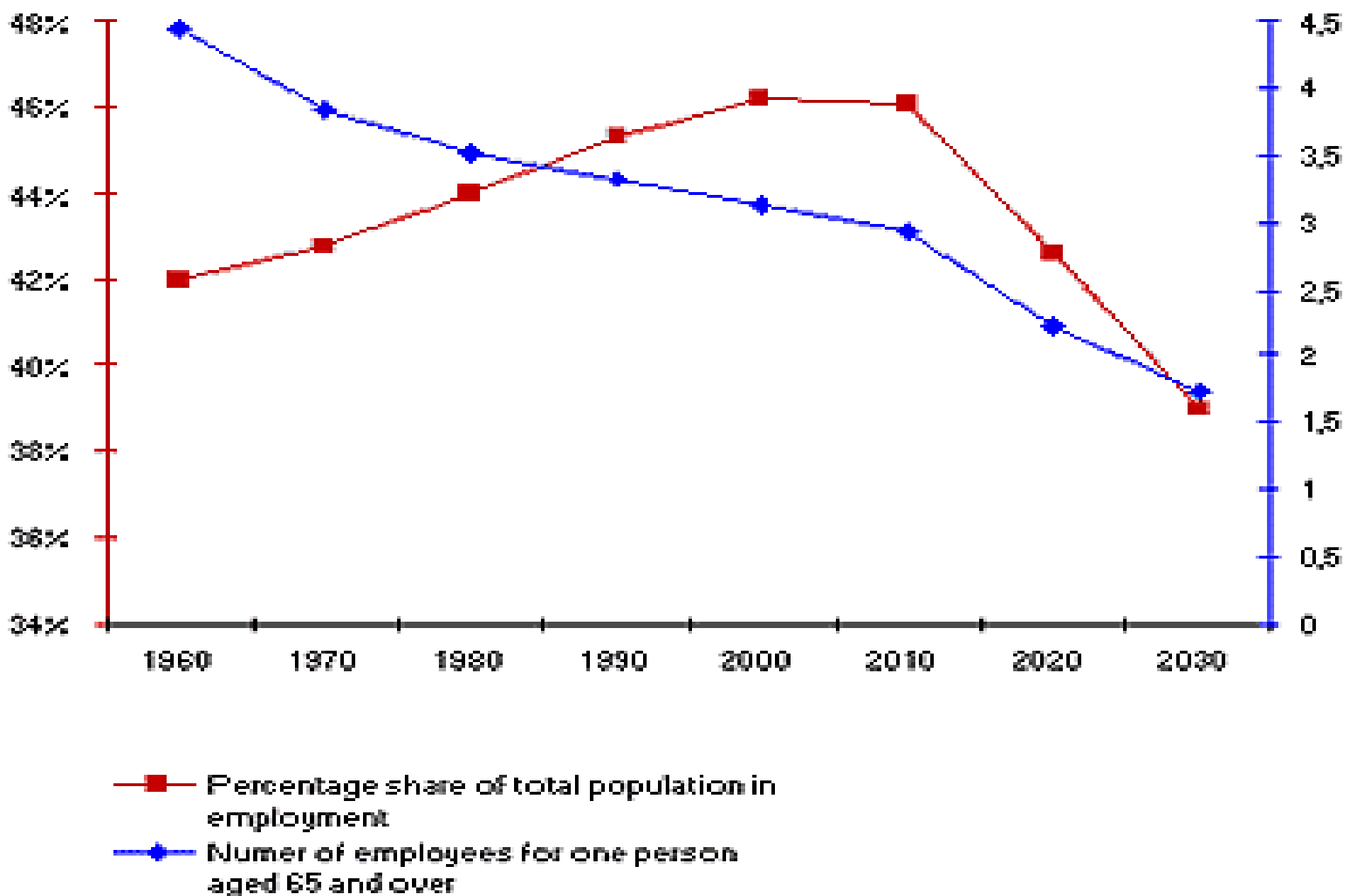
World population growth rate 1950–2050



Life Expectancy at Birth 2004

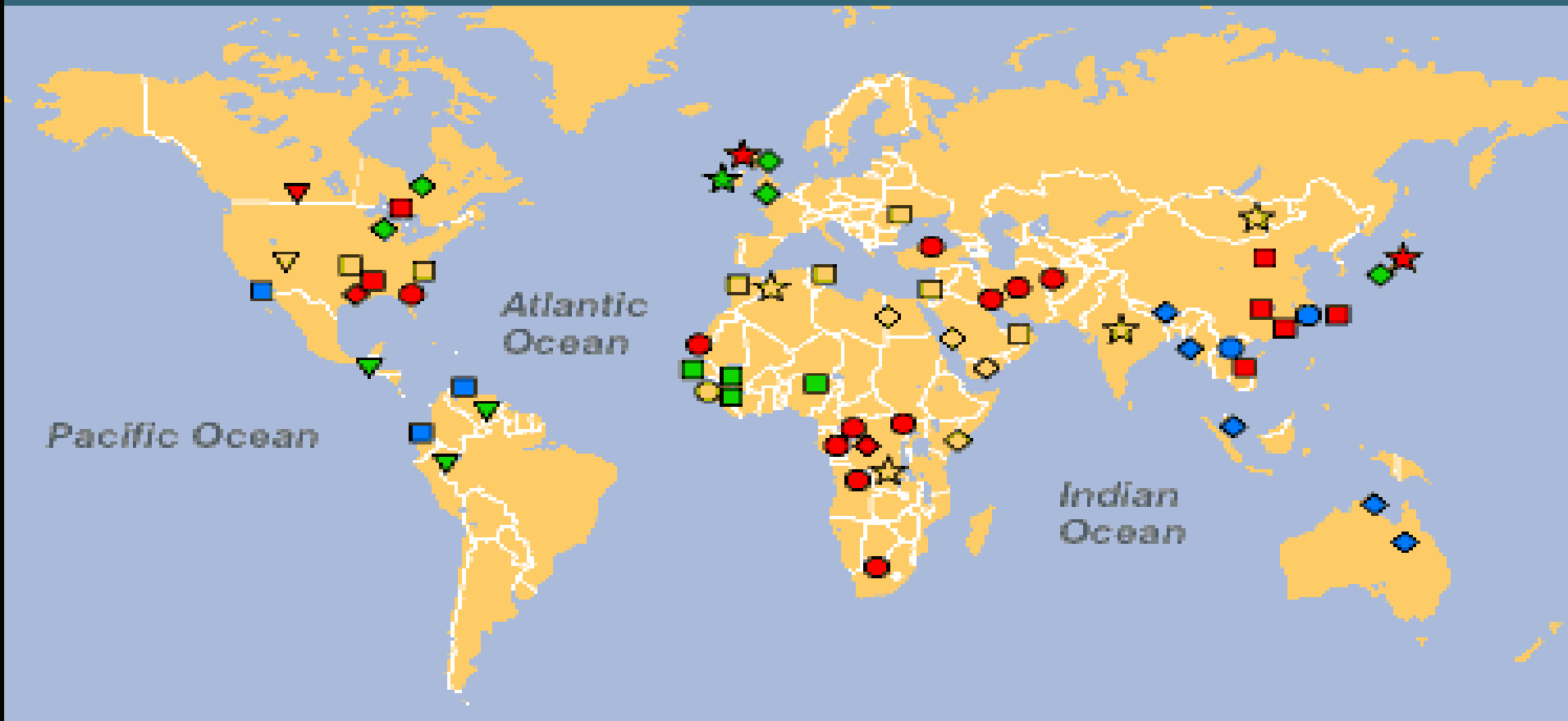


Employment ratios for OECD countries



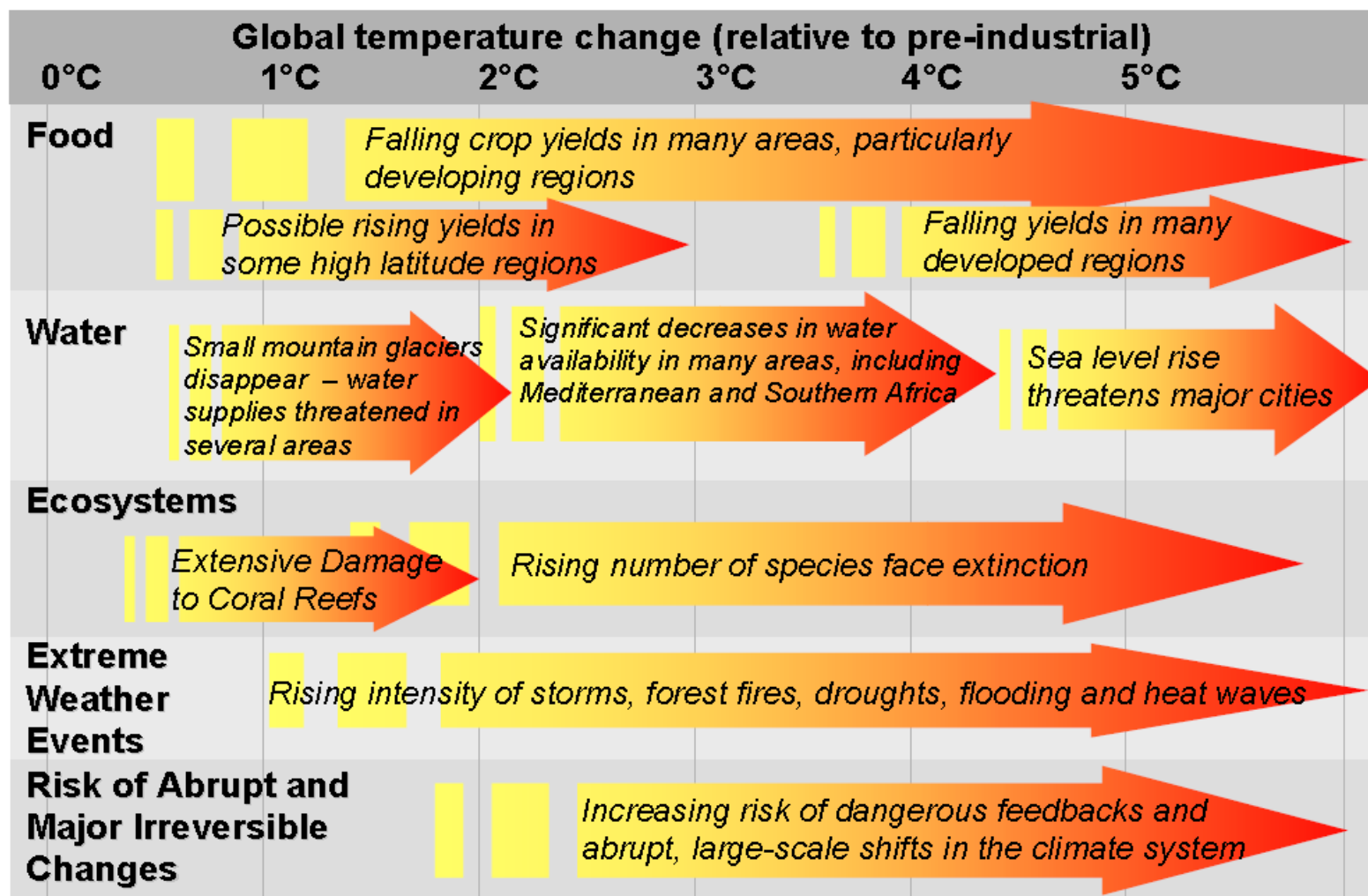


EMERGING AND RE-EMERGING INFECTIOUS DISEASES: 1996-2004



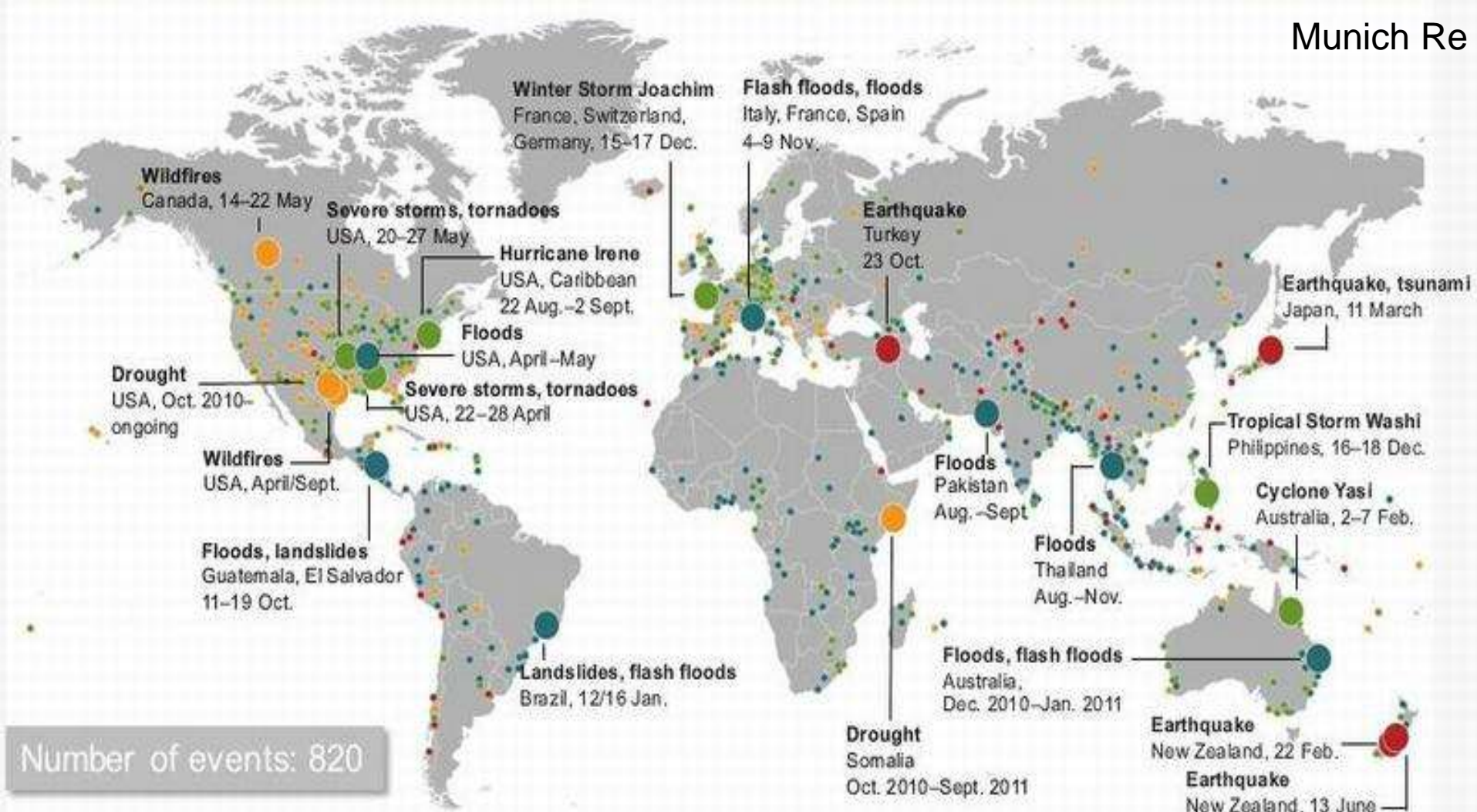
- | | | |
|--|--|----------------------------------|
| ● Ebola and Crimean Congo haemorrhagic fever | ◆ New variant Creutzfeld-Jakob disease | ▼ Cryptosporidiosis |
| ● Influenza H5N1 | ◆ Riftvalley fever | ▼ Leptospirosis |
| ● Hantavirus | ■ SARS coronavirus | ▼ Lyme borreliosis |
| ● Lassa fever | ■ Venezuelan equine encephalomyelitis | ★ Escherichia coli O157 |
| ◆ Monkeypox | ■ Yellow fever | ★ Multidrug-resistant Salmonella |
| ◆ Nipah Hendra | ■ West Nile fever | ★ Plague |

Projected impacts of climate change



Global natural disasters 2011 – a record year for insurance claims

Munich Re



○ Natural catastrophes

○ Selection of significant loss events (see table)

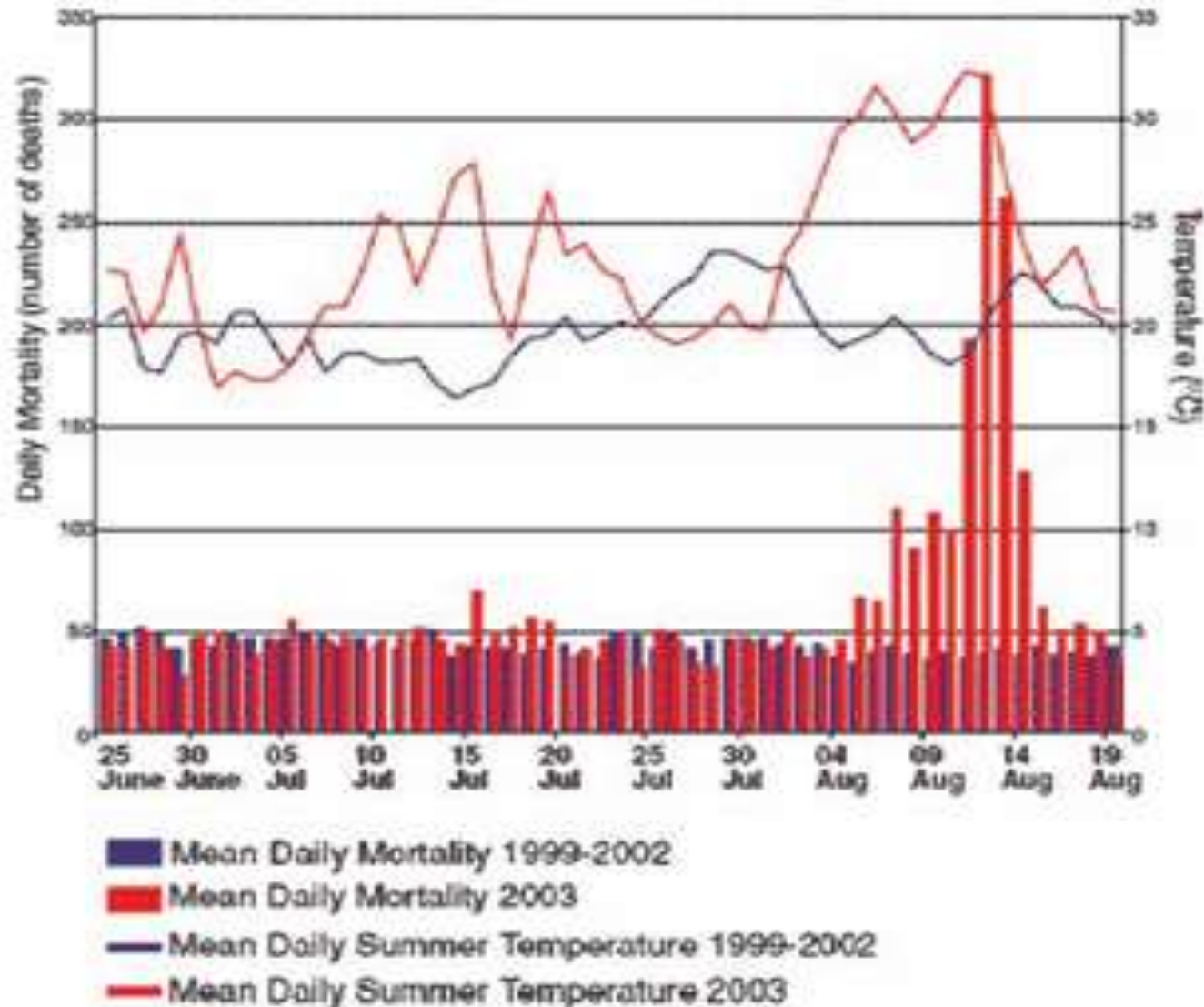
● Geophysical events
(earthquake, tsunami, volcanic activity)

● Meteorological events
(storm)

● Hydrological events
(flood, mass movement)

● Climatological events
(extreme temperature, drought, wildfire)

Excess mortality – Summer 2003

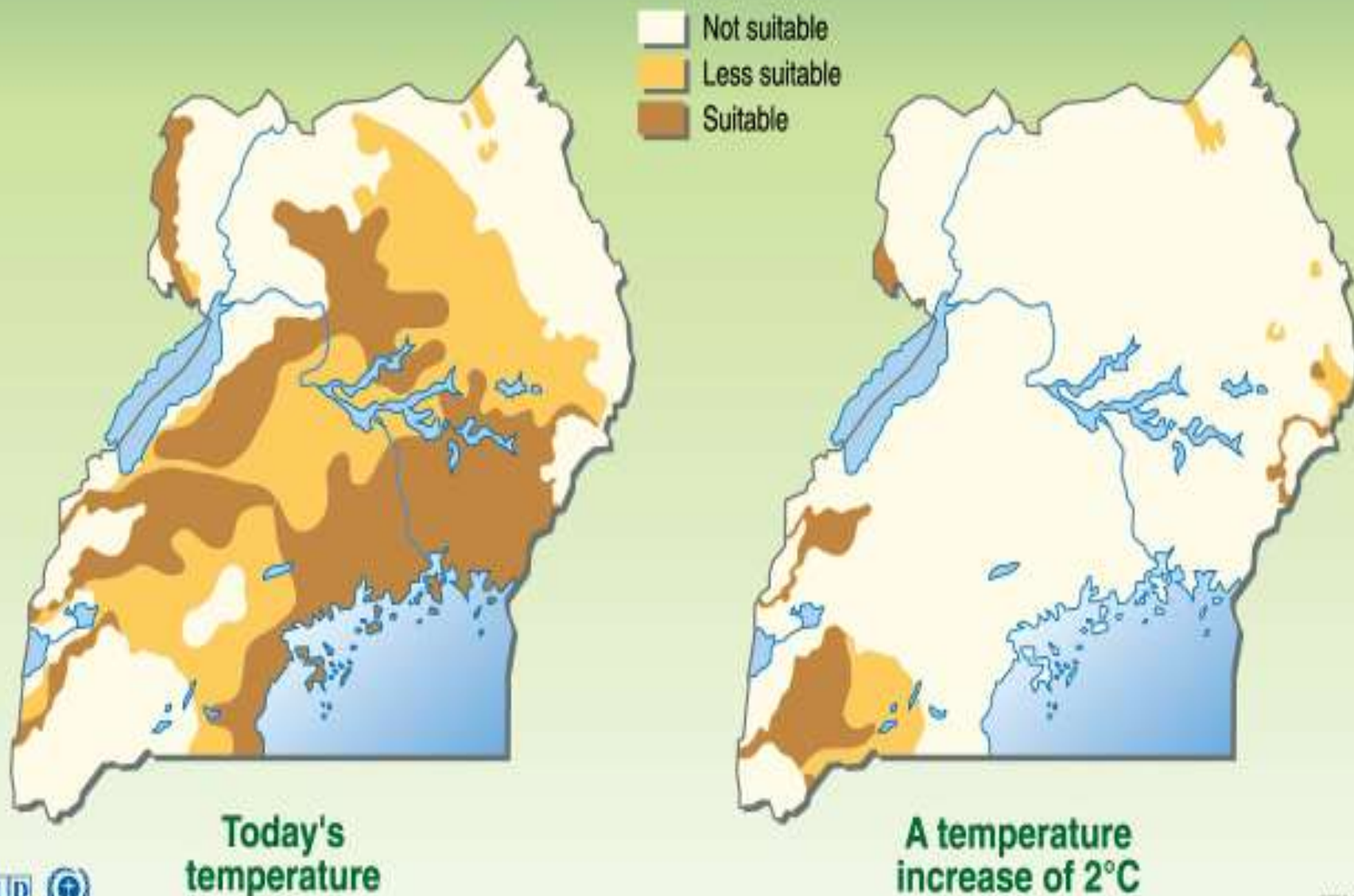




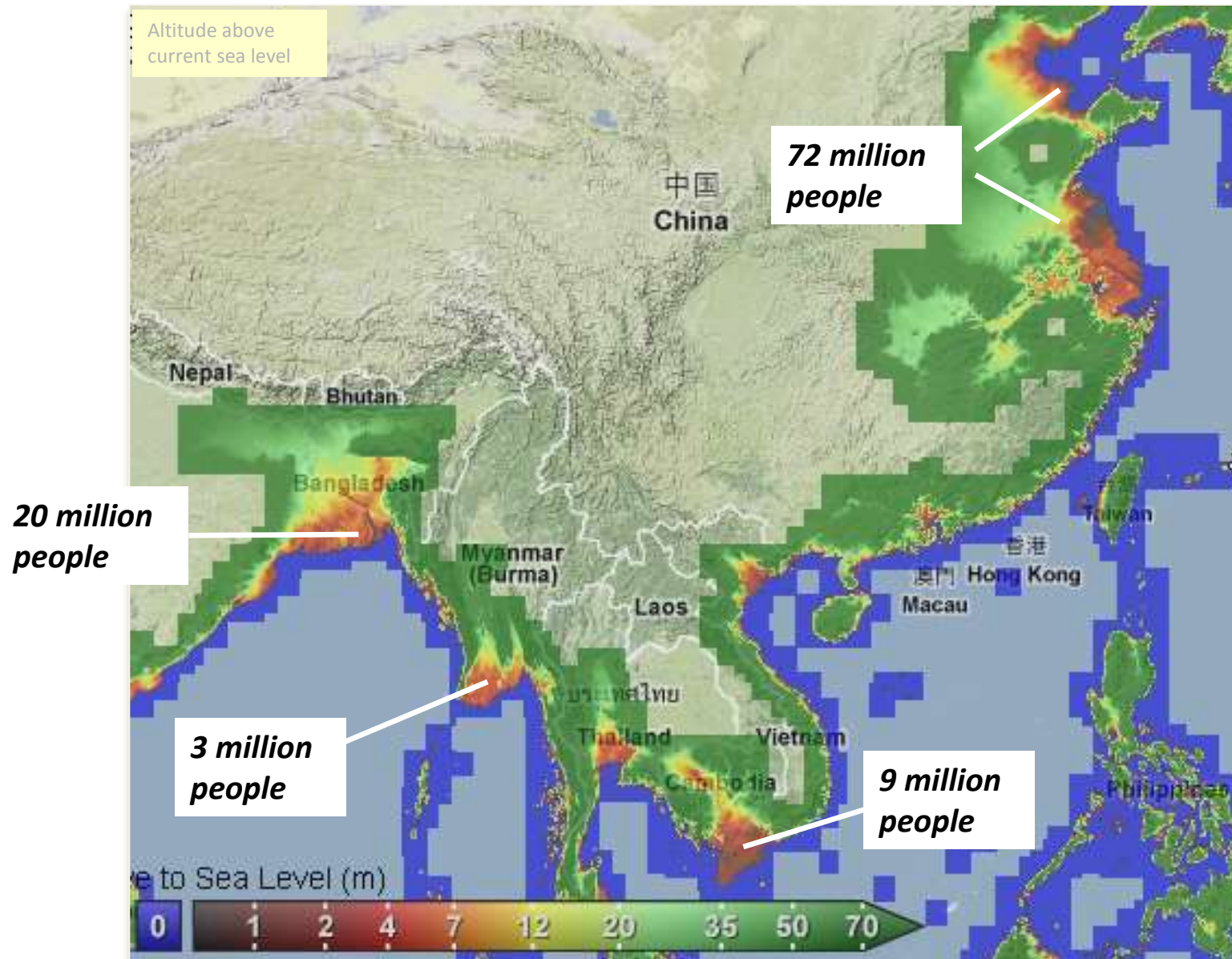
Potential Climate Change Health Effects

- Heat related morbidity and mortality
- Asthma, respiratory allergies and airway diseases
- Vectorborne and zoonotic diseases
- Cardiovascular disease and stroke
- Weather related morbidity and mortality
- Foodborne diseases and nutrition
- Waterborne diseases
- Human developmental effects
- Mental health and stress related disorders
- Neurological disorders and diseases
- Cancers

Impact of temperature rise on robusta coffee in Uganda

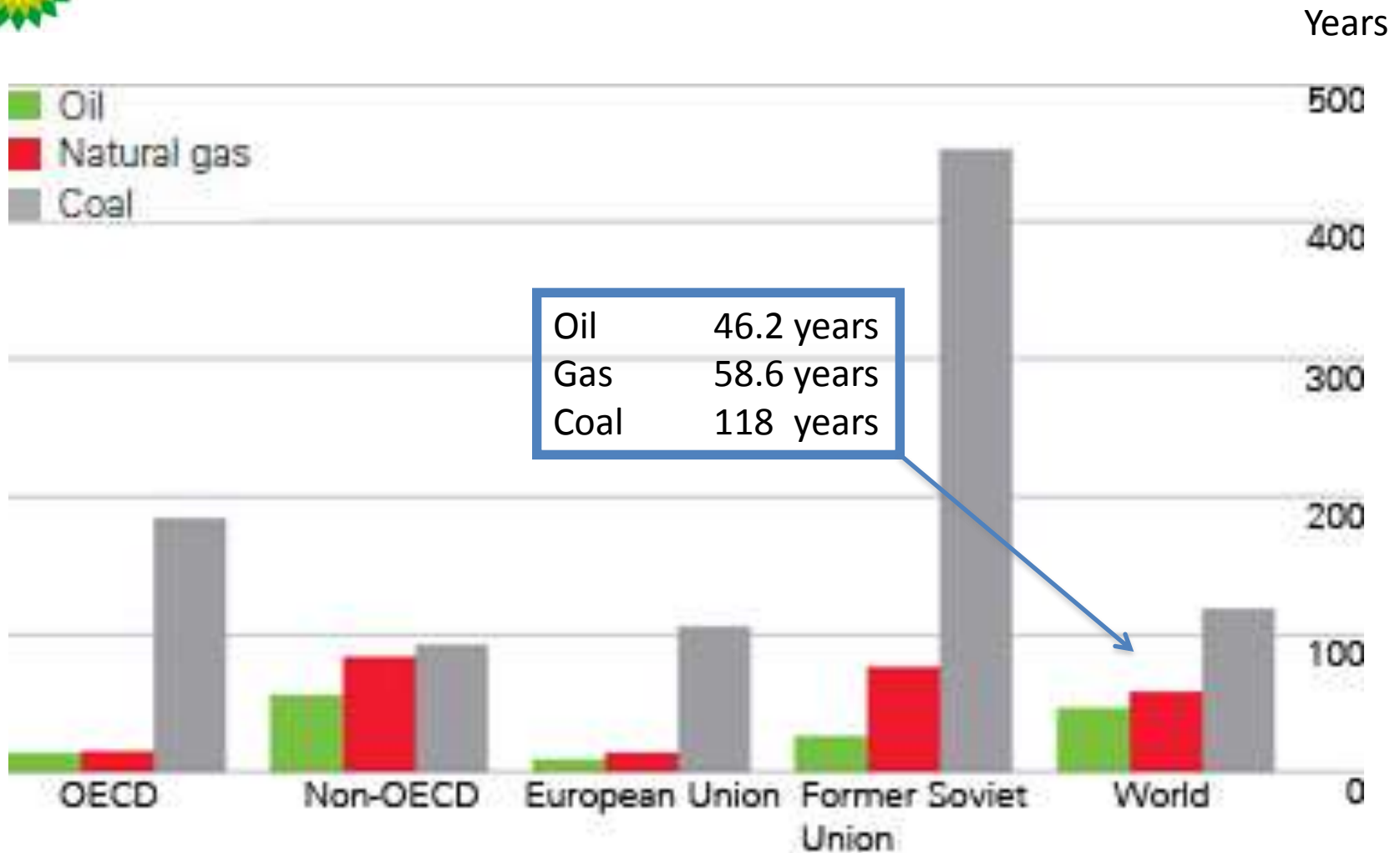


The impact of a one metre sea-level rise – displaced people in Asia

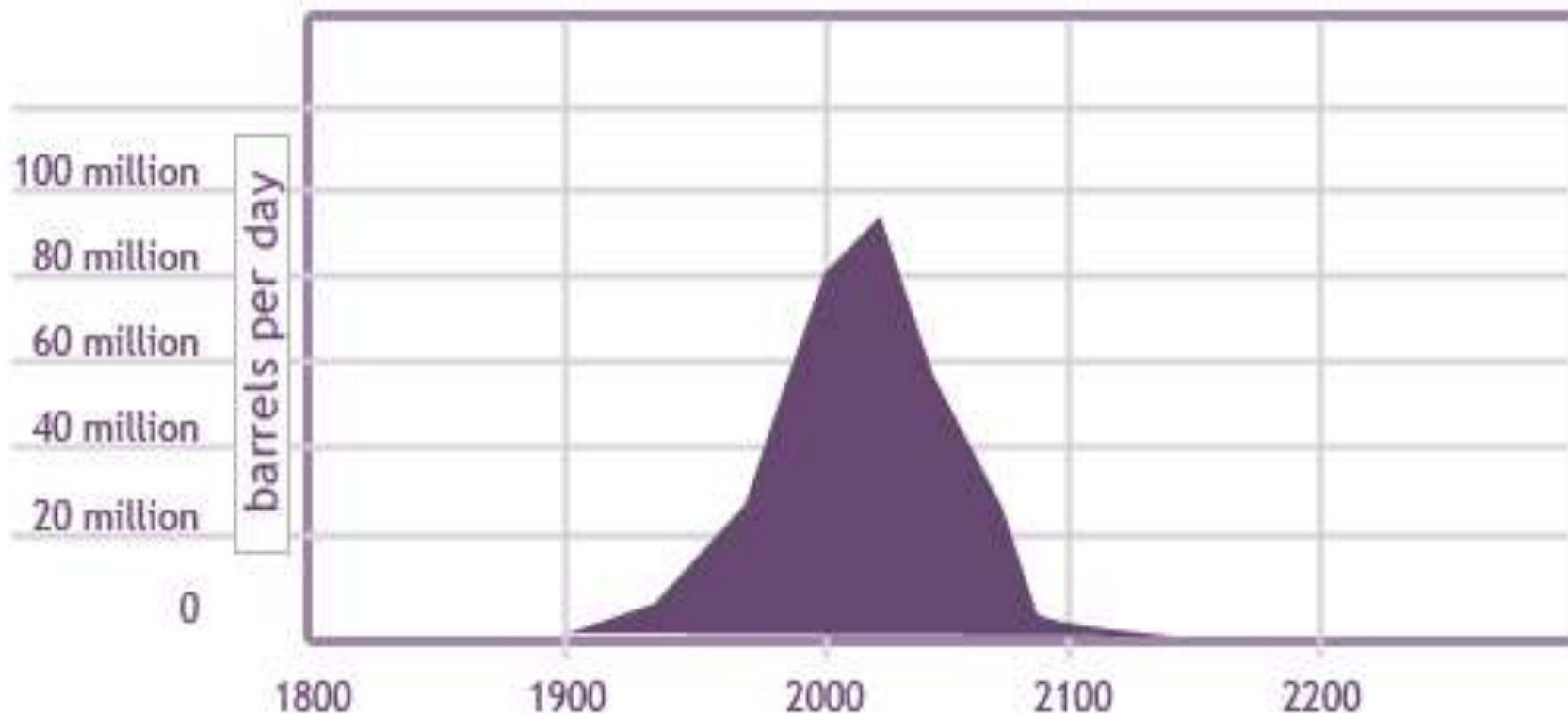




Fossil fuel reserves-to-production (R/P) ratios at end 2010

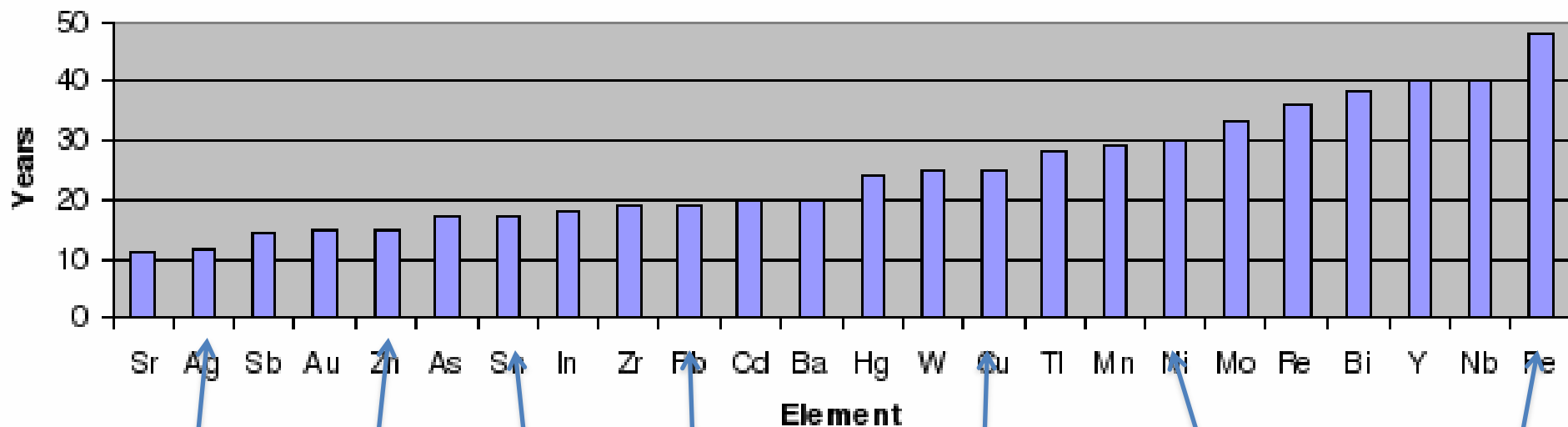


World Oil Consumption



Adapted from Richard Heinberg's *Powerdown: Option and Actions for a Post-carbon World*

Years left at sustained 2% annual primary production growth, based on reserves



Silver 11 years

Zinc 15 years

Tin 18 years

Lead 20 years

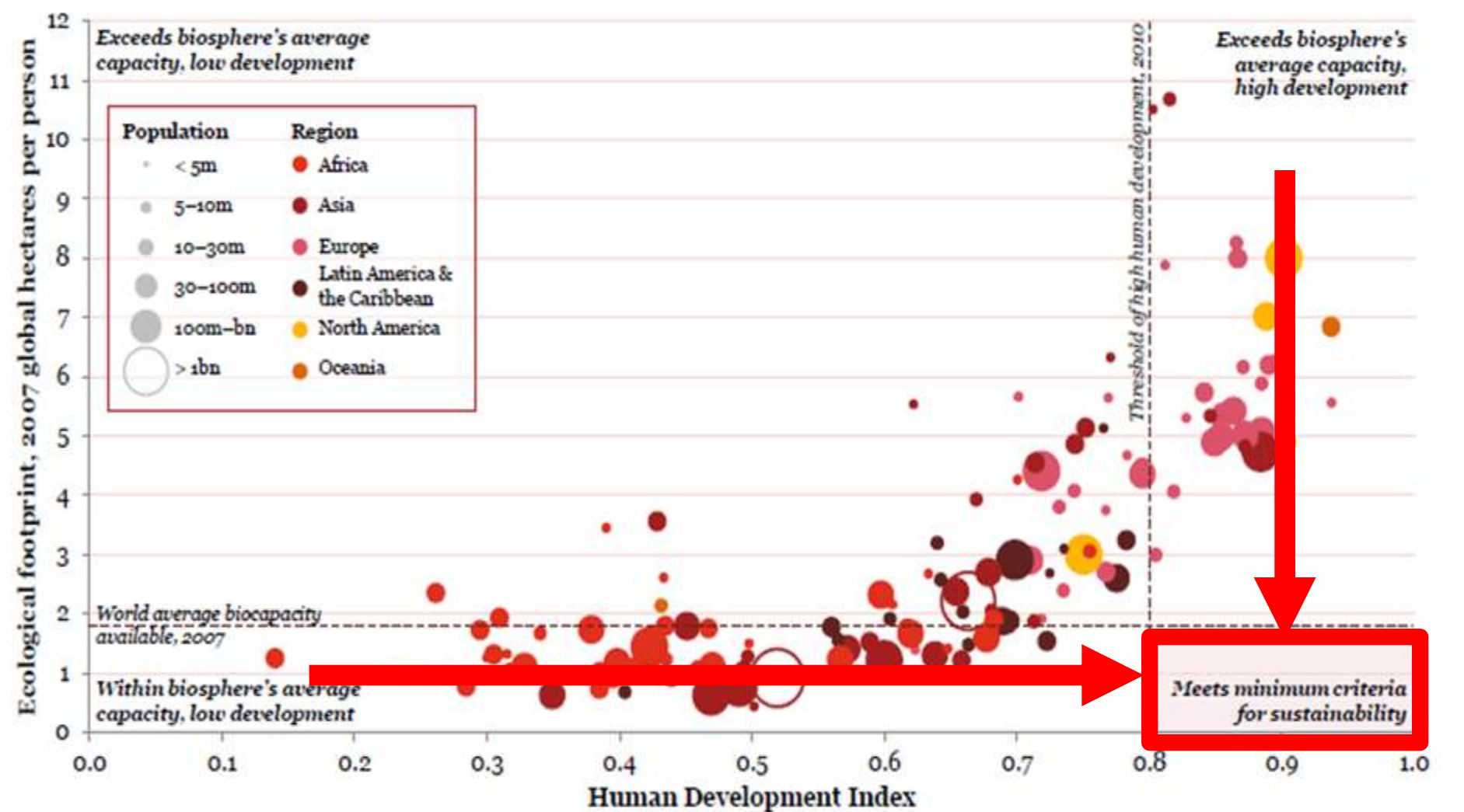
Copper 25 years

Nickel 30 years

Iron c 48 years

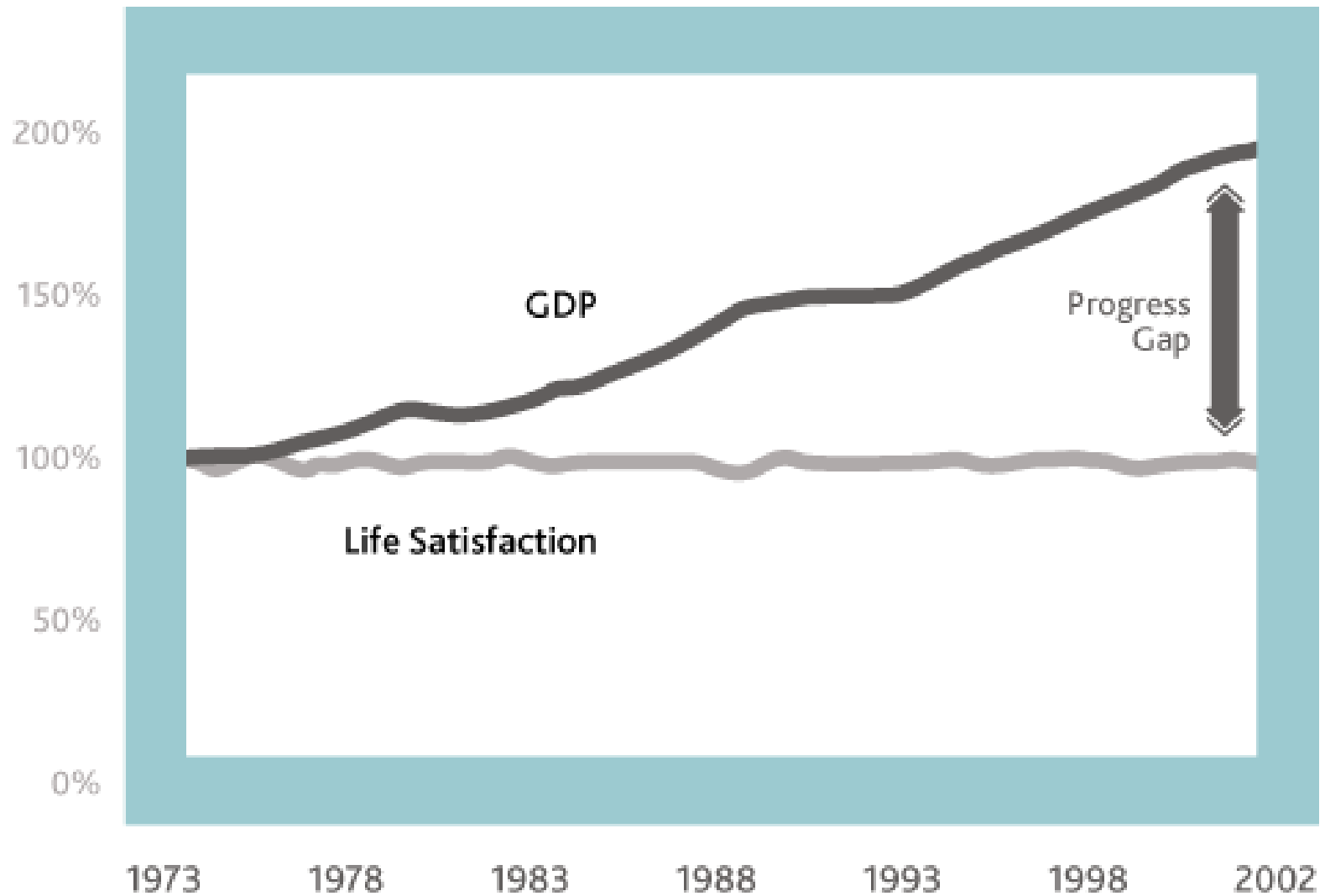
The big debate

Human Development Index, 2010 and ecological footprints, by country, 2007



Sources: Human Development Report 2011; Global Footprint Network; United Nations Population Division; Finance, Biodiversity and Ecosystems, Dr Genevieve Patenaud, 2011; PwC analysis

UK Life Satisfaction and GDP: 1973-2002



How may a man
measure his own
happiness?



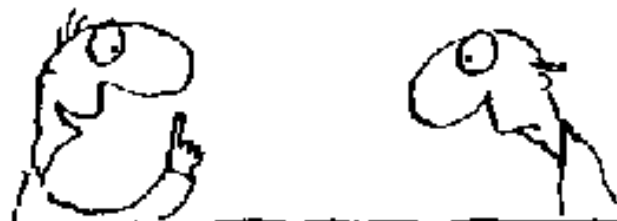
He must first go
to his cupboard and
take out all his
neckties.



Then he must
lay them out on
the ground, end
to end.



Then he must measure
the length of this
line of neckties.



And that measurement;
that distance is
exactly the same

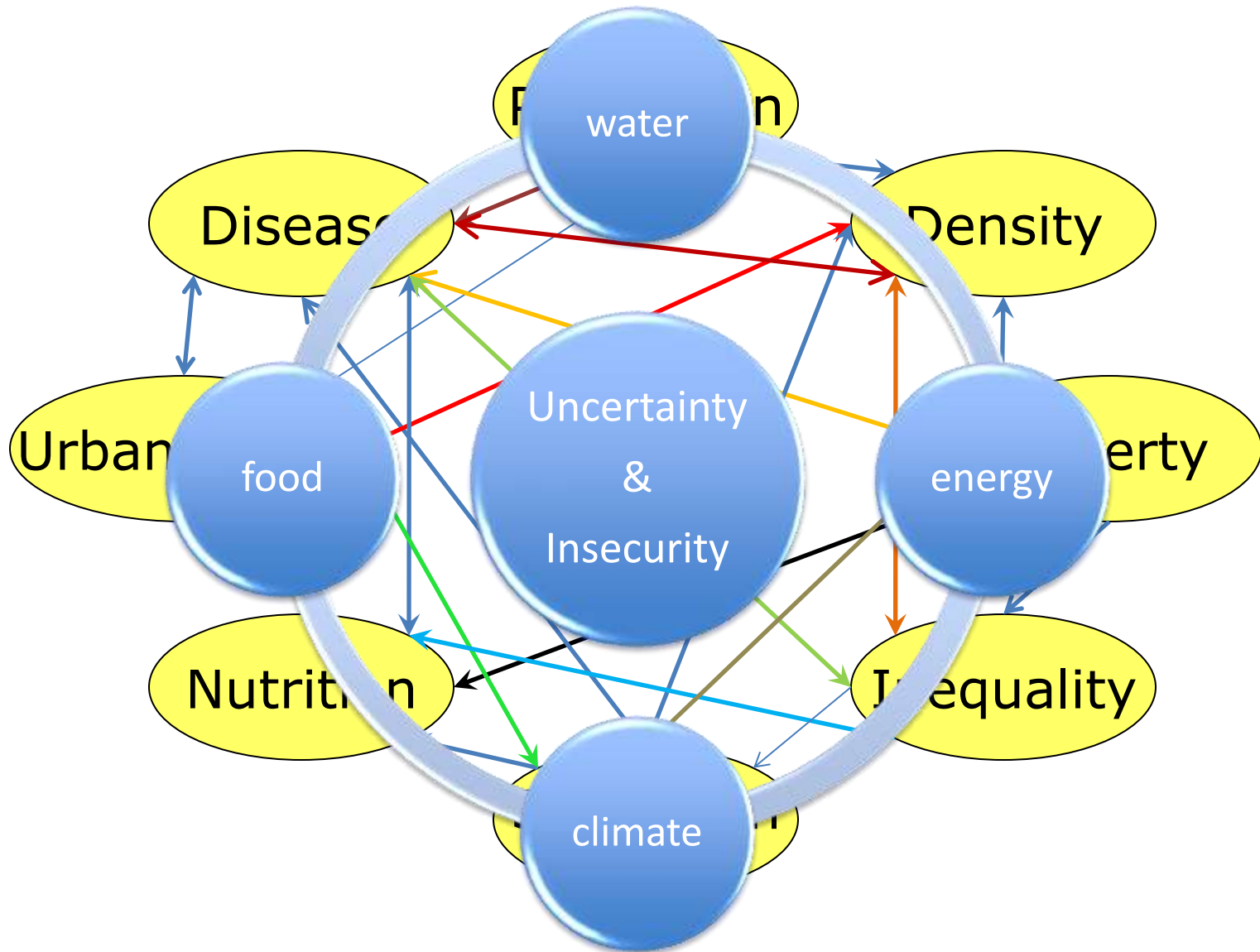


..... as his distance
from true happiness.

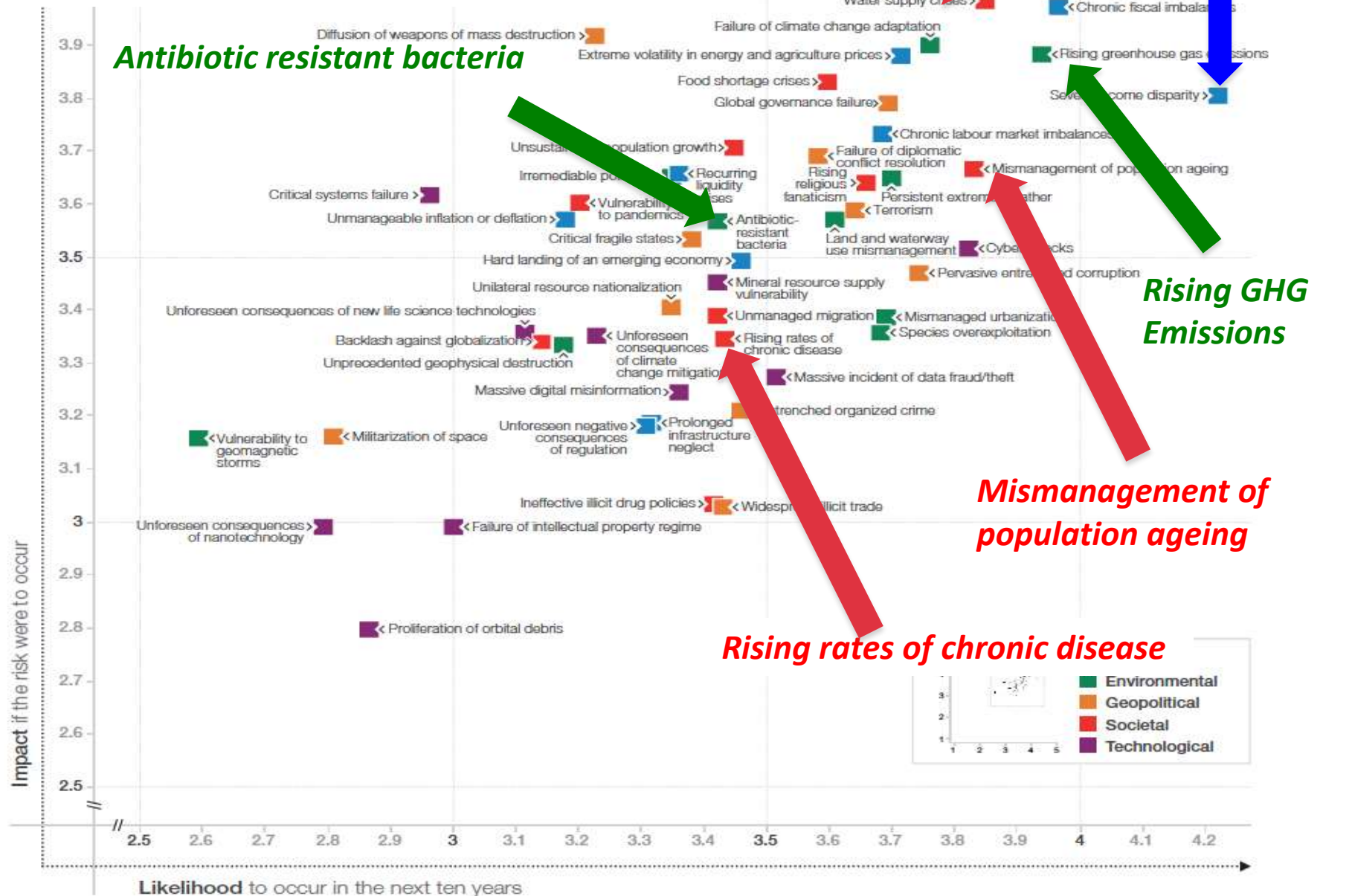


Leunig

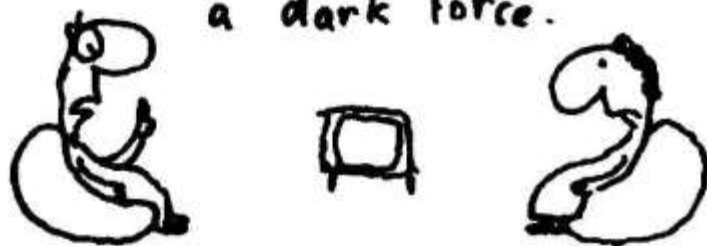
Making the connections



WEF GLOBAL RISKS LANDSCAPE 2012



our way of life is
being threatened by
a dark force.



WHAT IS THIS
DARK FORCE WHICH
THREATENS OUR WAY
OF LIFE?



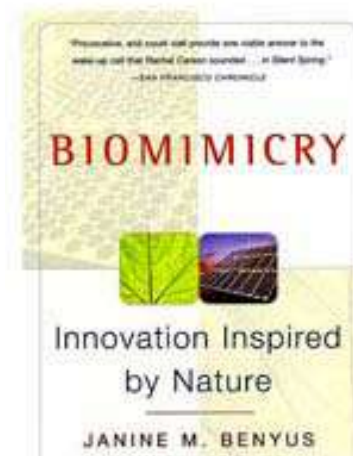
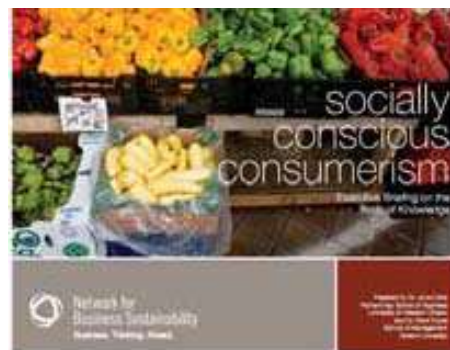
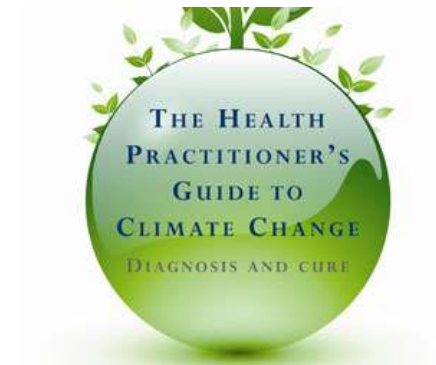
we must defend our
way of life.



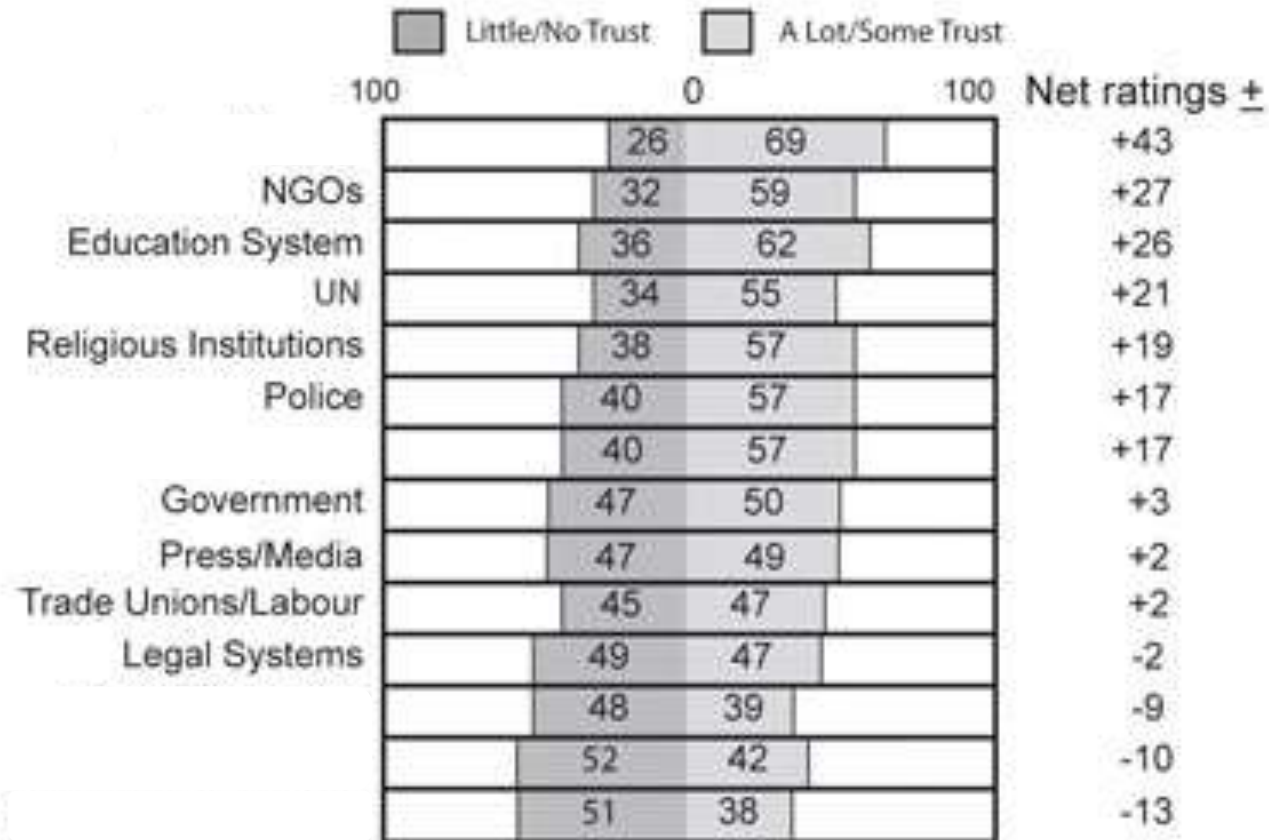
it's our way
of life...



Leunig



Trust in institutions to operate in society's best interest



* % trust minus % distrust = net rating

Source: WEF - - Voice of the People, 2002



I'm Very sorry Ms. Nature but
poisoned air and water, toxic
waste, global warming,
deforestation, and insomnia are
all pre-existing conditions.

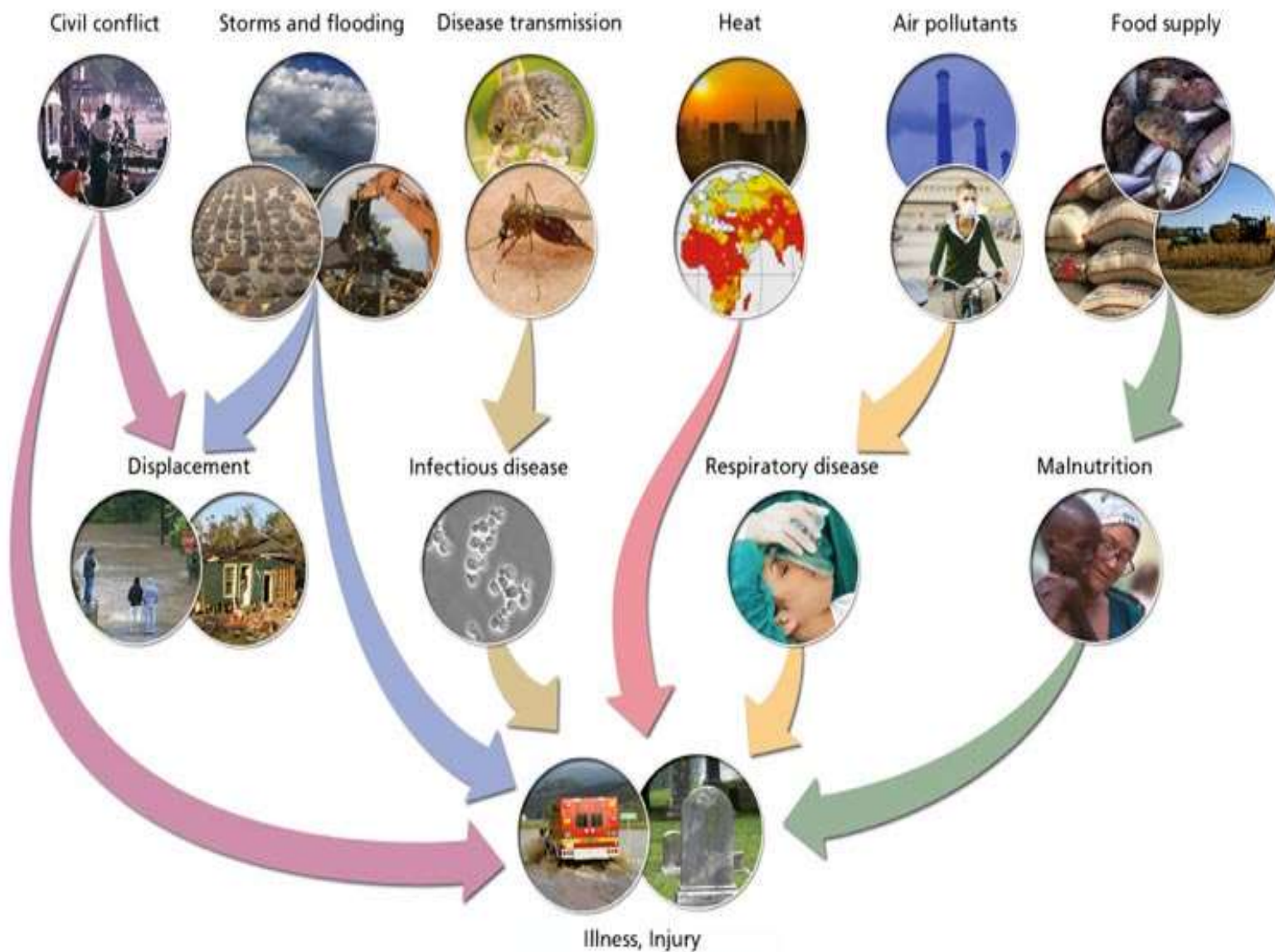


www.JoeMoht.com

Doctors should take the lead in practical steps to reduce the carbon footprints associated with obesity, chronic disease and population growth.....

Prof Robyn McDermott, Professor of Public Health at the University of South Australia, writes that **ageing, obesity and associated conditions account for the greatest proportion of disability and accelerating health care use, and that the health sector itself has a significant and expanding carbon footprint.**

Climate Change Effects on Human Health



How effective is OECD health expenditure?

