

# Is sustainable growth a realistic aspiration

John Whitelegg

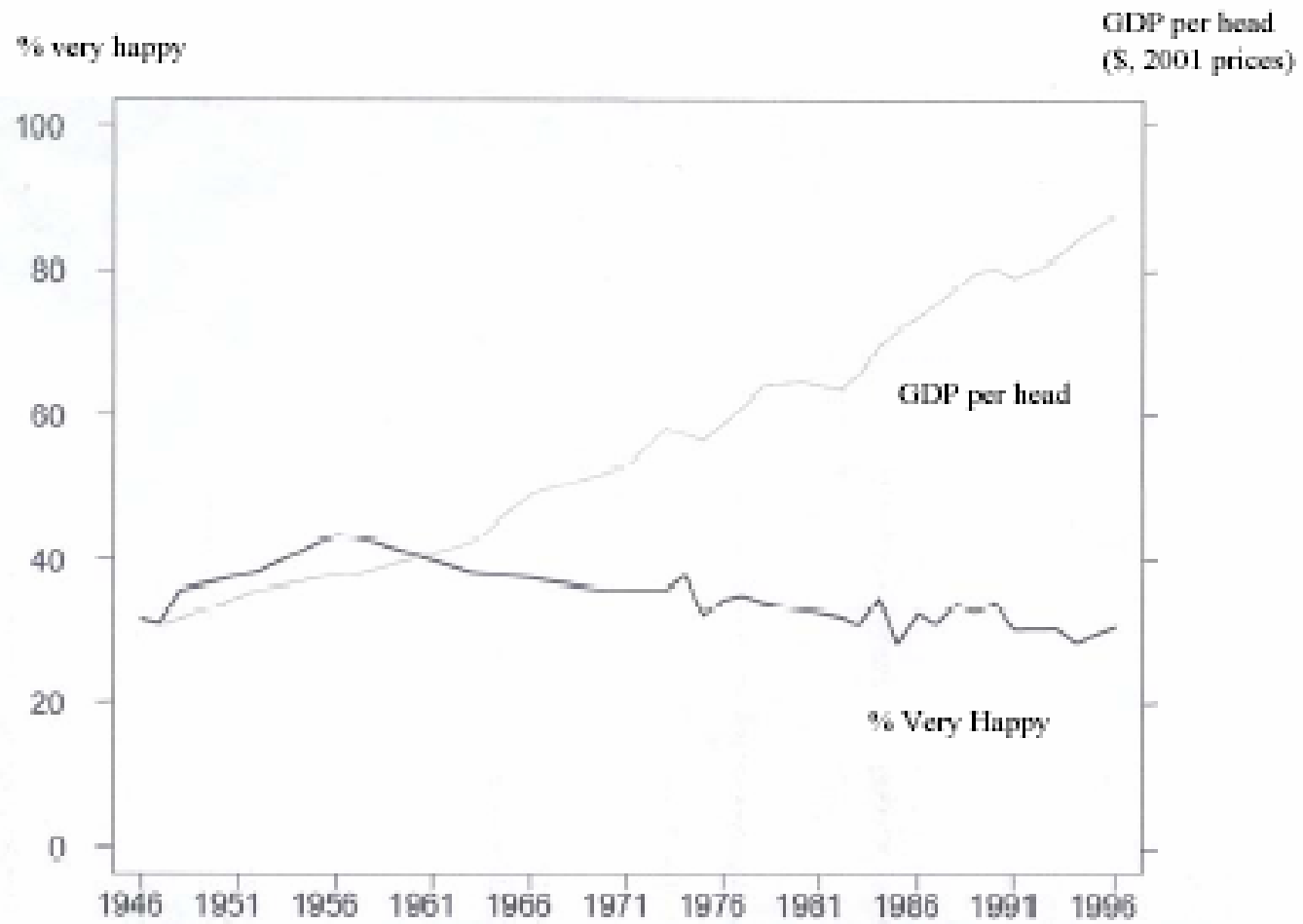
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# What do we want and how do we get it

- Economic growth has failed to increase happiness (Richard Layard, LSE)
- Our planet and its eco-systems are damaged (UN Millennium Assessment)

## Income and happiness in the USA



# Millennium Ecosystem Assessment Findings

# Finding #1

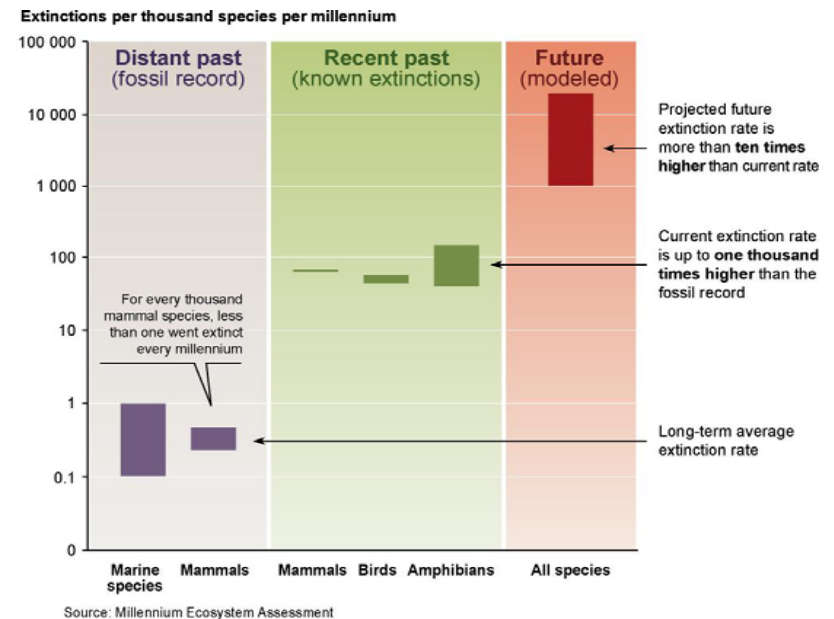
- Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history
- This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth

# Unprecedented Change

- More land was converted to cropland since 1945 than in the 18th and 19th centuries combined
- 20% of the world's coral reefs were lost and 20% degraded in the last several decades
- 35% of mangrove area has been lost in the last several decades
- Amount of water in reservoirs quadrupled since 1960
- Withdrawals from rivers and lakes doubled since 1960

# Significant and largely irreversible changes to species diversity

- The distribution of species on Earth is becoming more homogenous
- Humans have increased the species extinction rate by as much as 1,000 times over background rates typical over the planet's history (*medium certainty*)
- 10–30% of mammal, bird, and amphibian species are currently threatened with extinction (*medium to high certainty*)



# Finding #2

- The changes that have been made to ecosystems have contributed to substantial net gains in human well-being and economic development
  - Since 1960, while population doubled and economic activity increased 6-fold, food production increased 2 ½ times, food price has declined, water use doubled, wood harvest for pulp tripled, hydropower doubled.
- But these gains have been achieved at growing costs that, unless addressed, will substantially diminish the benefits that future generations obtain from ecosystems

# Degradation and unsustainable use of ecosystem services

- Approximately 60% (15 out of 24) of the ecosystem services evaluated in this assessment are being degraded or used unsustainably
- The degradation of ecosystem services often causes significant harm to human well-being and represents a loss of a natural asset or wealth of a country

# Is sustainable growth happening?

- Tripling of aviation (Aviation White Paper)
- 40% increase in traffic (DfT)
- 80 road schemes

# Sprawl

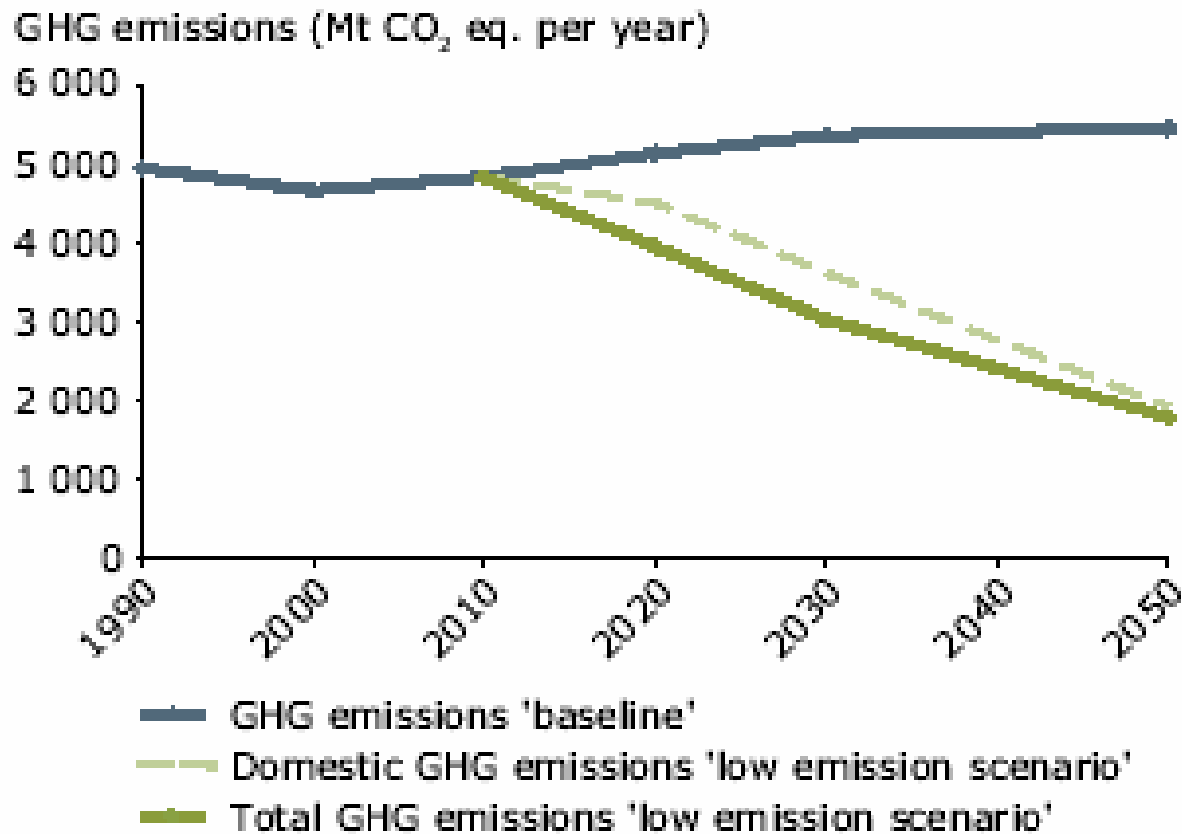
This was the Western American Solution



More polarised

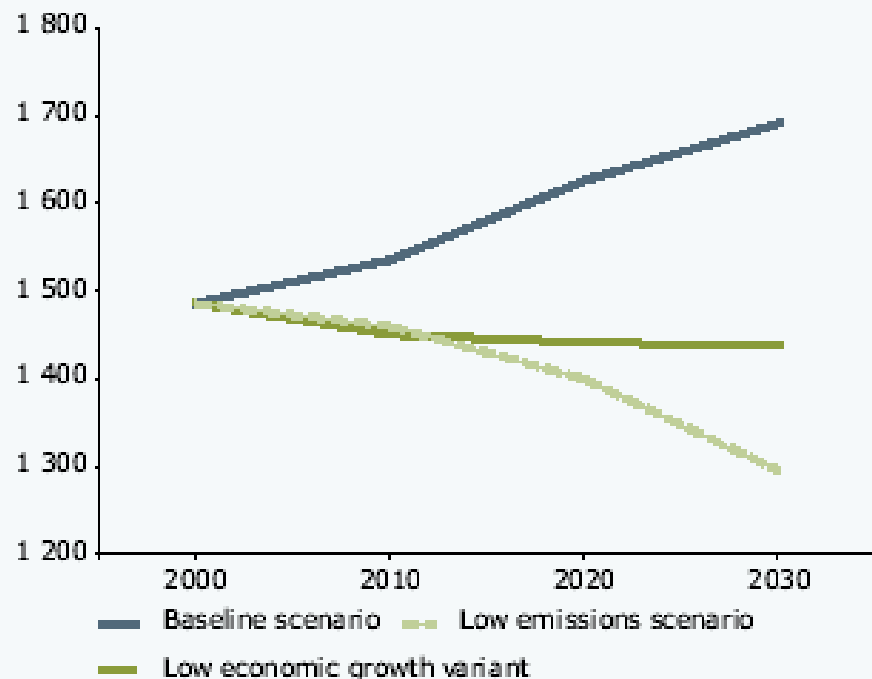


**Figure 4.3 EU GHG emissions 1990–2050**

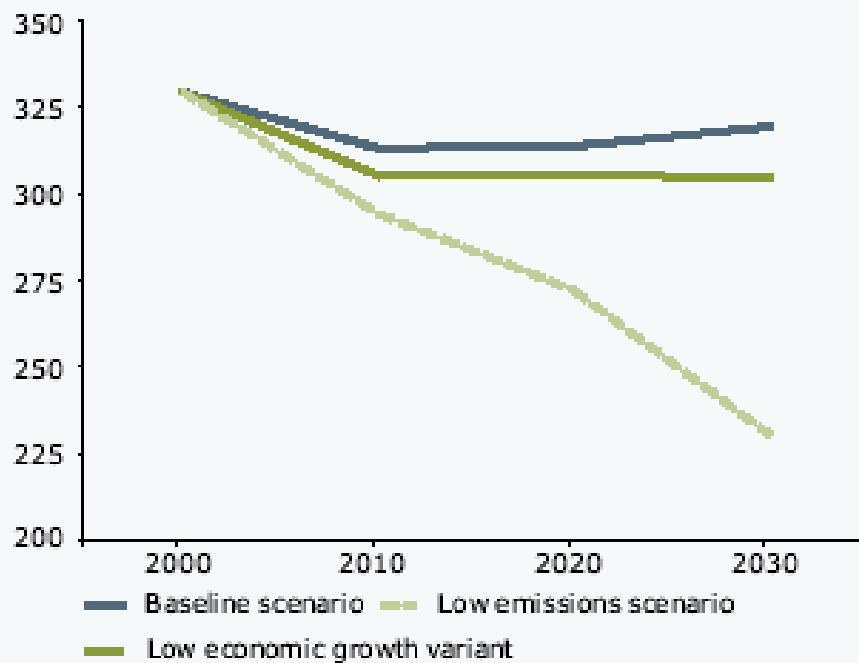


## Fossils fuels developments (2000–2030, baseline, low economic growth and low GHG emissions scenarios)

Fossil fuel use (million tonnes) **EU-15**



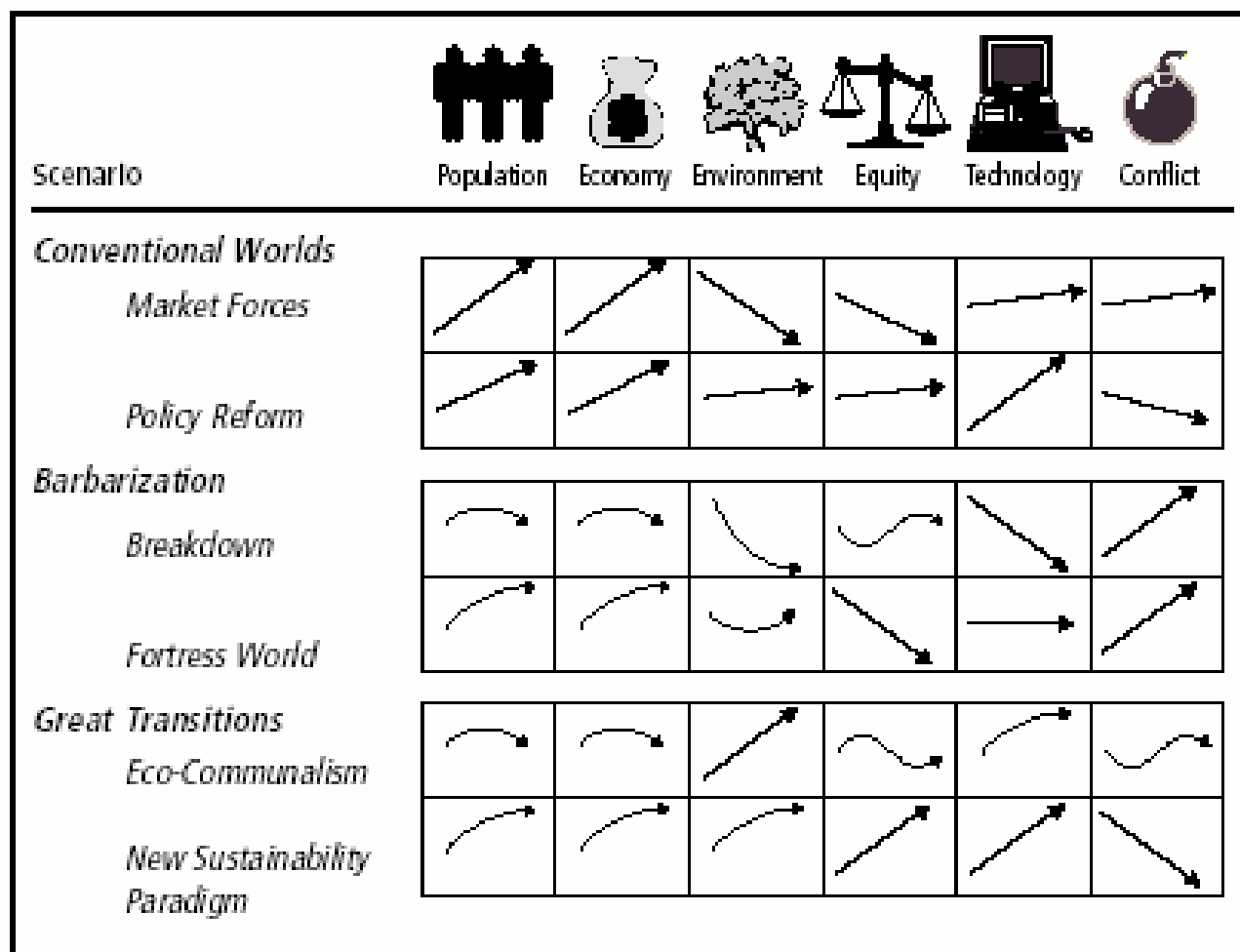
Fossil fuel use (million tonnes) **New-10**



# Can we change direction?

- Stockholm Environment institute, Boston, USA, Great Transitions project
- [http://www.tellus.org/Publications/Great\\_Transitions.pdf](http://www.tellus.org/Publications/Great_Transitions.pdf)

Figure 4. Scenario Structure with Illustrative Patterns



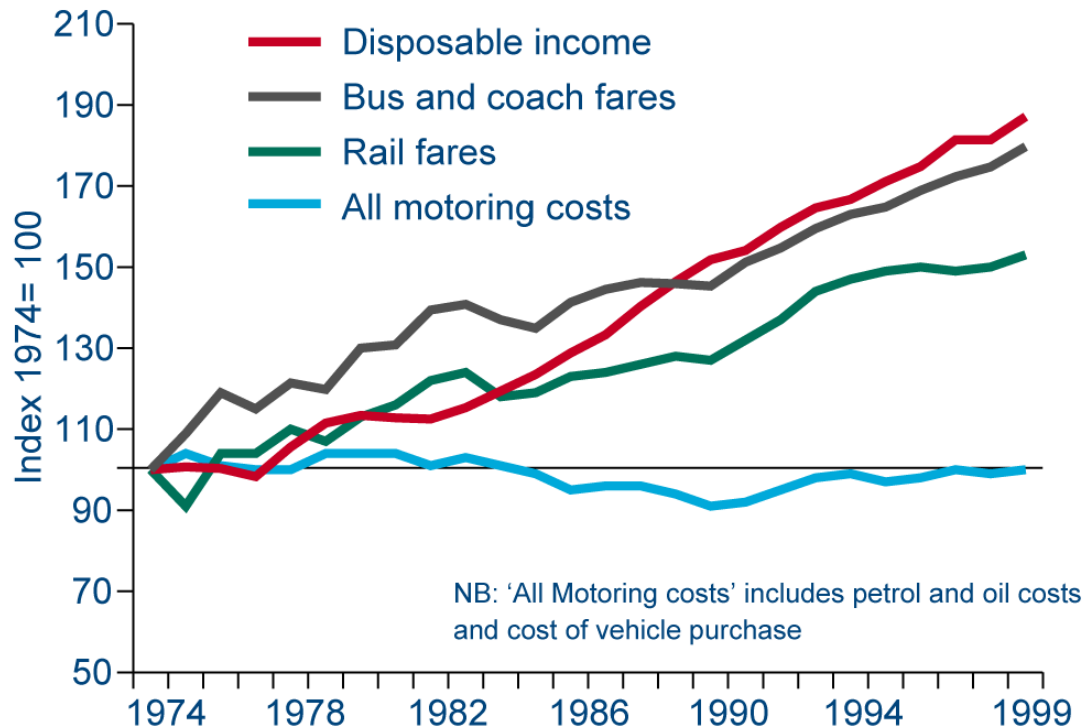
# We can get there if we want to

- Renewable energy
- Re-localised food supply/procurement
- Social enterprise
- Circular economy (outputs become inputs)
- Zero waste
- Rule of one third in transport

..but

- Northern way
- Thames Gateway Bridge
- Transport assumptions

# Real changes in the cost of transport and in disposable income



Source: Department for Transport Transport 2010The 10 Year Plan

<http://www.dft.gov.uk/trans2010/plan/06.htm>

# Sustainable growth is realistic (if)

- We commit to a low carbon/carbon neutral economy
- We guarantee the integrity of ecosystems
- We abandon traditional ways of measuring economic growth

# Best practice models

- Urban development in Vienna
- Emscher Park in Germany
- Albertslund in Copenhagen