

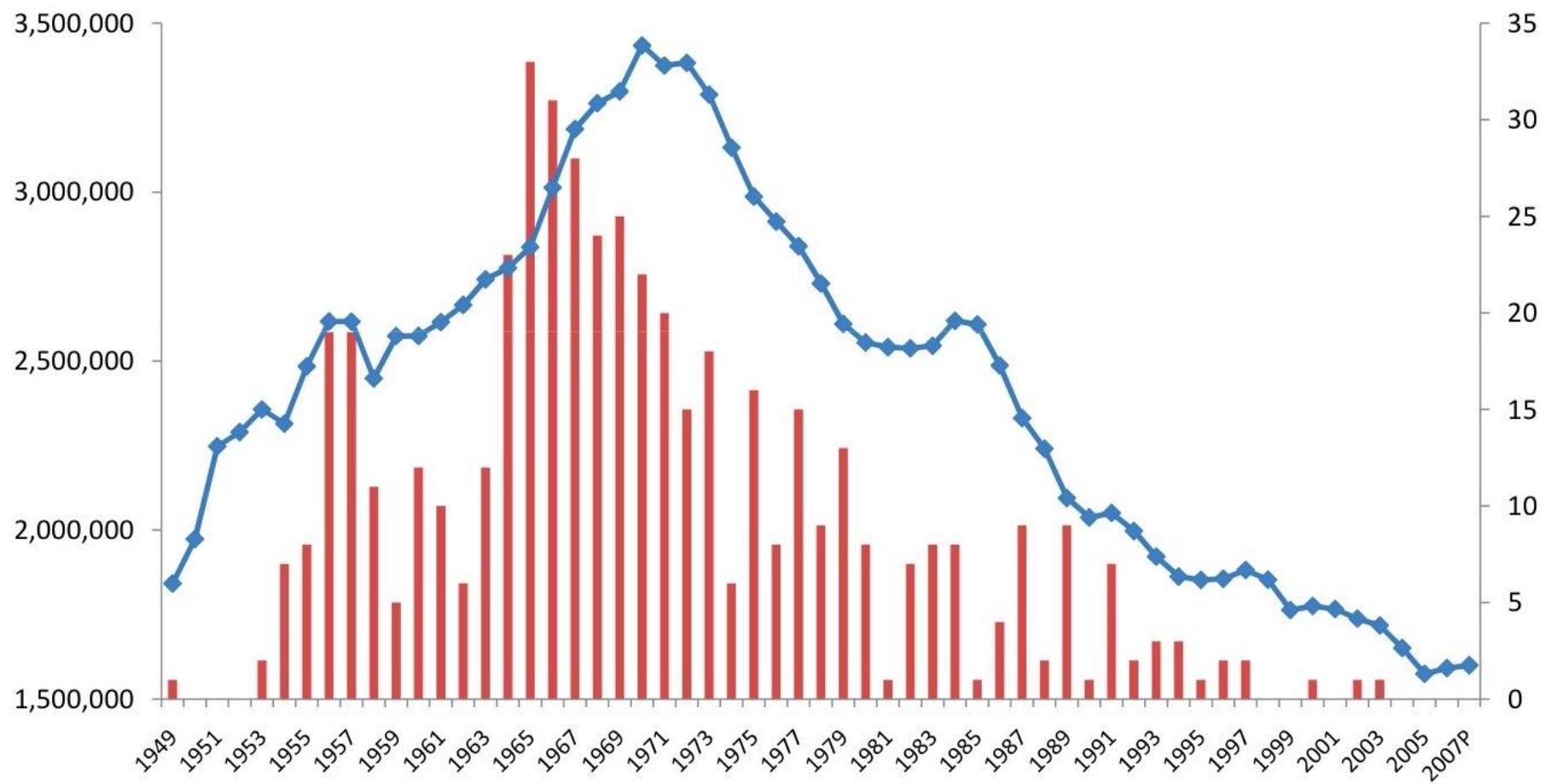
Why this stuff really mattersand is inescapable!

Or....

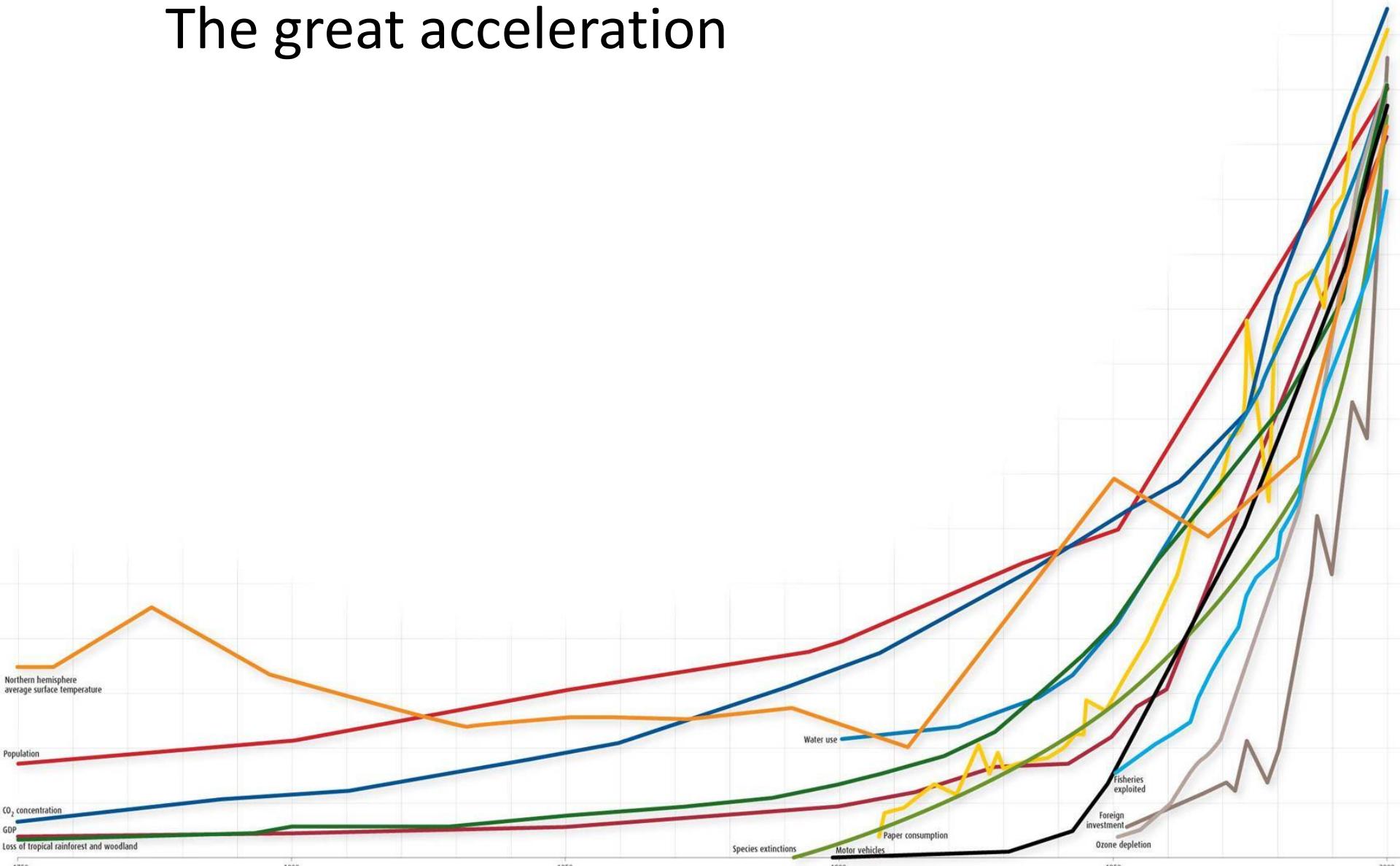
Scale, urgency and connectedness

*'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

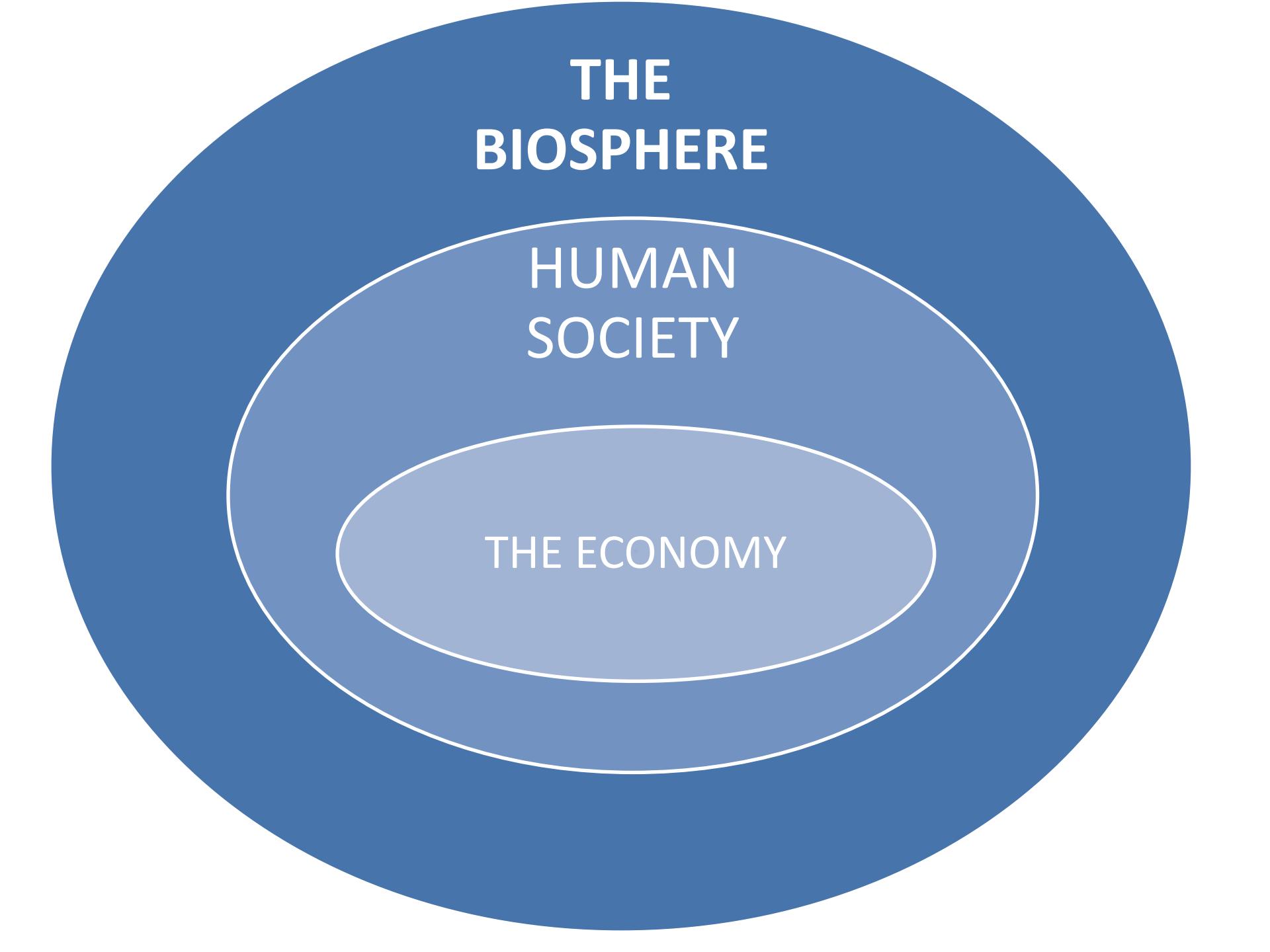


EARTH
OVER
SHOOT
DAY
2012

August
22nd







THE
BIOSPHERE

HUMAN
SOCIETY

THE ECONOMY



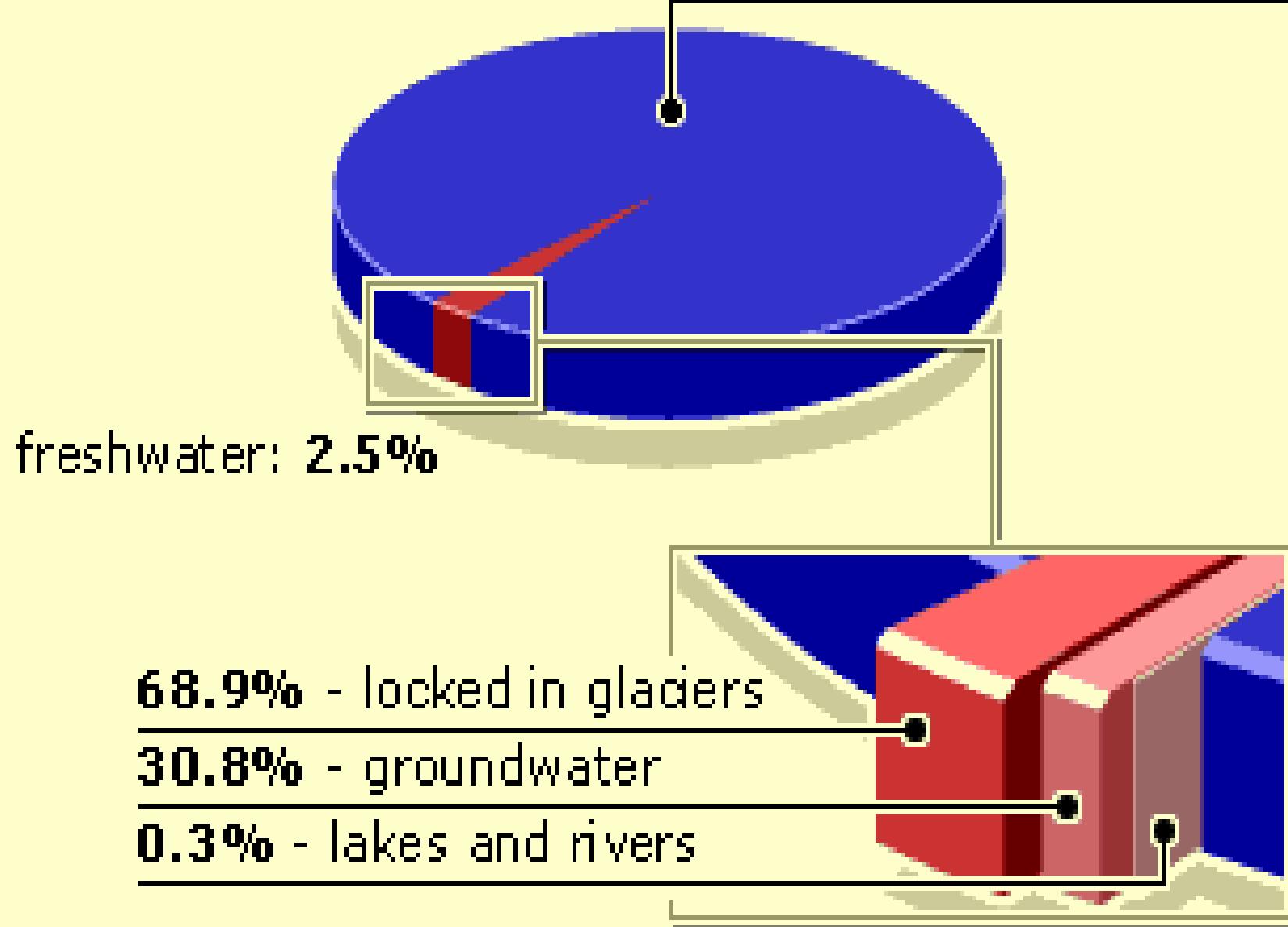
Scarce resources



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

saltwater: 97.5%



SOURCE : UNEP

How much?

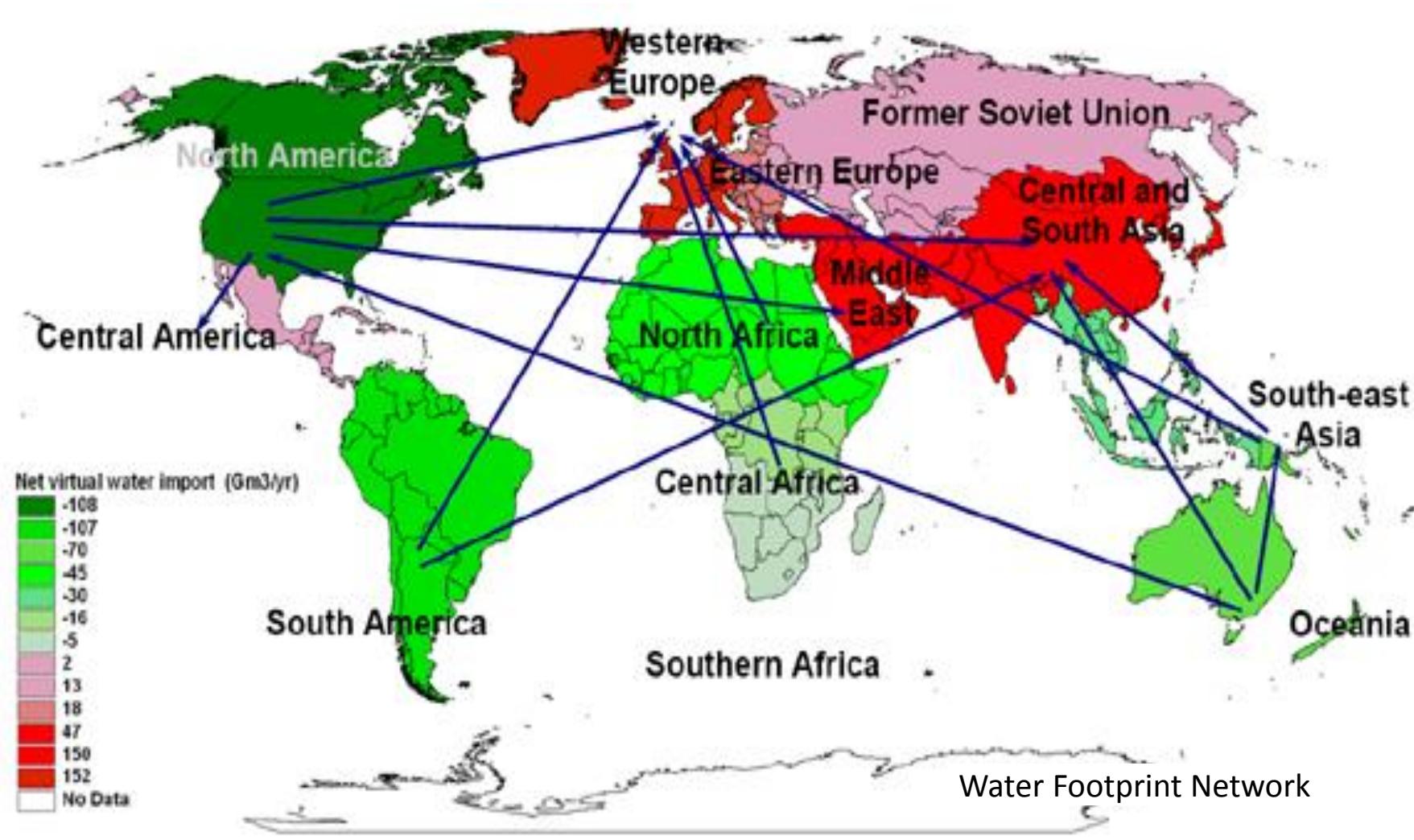
1 pound of lettuce	23 gallons
1 pound of tomatoes	23 gallons
1 pound of potatoes	24 gallons
1 pound of wheat	25 gallons
1 pound of carrots	33 gallons
1 pound of apples	49 gallons
1 pound of chicken	815 gallons
1 pound of pork	1,630 gallons
1 pound of grain fed beef	at least 3,000 gallons

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.

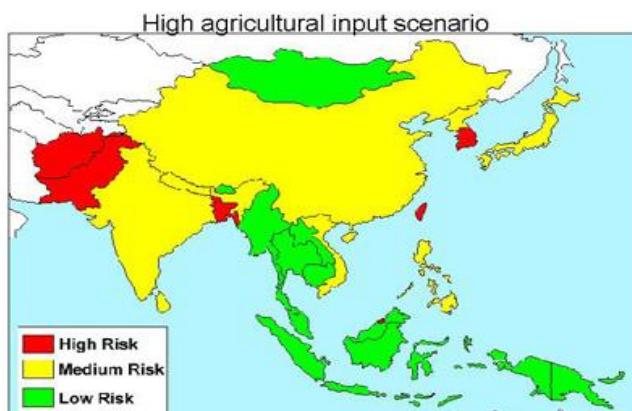
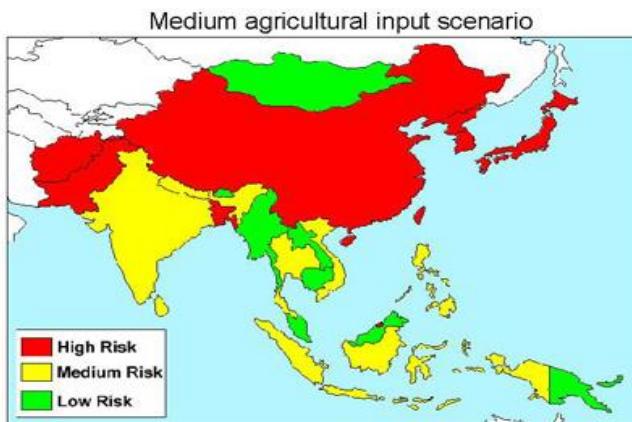
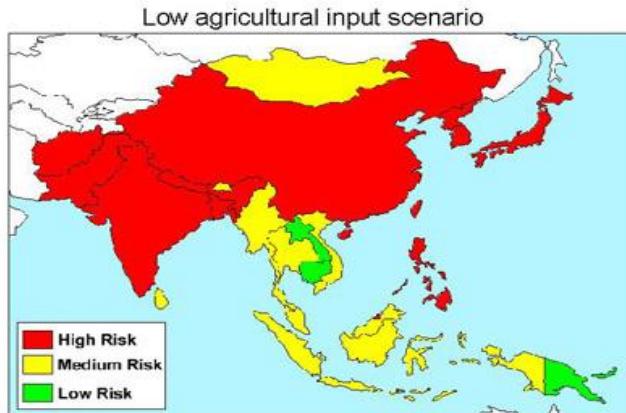
Jason Clay, Senior Vice President WWF

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

Period: 1997-2001.

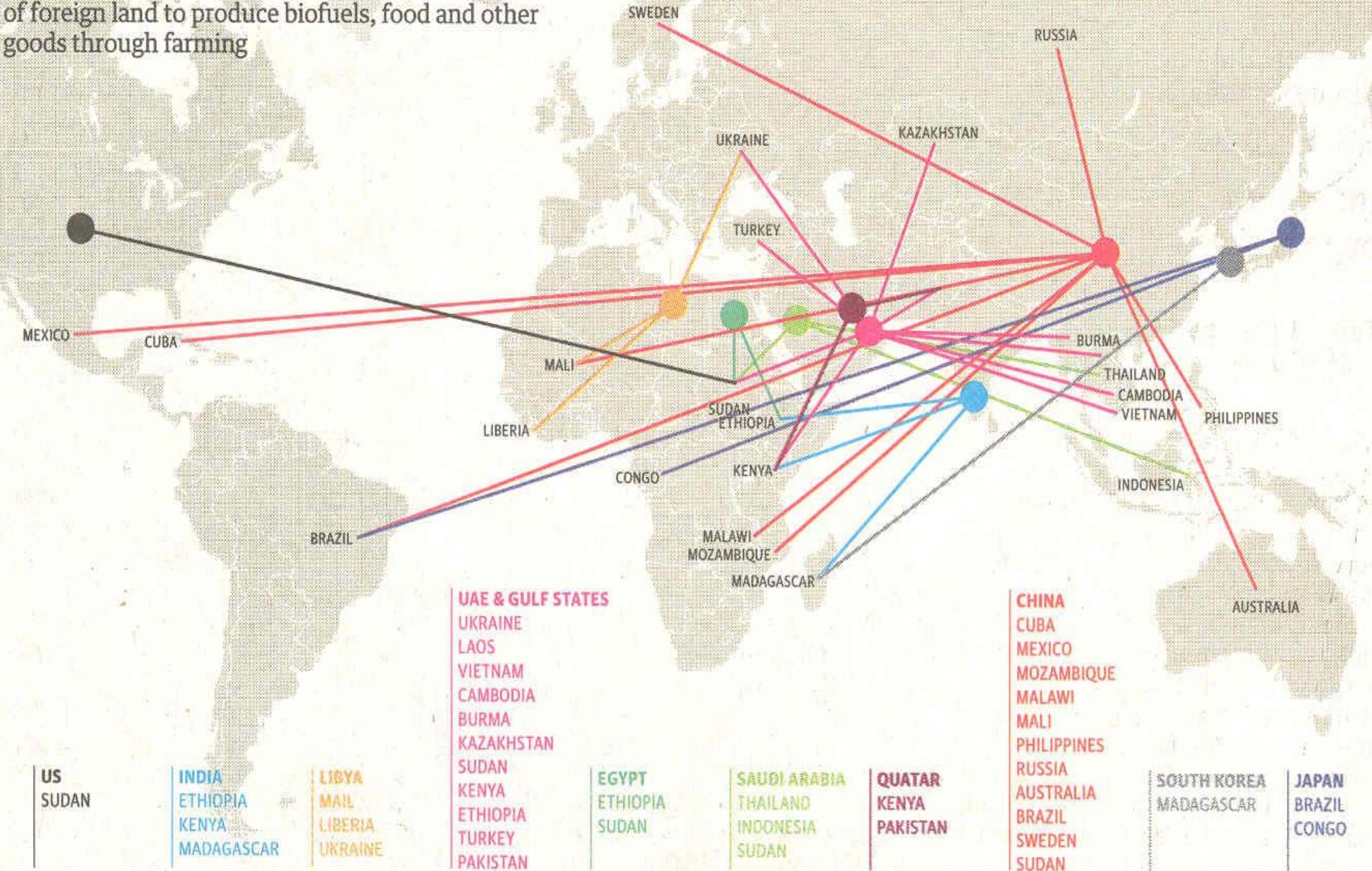


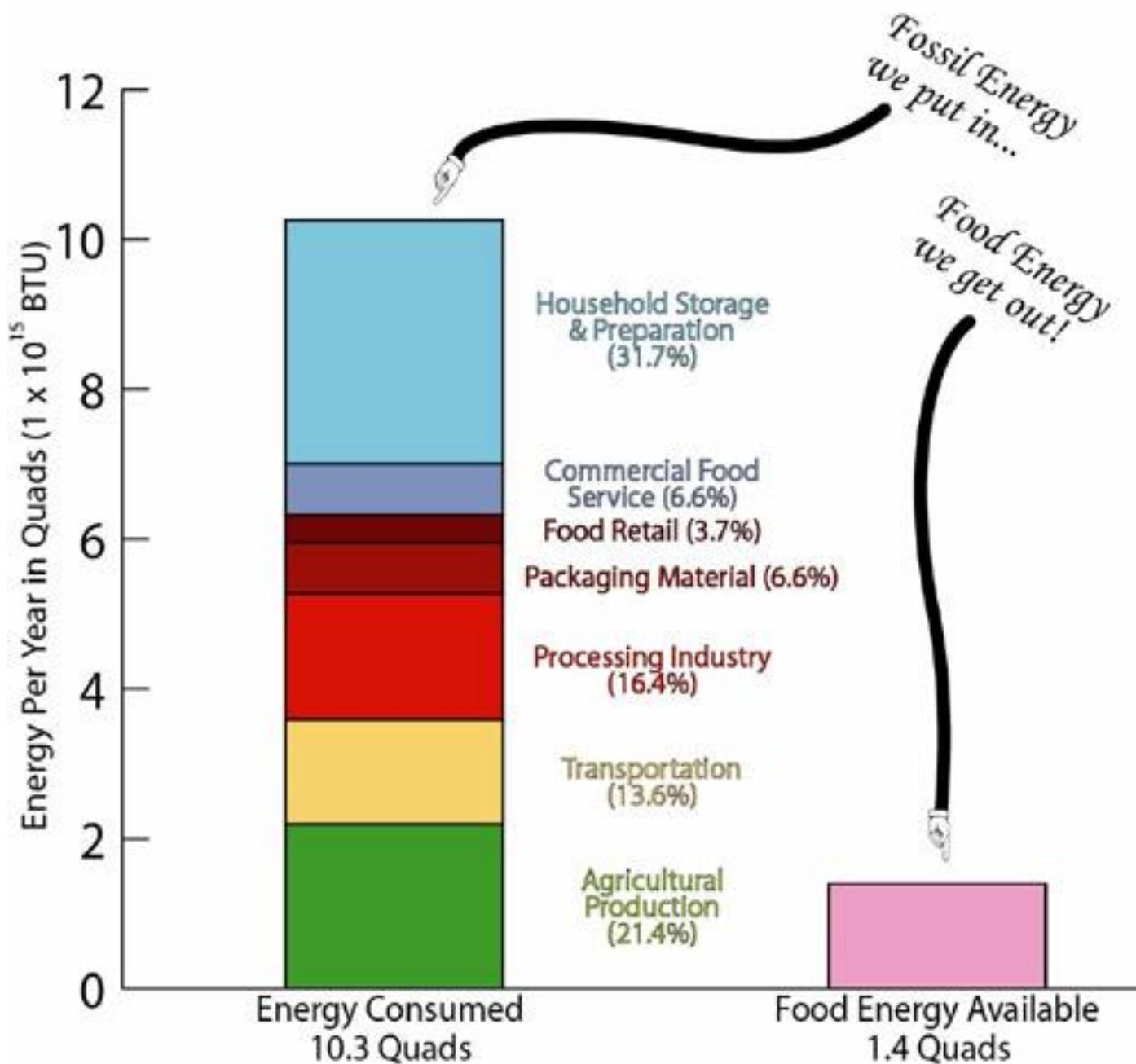
Food security in Asia



Global land grabs

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





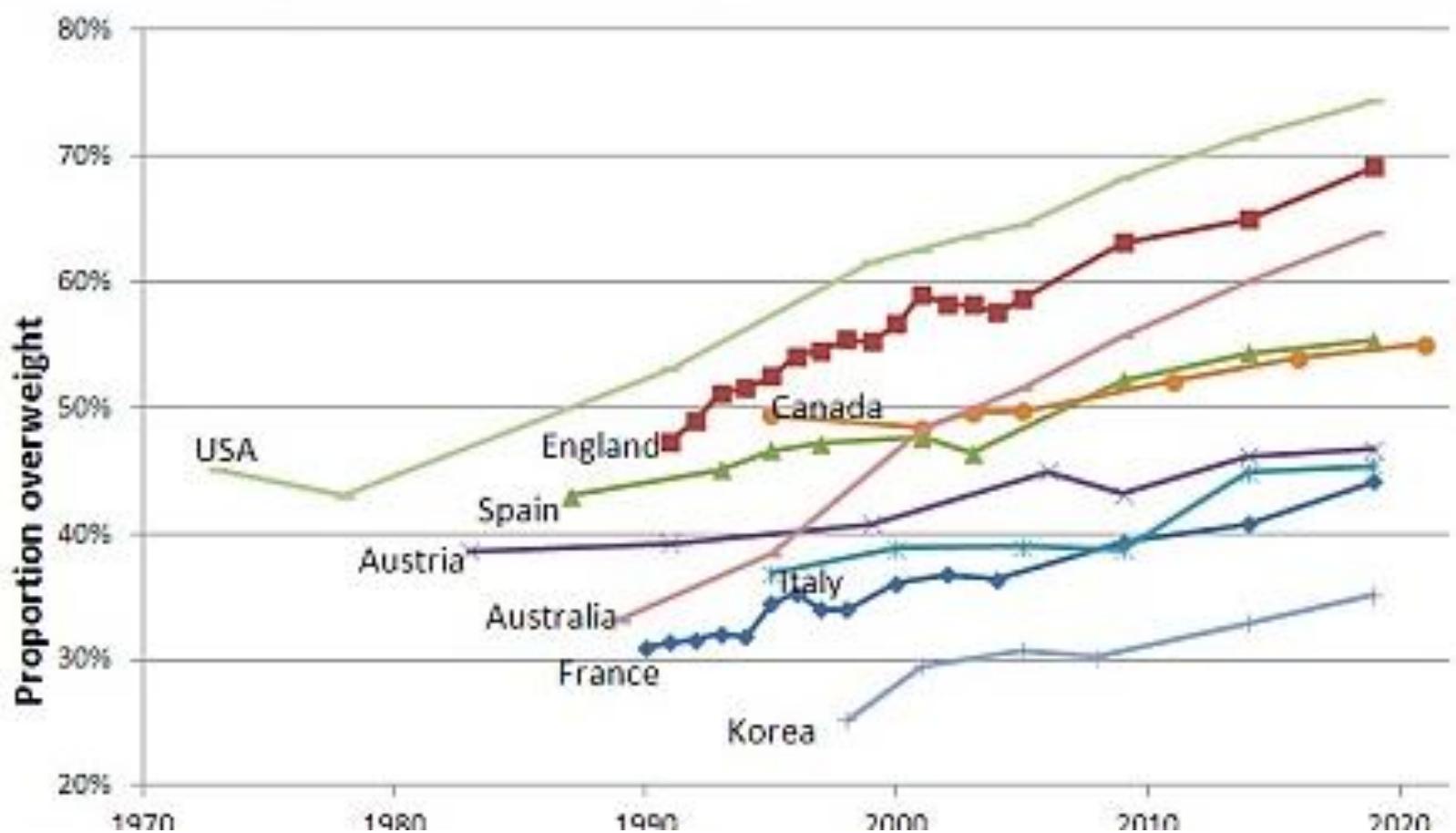
STAPLE PRICES TRIPLE AS MUCH OF THE WORLD'S FOOD SUPPLY IS DIVERTED TOWARDS FUEL CONSUMPTION

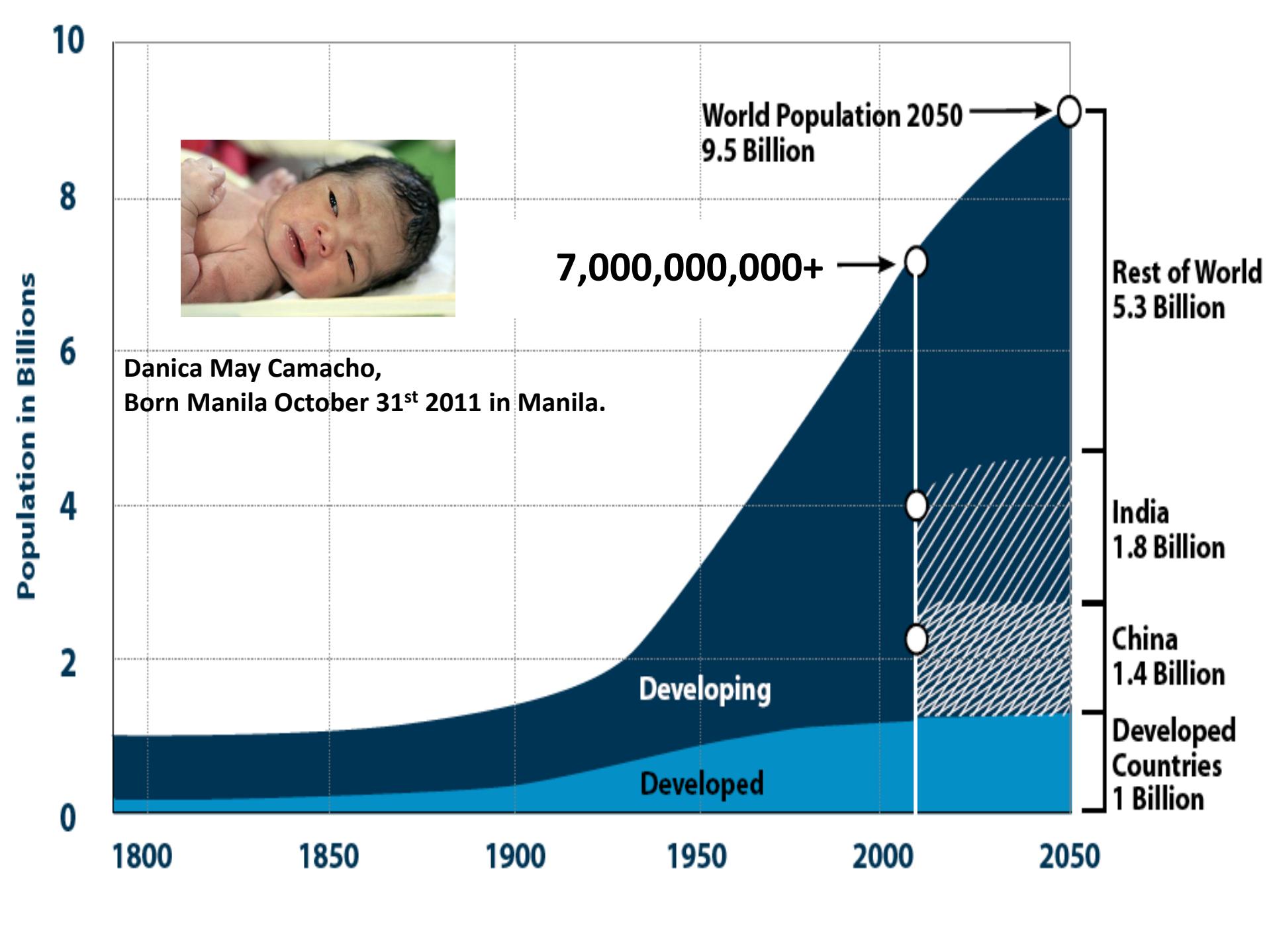


Answer:

**Between
30% and 80%**

Past and projected overweight rates in selected OECD countries

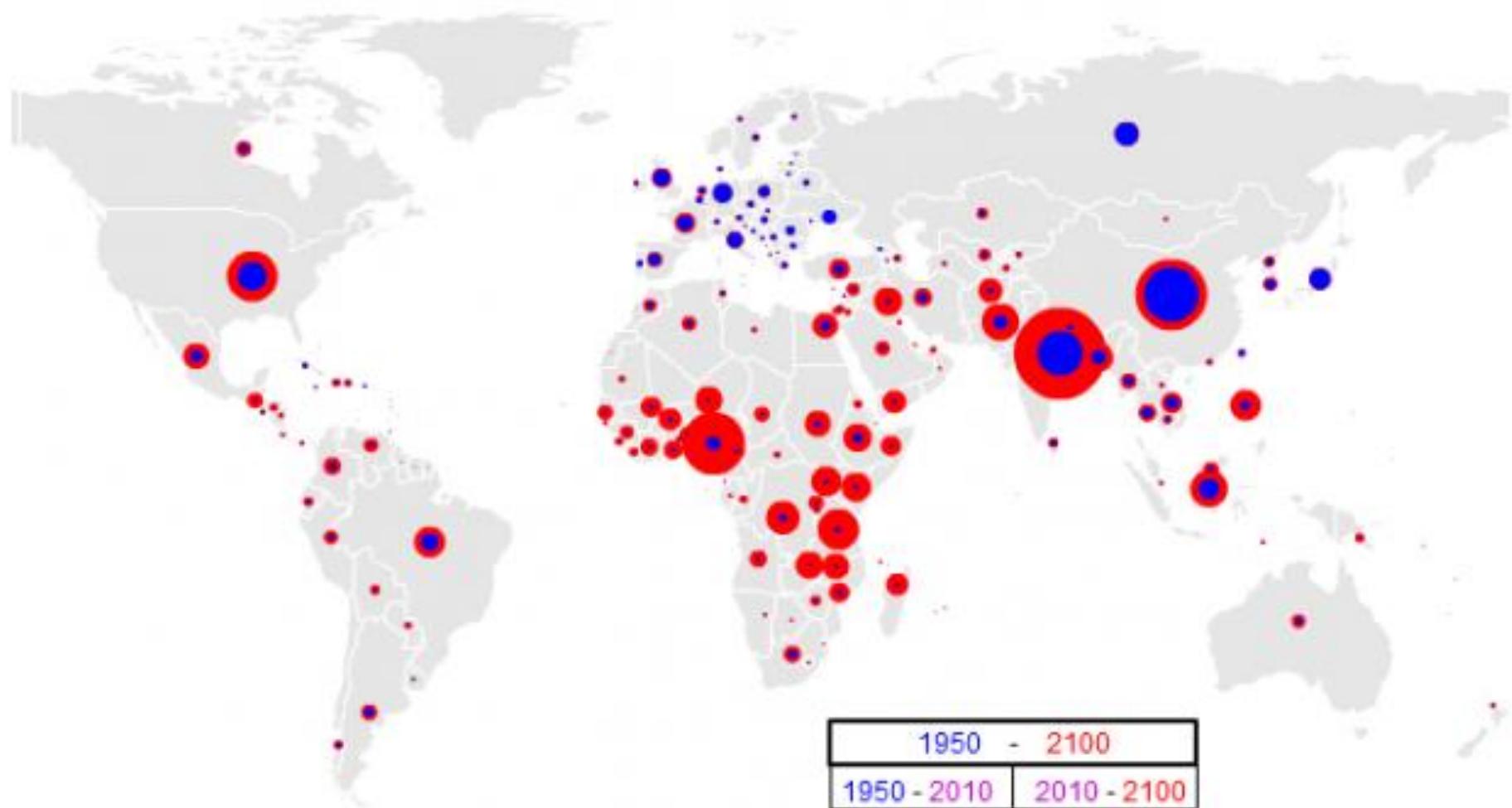




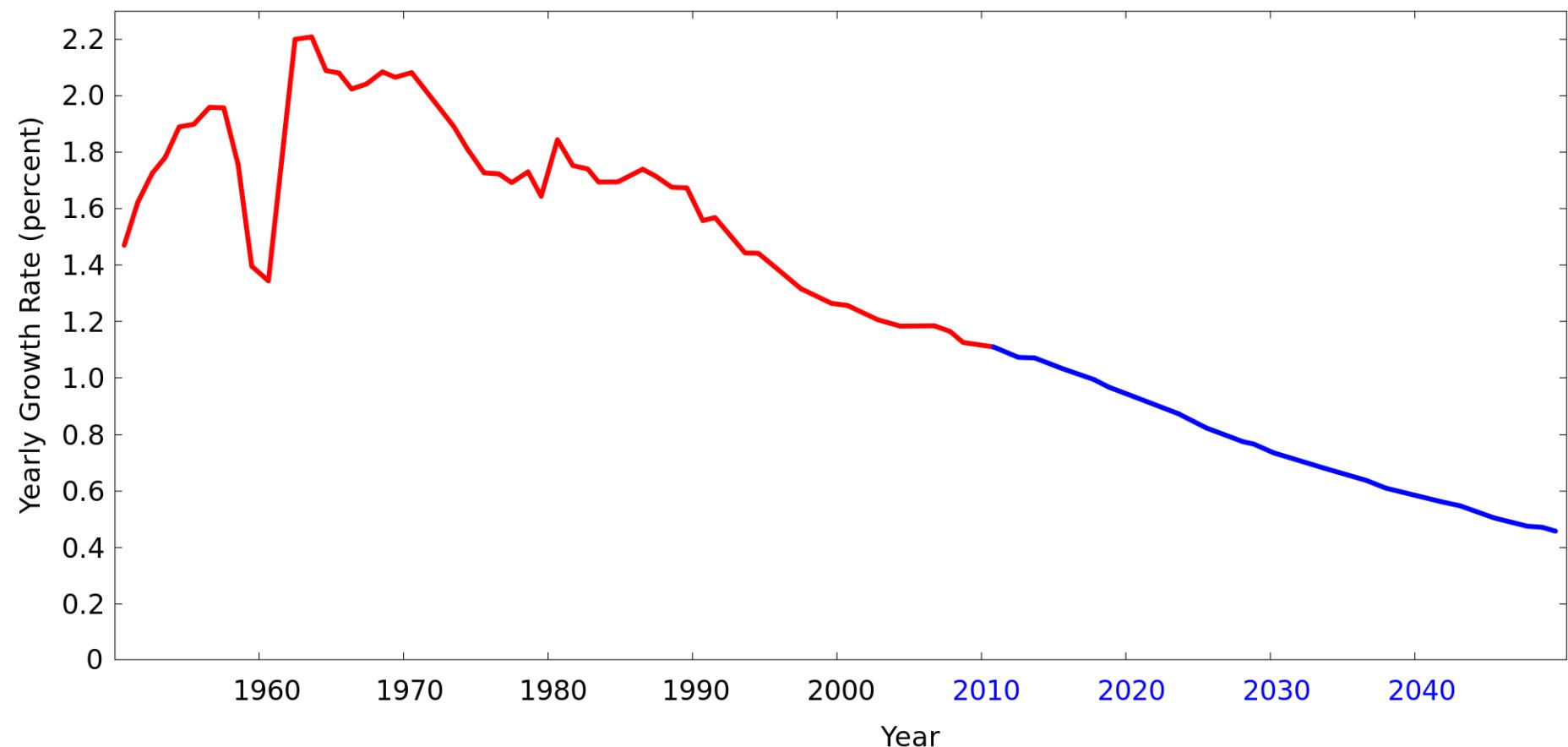
Country population past, present, future

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.

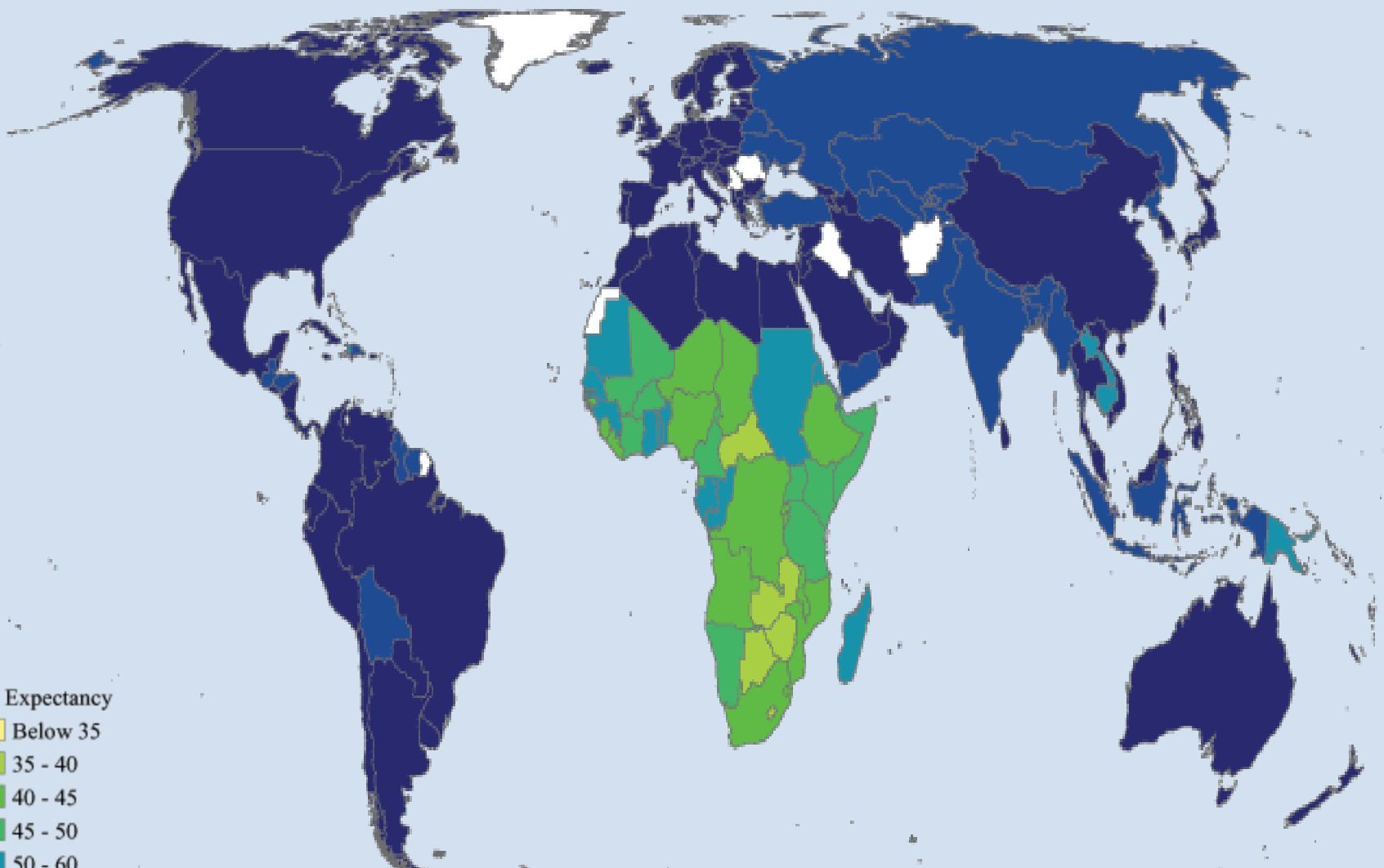
click on countries to select, click again to deselect:



World population growth rate 1950–2050



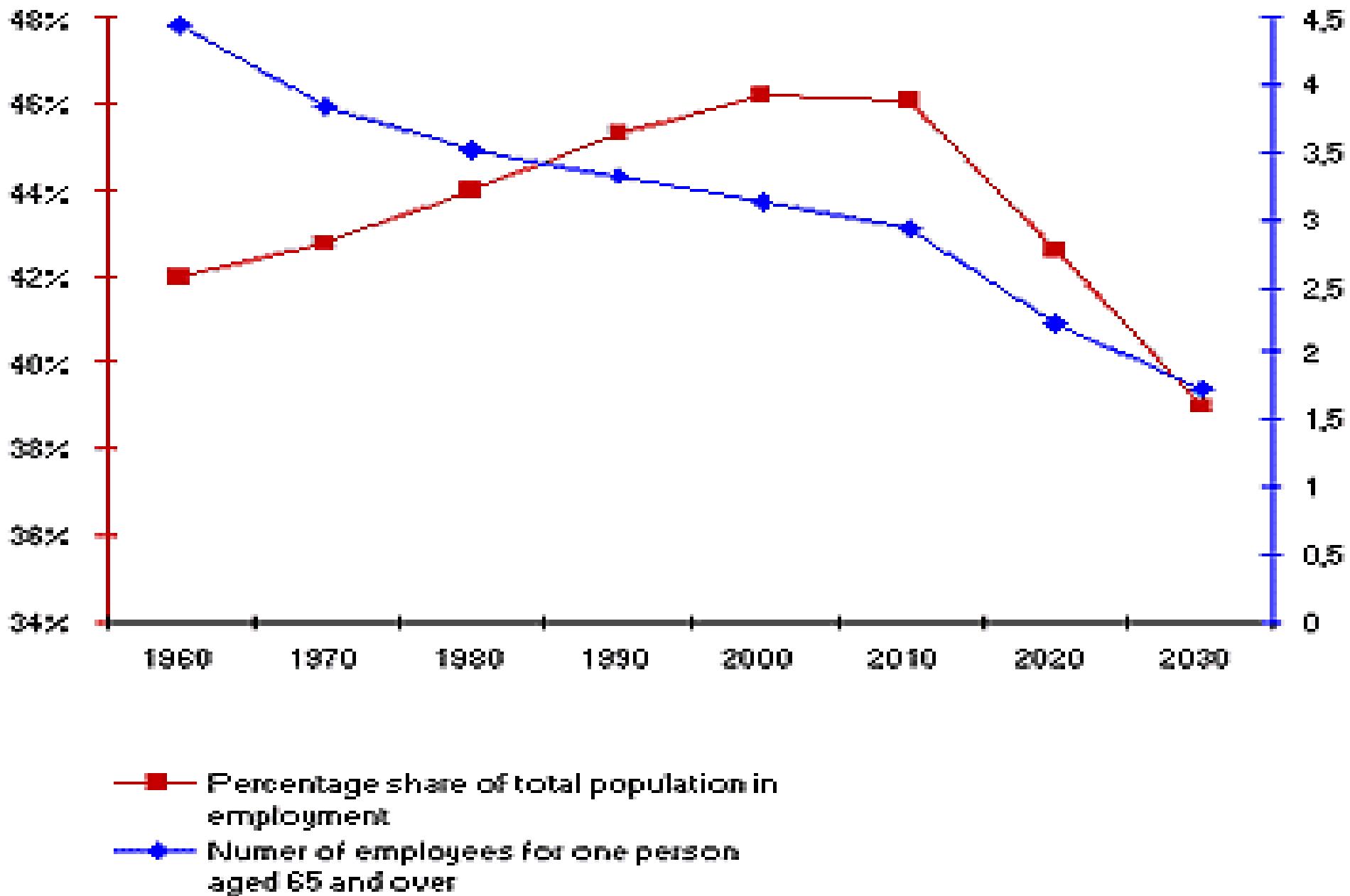
Life Expectancy at Birth 2004



Life Expectancy

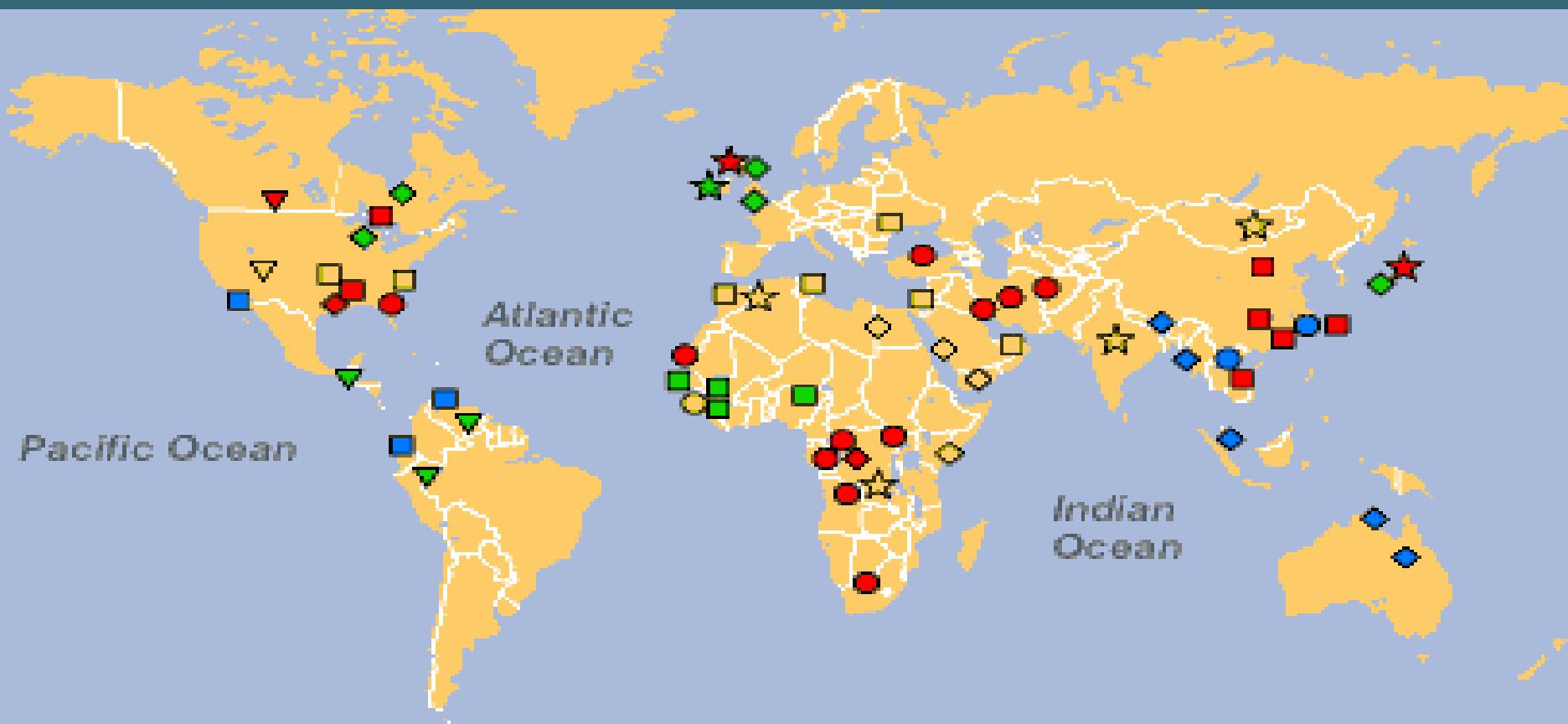
- Below 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 60
- 60 - 70
- 70 - 83
- No Data

Employment ratios for OECD countries





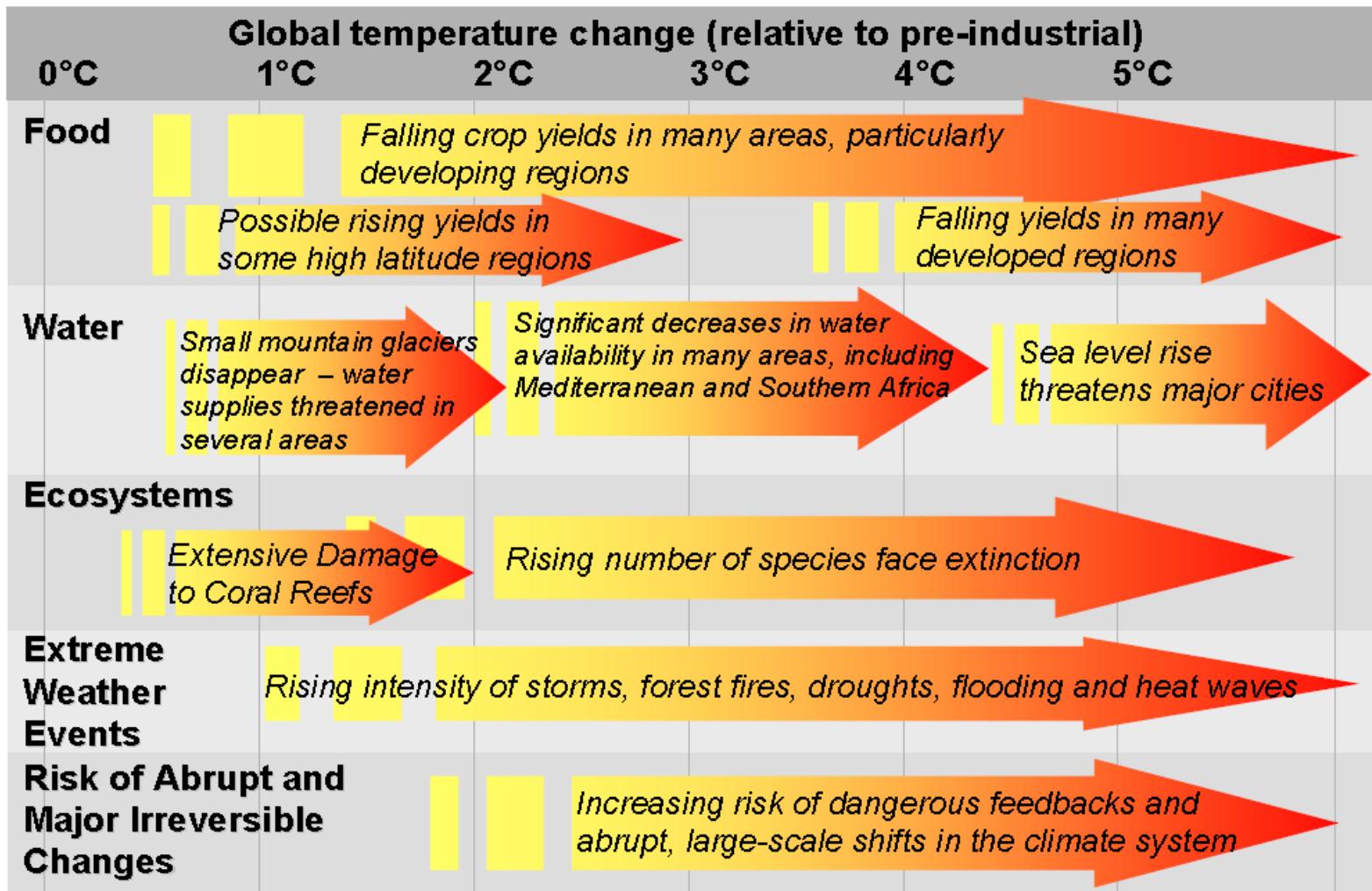
EMERGING AND RE-EMERGING INFECTIOUS DISEASES: 1996-2004



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

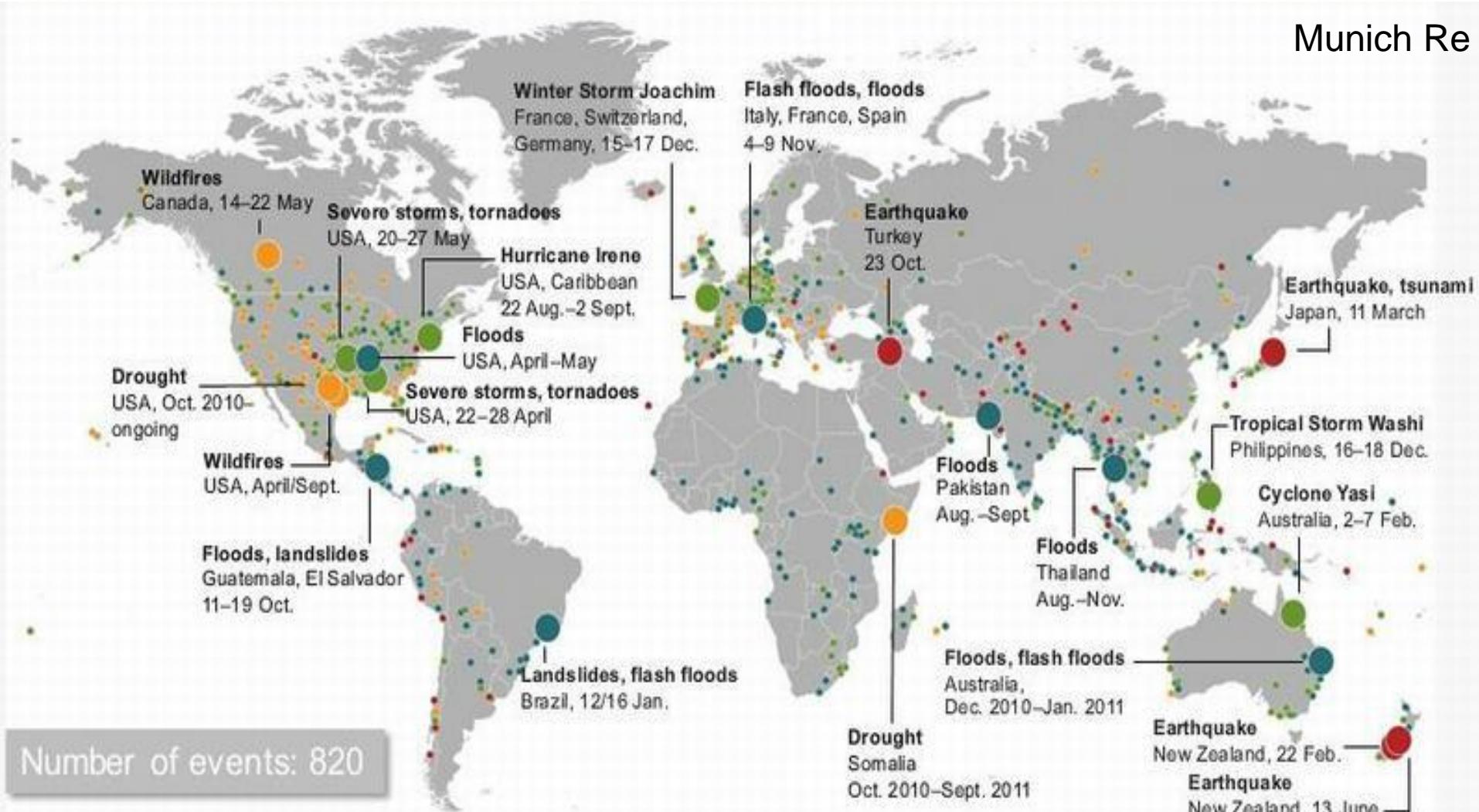
SOURCE: WHO

Projected impacts of climate change



Global natural disasters 2011 – a record year for insurance claims

Munich Re



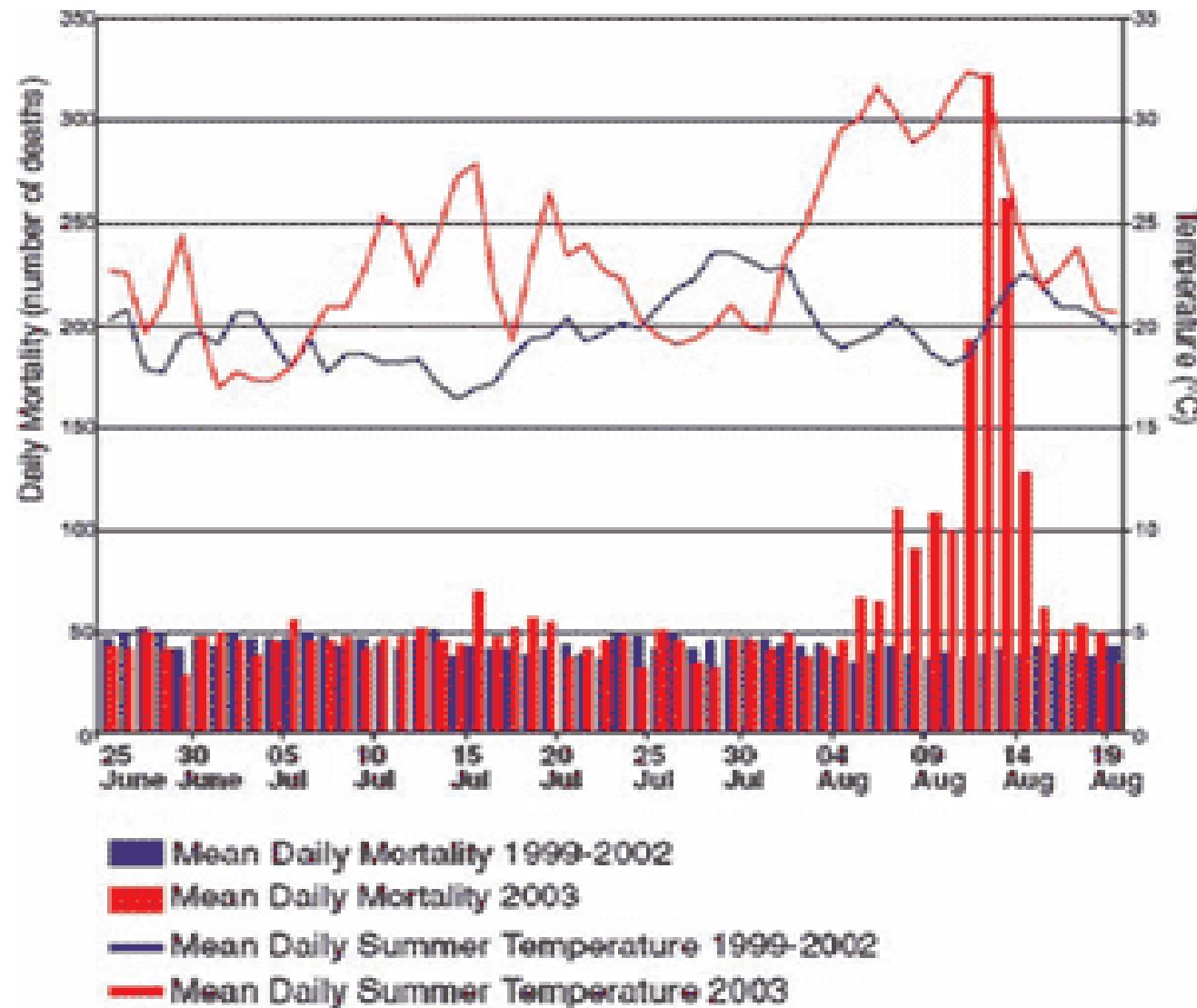
- Natural catastrophes

- 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

- Not suitable
- Less suitable
- Suitable

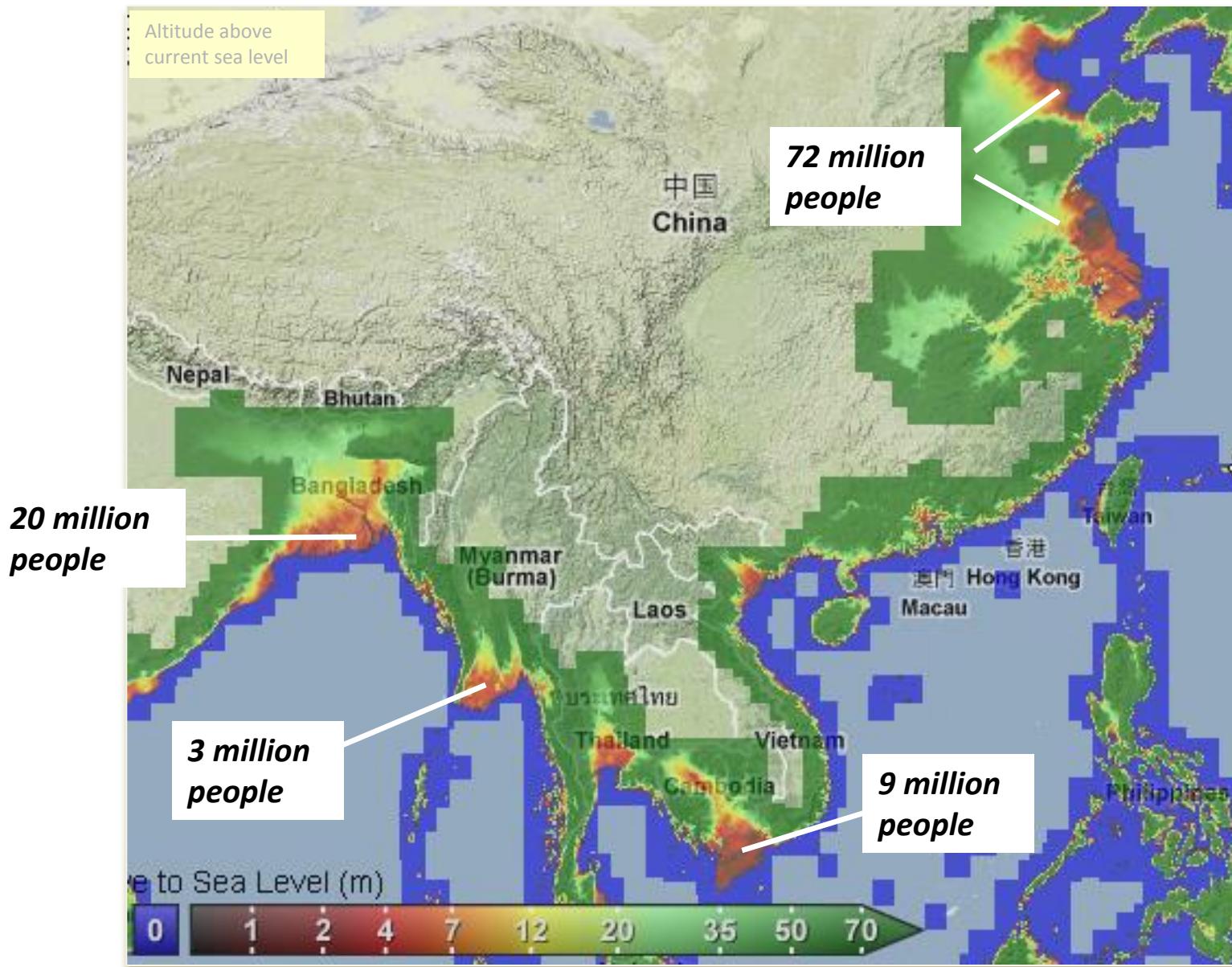


Today's
temperature



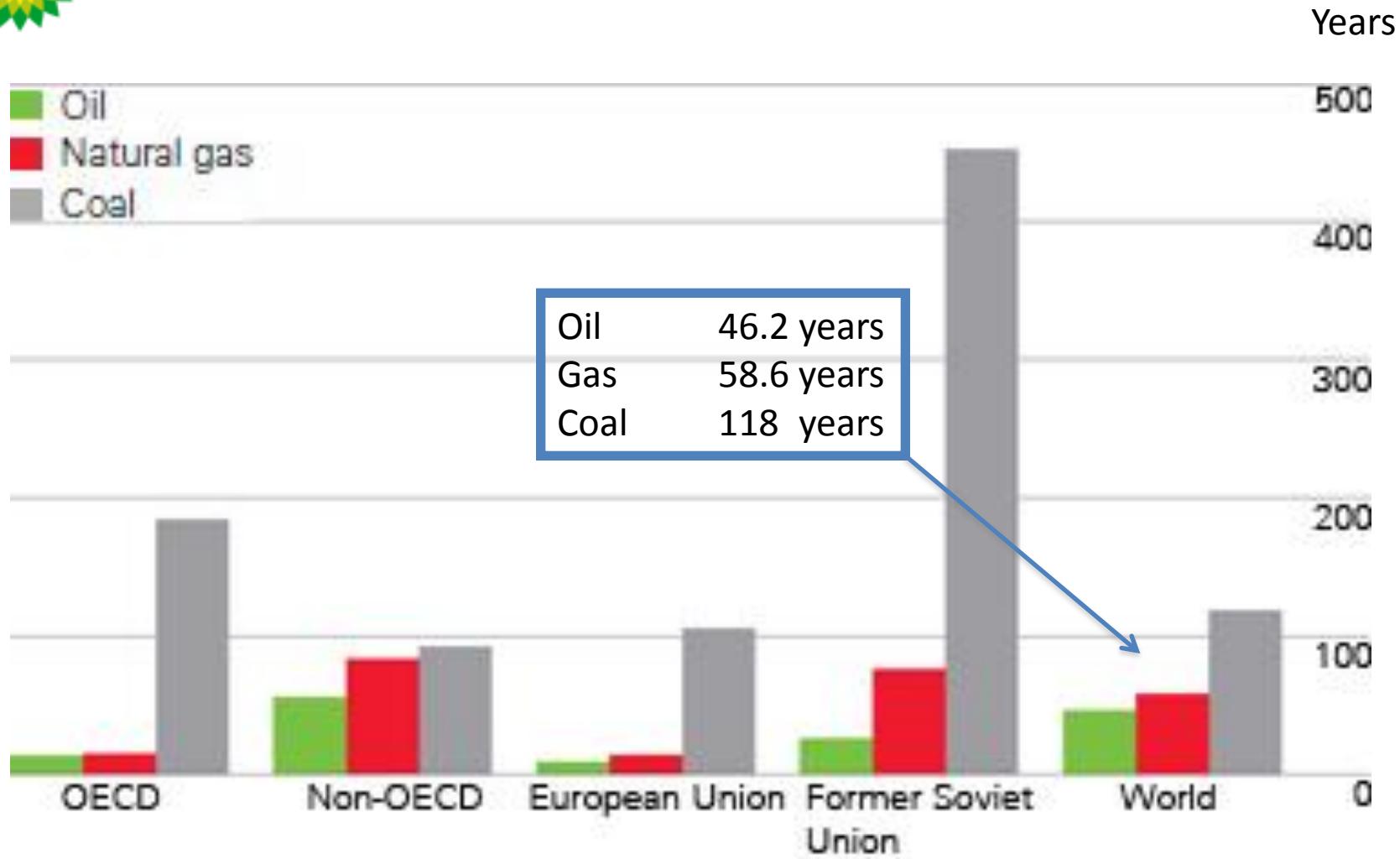
A temperature
increase of 2°C

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

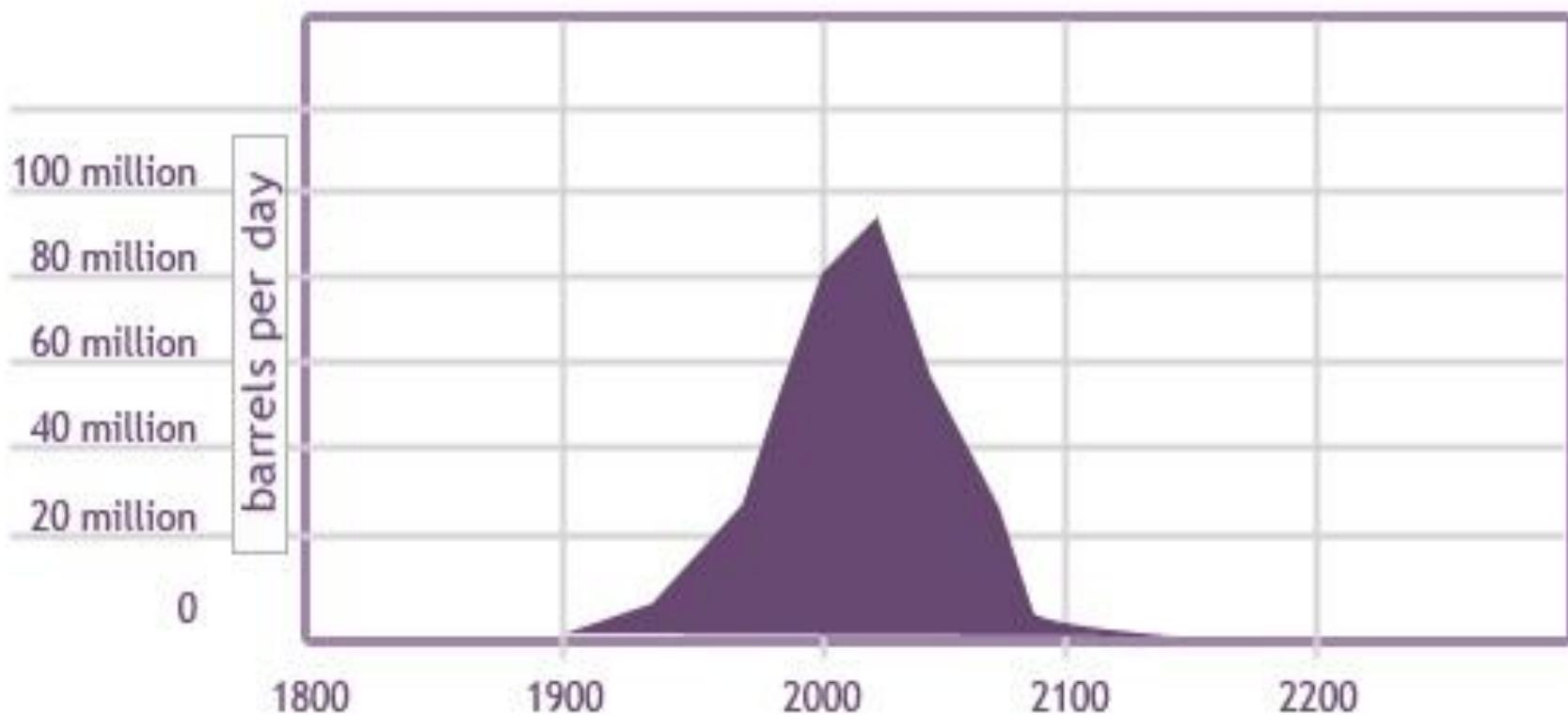




Fossil fuel reserves-to-production (R/P) ratios at end 2010

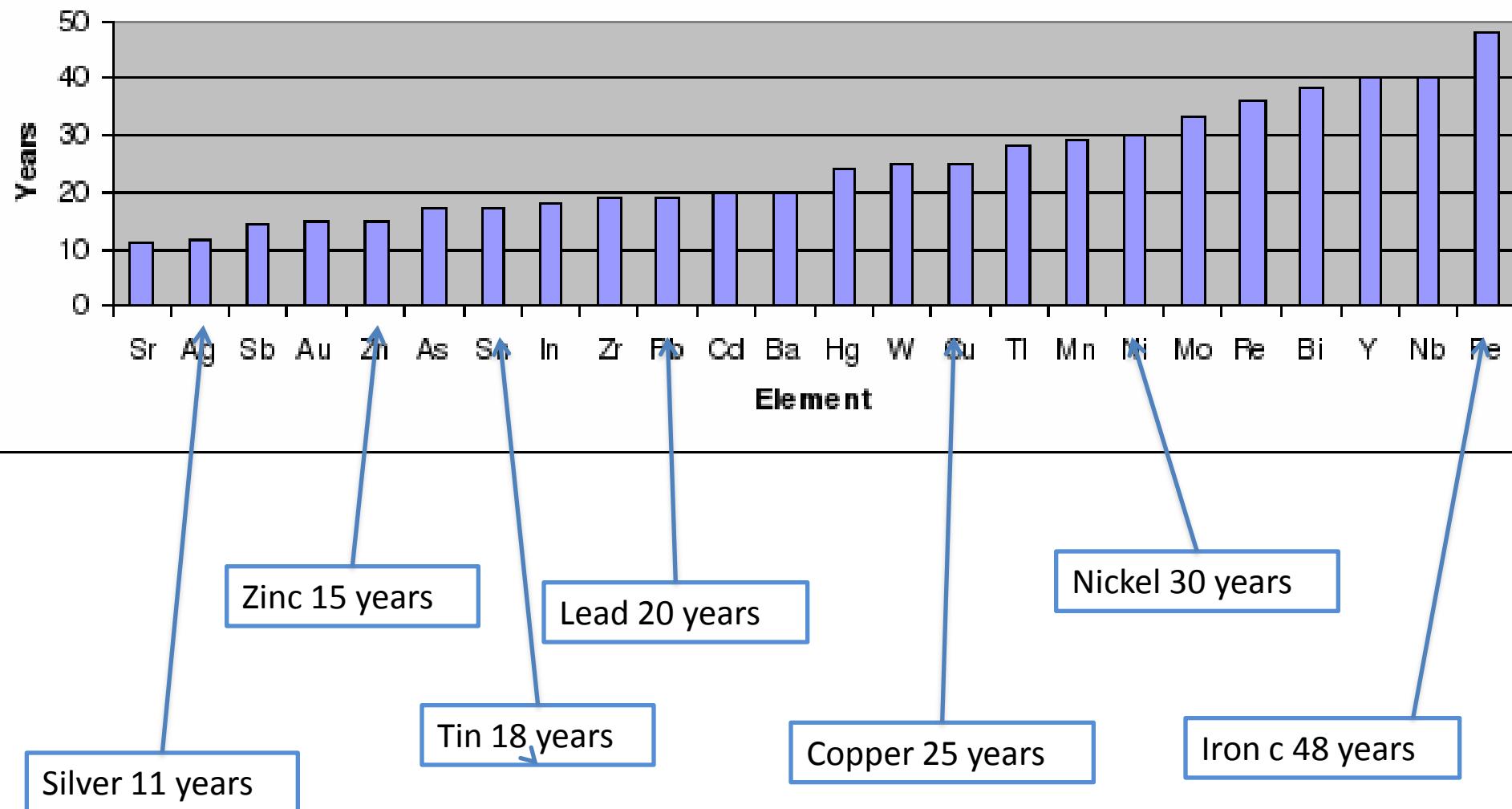


World Oil Consumption



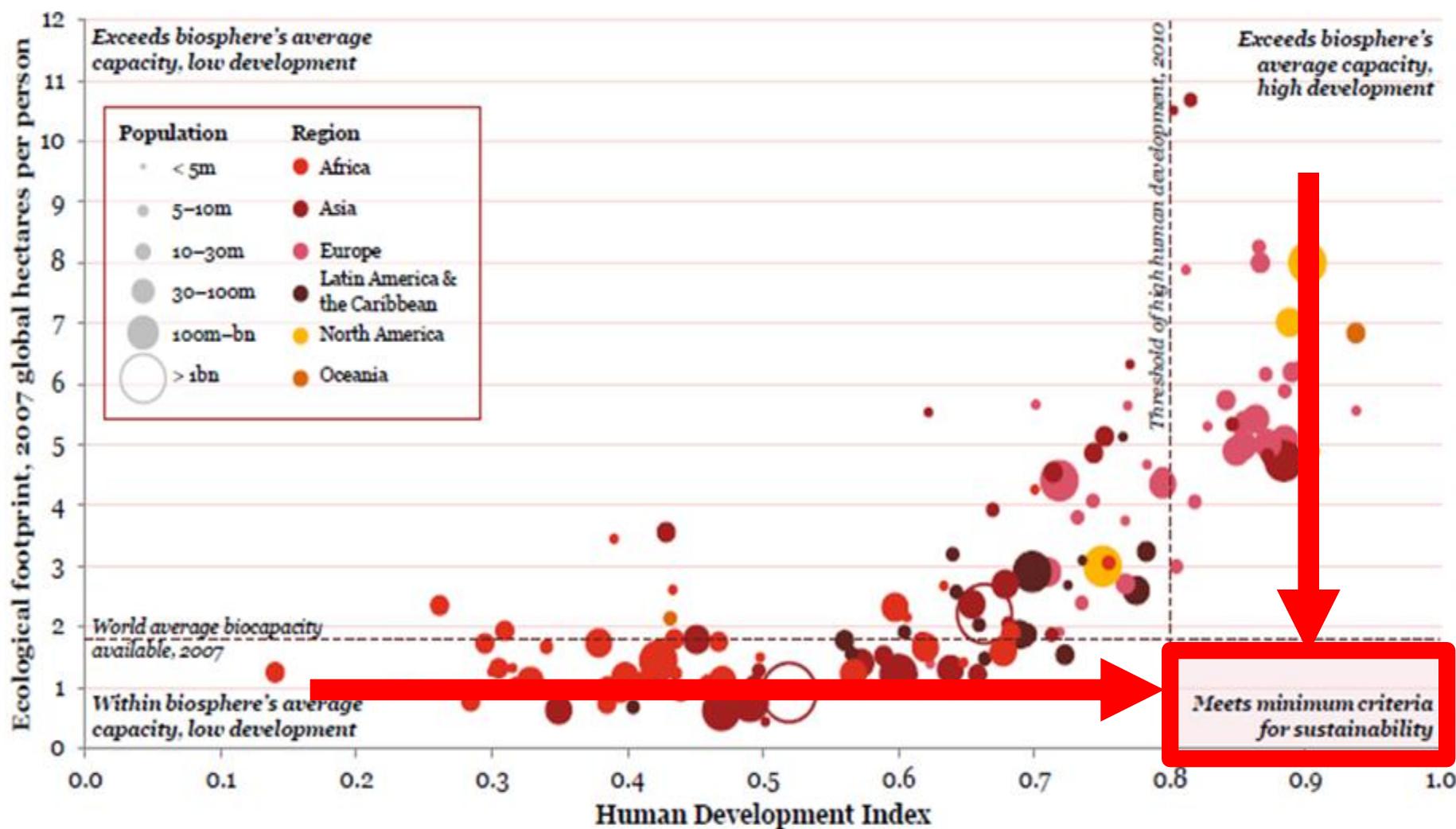
Adapted from Richard Heinberg's *Powerdown: Option and Actions for a Post-carbon World*

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



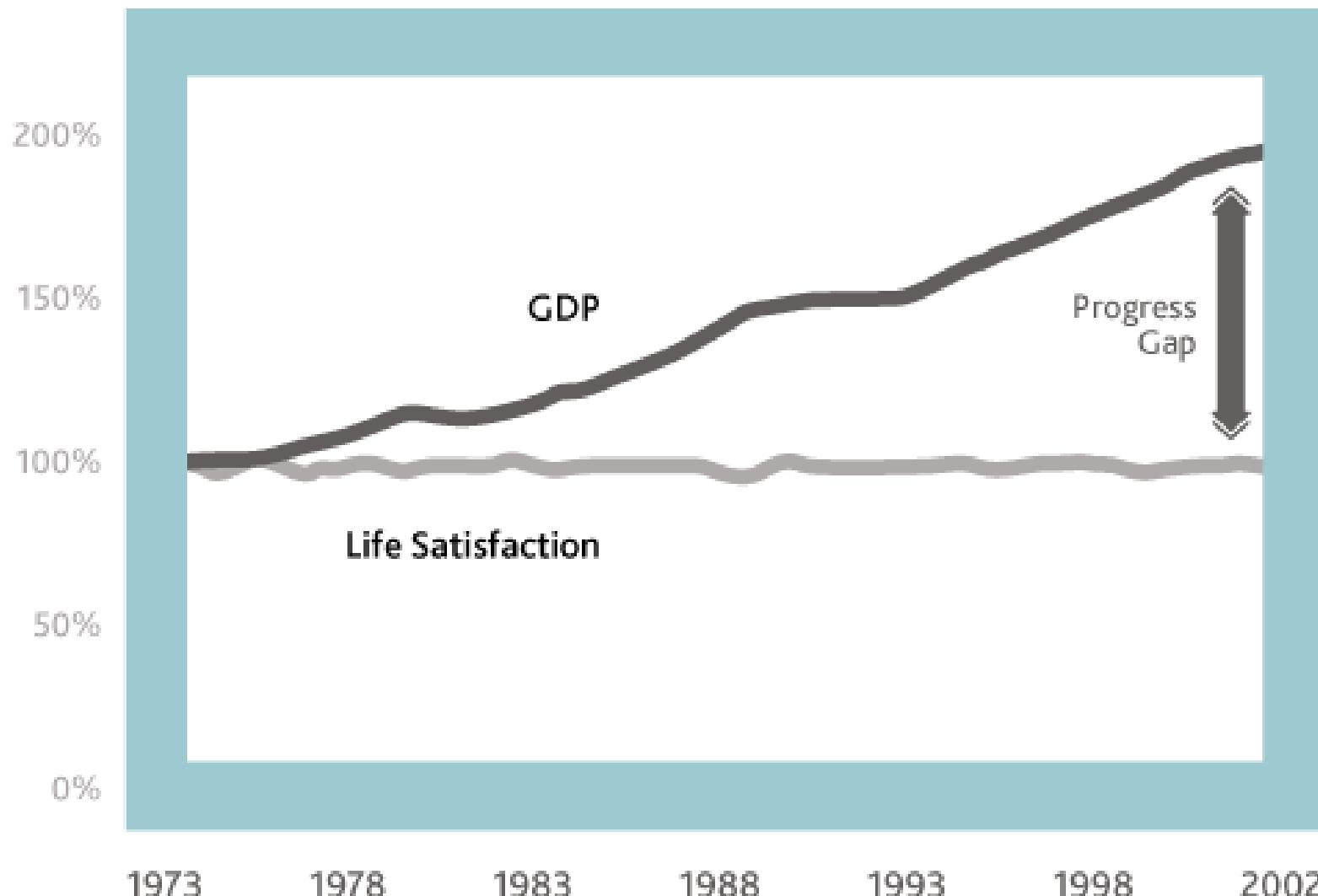
The big debate

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



Eurobarometer survey

How may a man
measure his own
happiness?



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



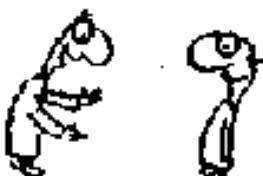
Then he must
lay them out on
the ground, end
to end.



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



And that measurement;
that distance is
exactly the same

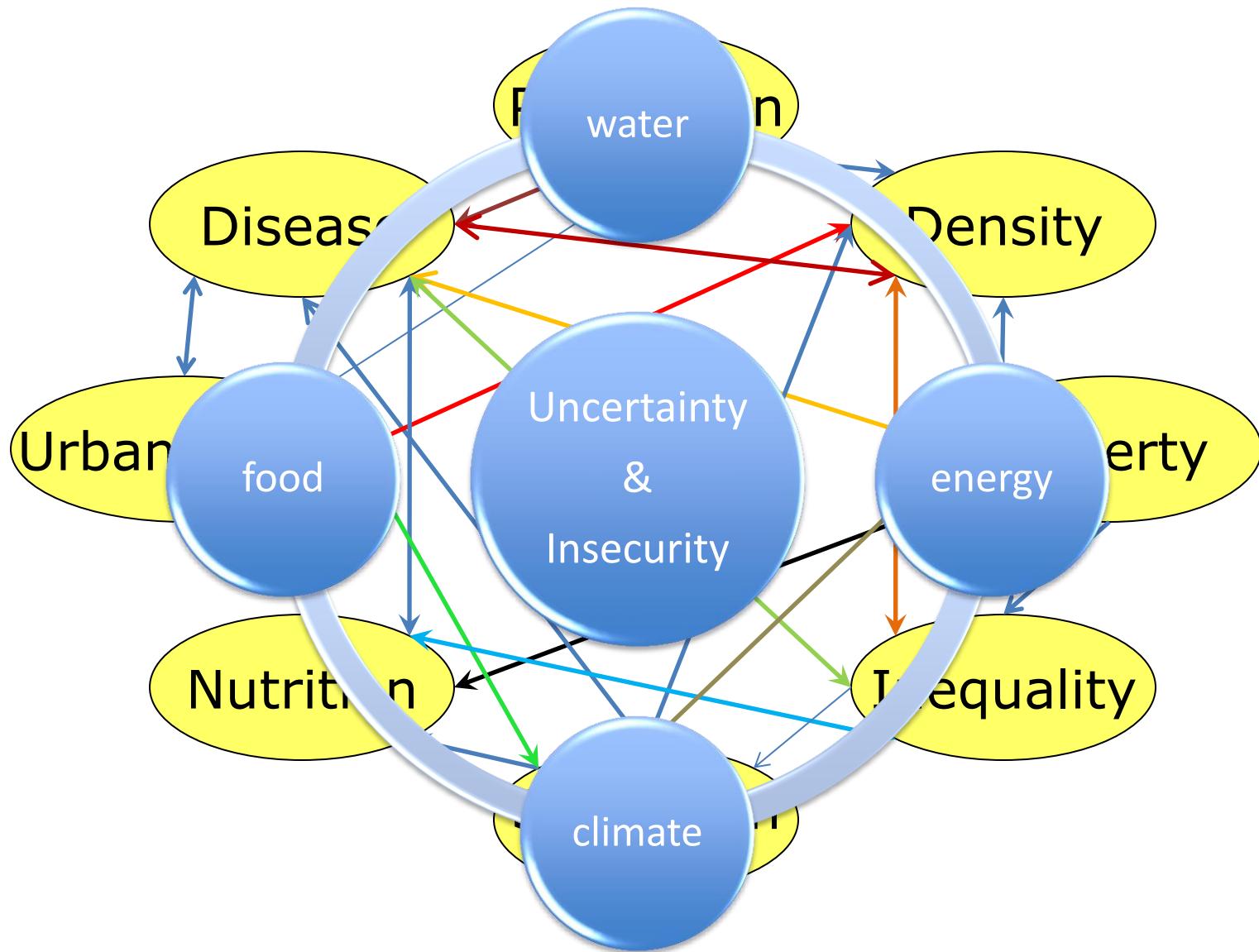


..... as his distance
from true happiness.



(unig)

Making the connections



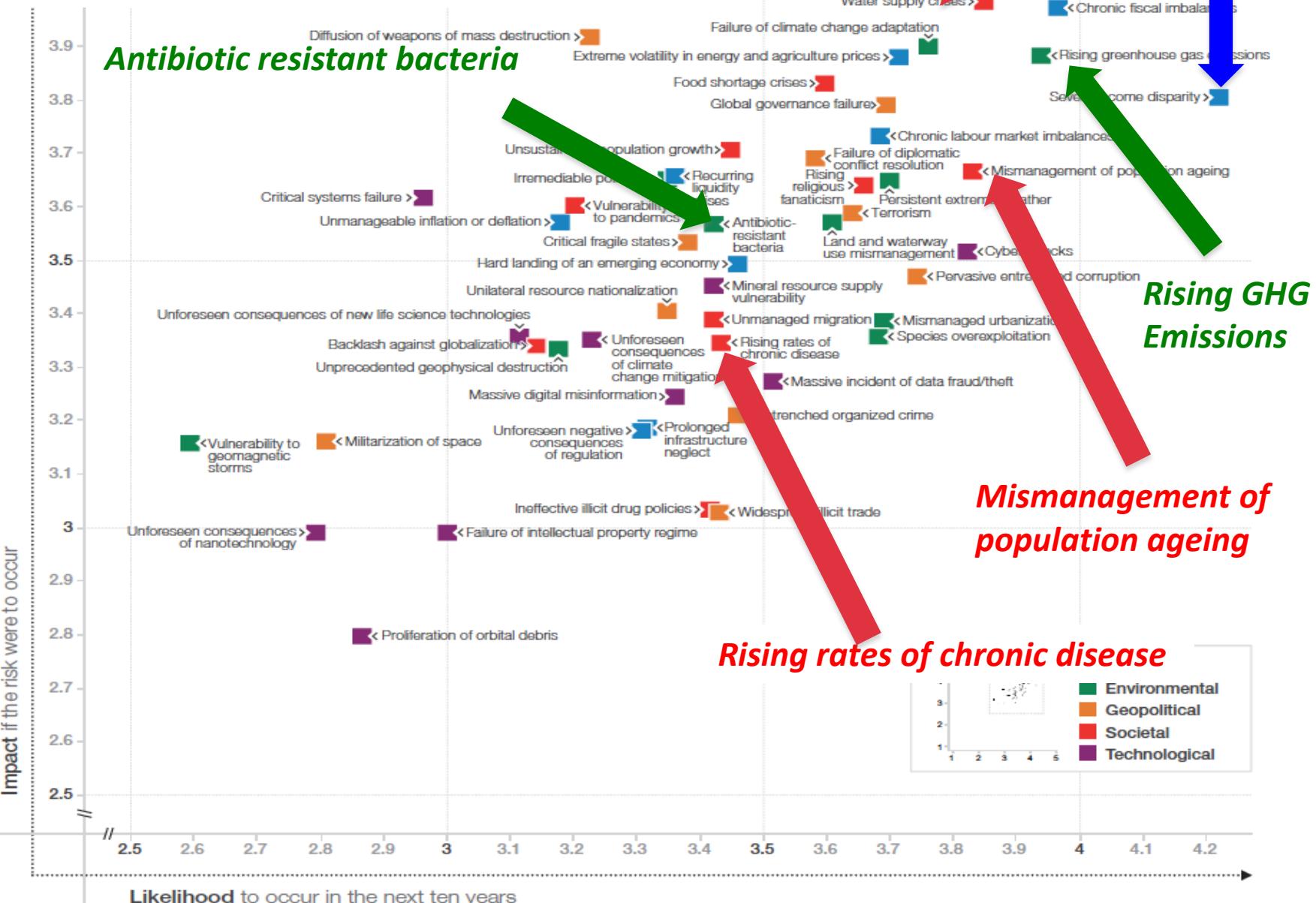
WEF GLOBAL RISKS LANDSCAPE 2012

Fiscal imbalances

Severe Income Disparity

Water Supply Crisis

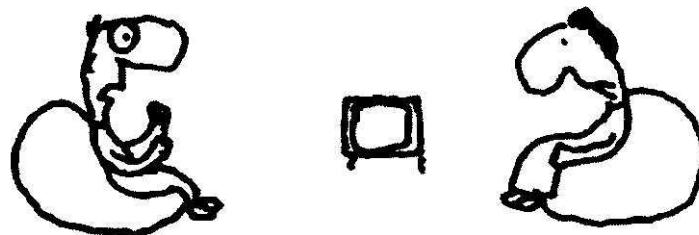
Antibiotic resistant bacteria



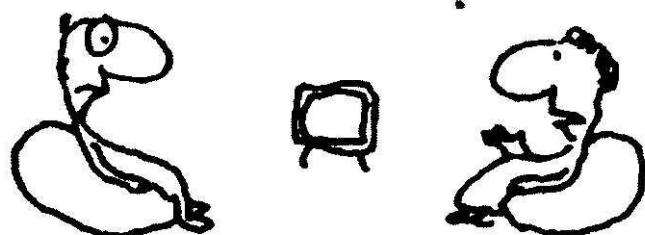
our way of life is
being threatened by
a dark force.



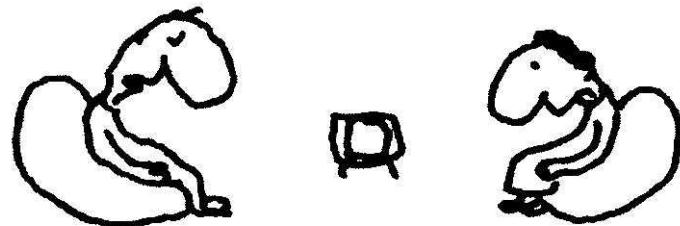
we must defend our
way of life.



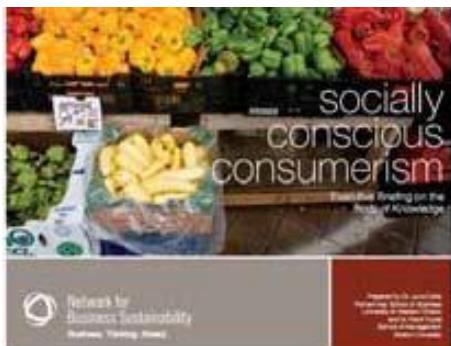
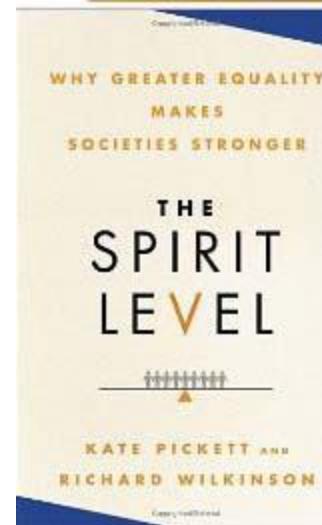
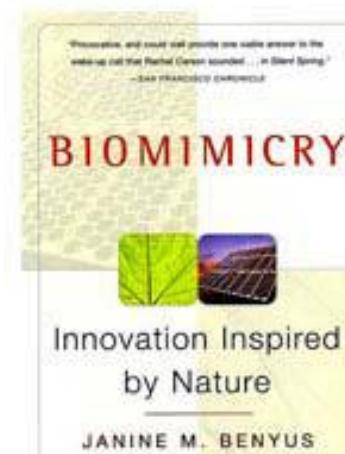
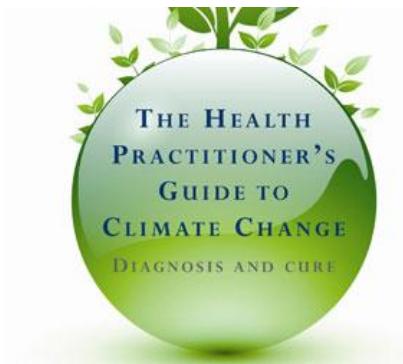
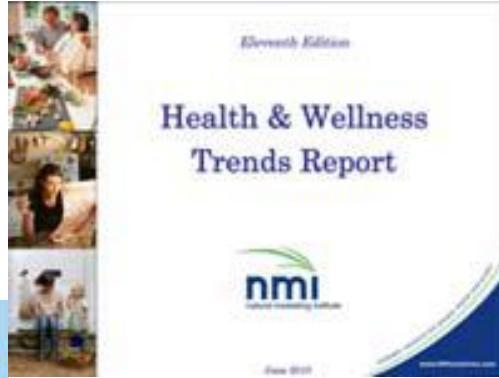
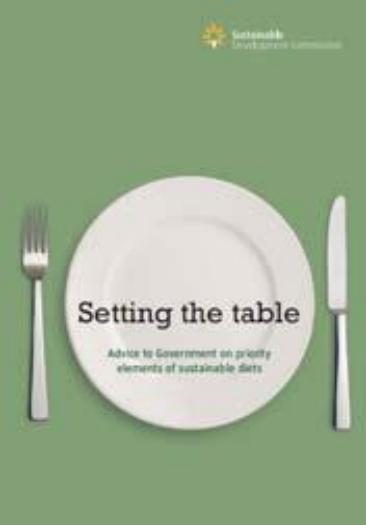
WHAT IS THIS
DARK FORCE WHICH
THREATENS OUR WAY
OF LIFE?



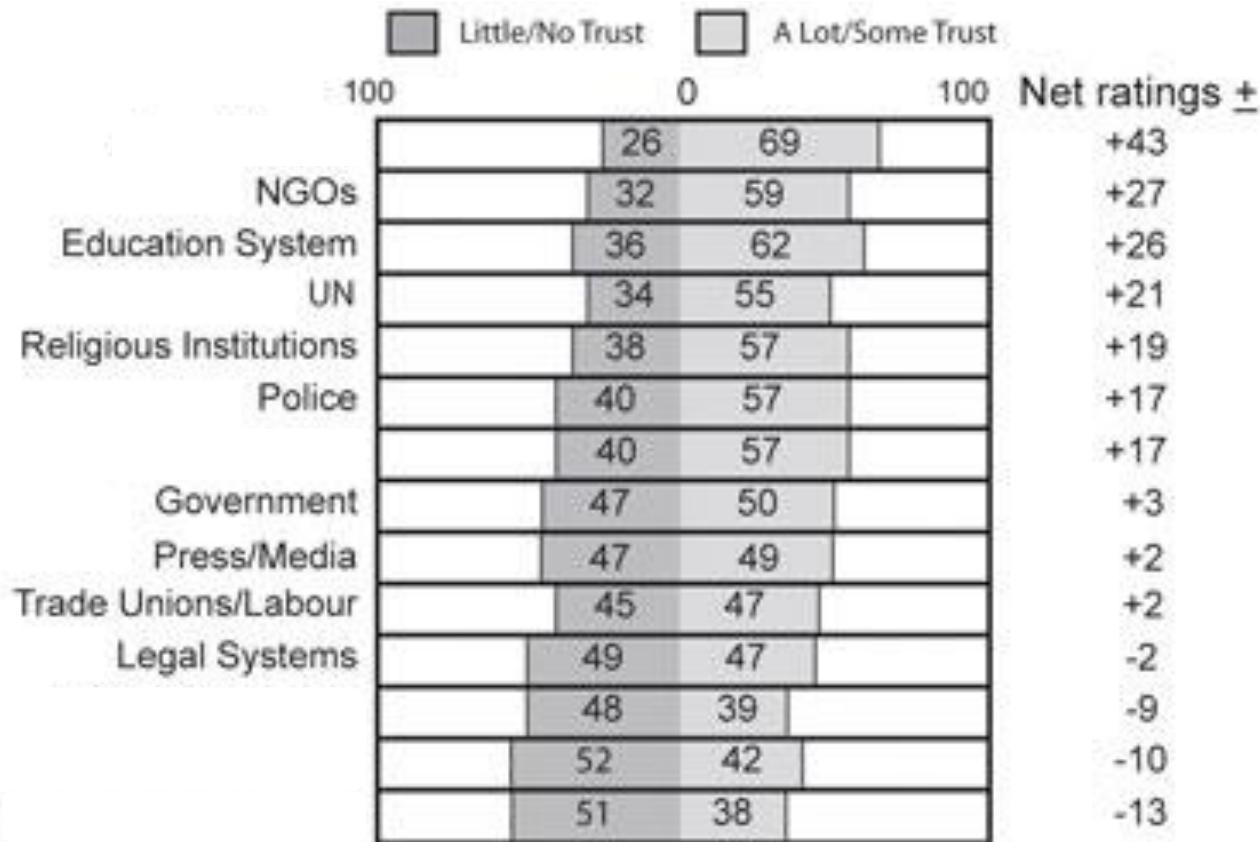
it's our way
of life...



Leunig

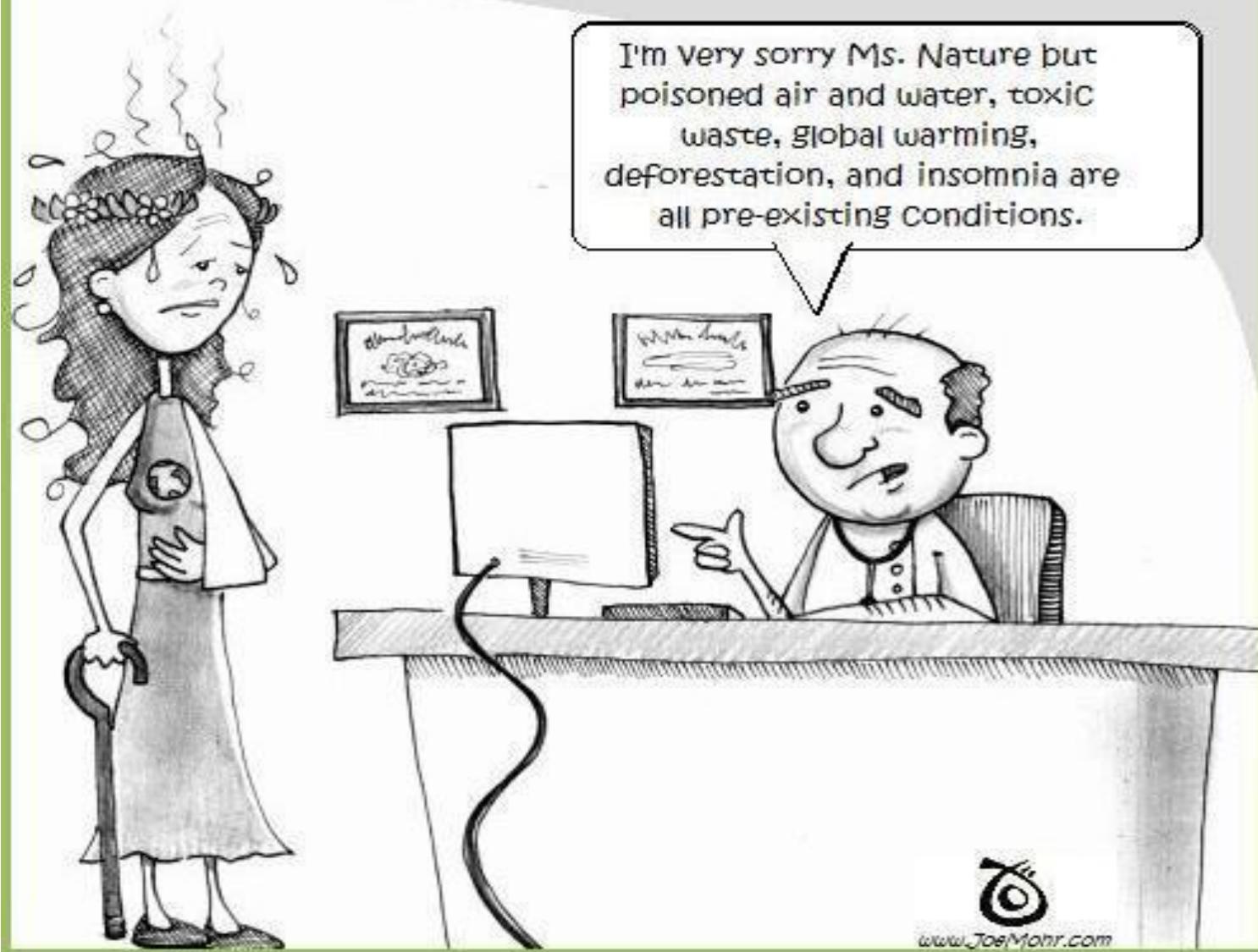


Trust in institutions to operate in society's best interest



* % trust minus % distrust = net rating

Source: WEF - Voice of the People, 2002





The Medical Journal of Australia

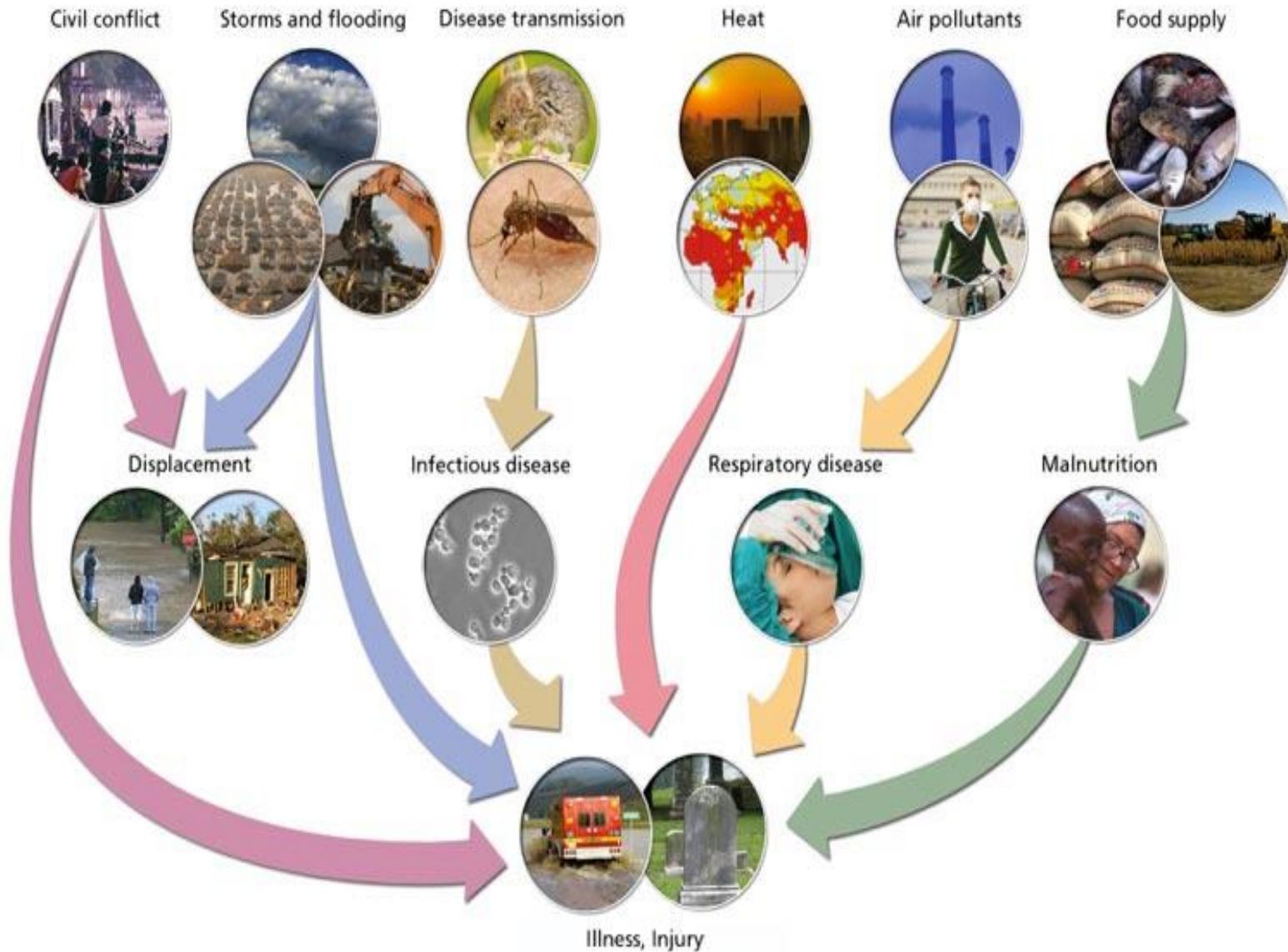
Established 1914 • Journal of the Australian Medical Association



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?

