

People and the planet

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THE ROYAL SOCIETY

Overview

Parfait Eloundou-Enyegue, Cornell University

- . Why now?
- . The RSS and working group

- . People and Population
- . Consumption
- . A Finite Planet
- . People's Wellbeing

- . Recommendations

Why now?

The 21st century is a critical period for people and the planet:

- Continued growth and widespread changes in the world's human population.
- Unprecedented and increasing levels of consumption, unequally distributed.
- Profound challenges to human health and wellbeing, and to the natural environment.

The Royal Society's involvement

- International working group of 22 experts covering natural and social science.
- Result of a 21 month study, which has included a wide consultation process.
- Broad look at population, consumption and the environment.
- Nine high-level recommendations

Key Messages

- . Recognize the Earth's finite capacity to meet consumption standards set by developed nations
- . Act simultaneously to
 - a) lift the world's poor out of poverty
 - b) reduce consumption in developed & emerging economies
 - c) voluntarily stabilize global population
- . Integrate population in global economic & env'tal planning
- . Develop alternative indicators of wealth

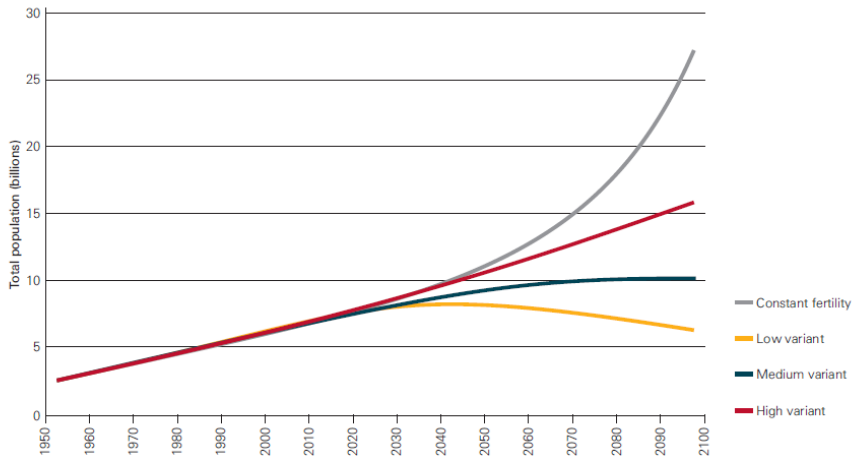
A diverse world

Eliya Msiyaphazi Zulu, African Institute for Development Policy

Population is about much more than total numbers of people...

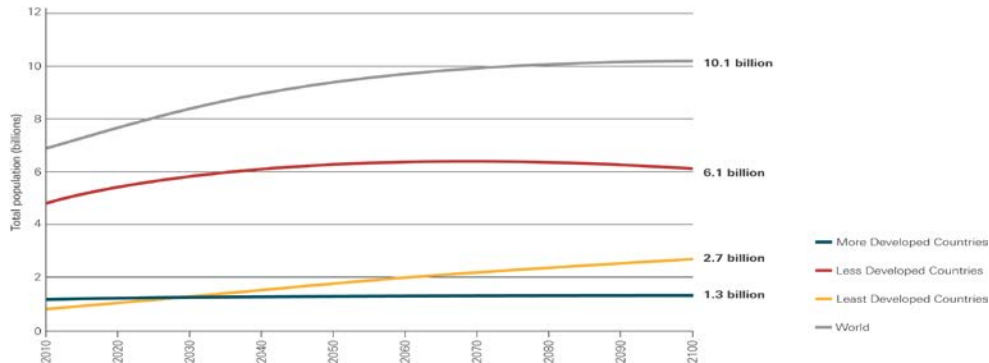
- Density (urbanisation)
- Distribution (migration)
- Composition (ageing)

The global picture



Demographic diversity

Below the picture of global population there is huge demographic diversity between regions of the world.



Demographic diversity continued

Least Developed Countries:

High but declining total fertility rates, high population growth rates, high youth dependency ratio, high rates of urbanisation.

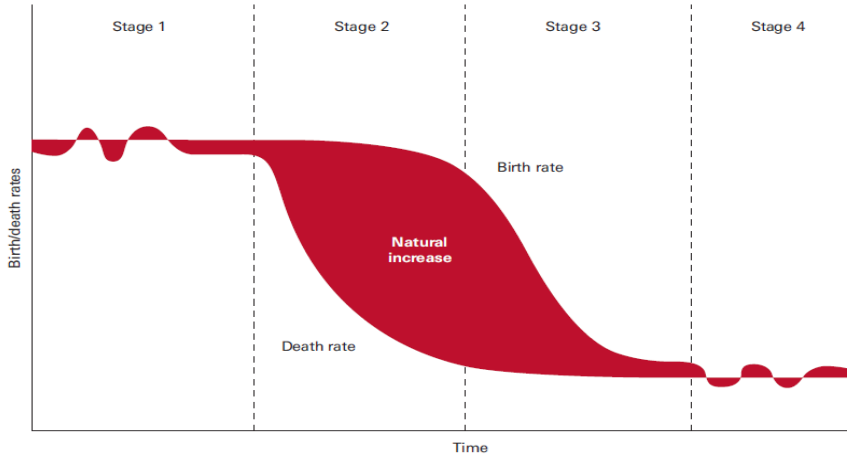
Less Developed Countries:

Declining total fertility rates but continued population growth, and the potential for a demographic dividend

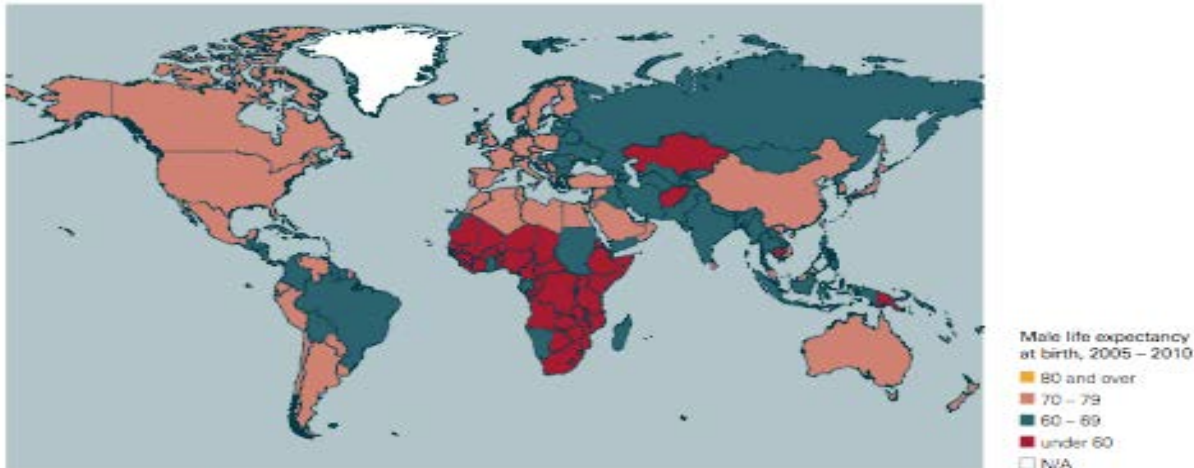
More Developed Countries:

Low total fertility rates, an ageing population, possible demographic deficit

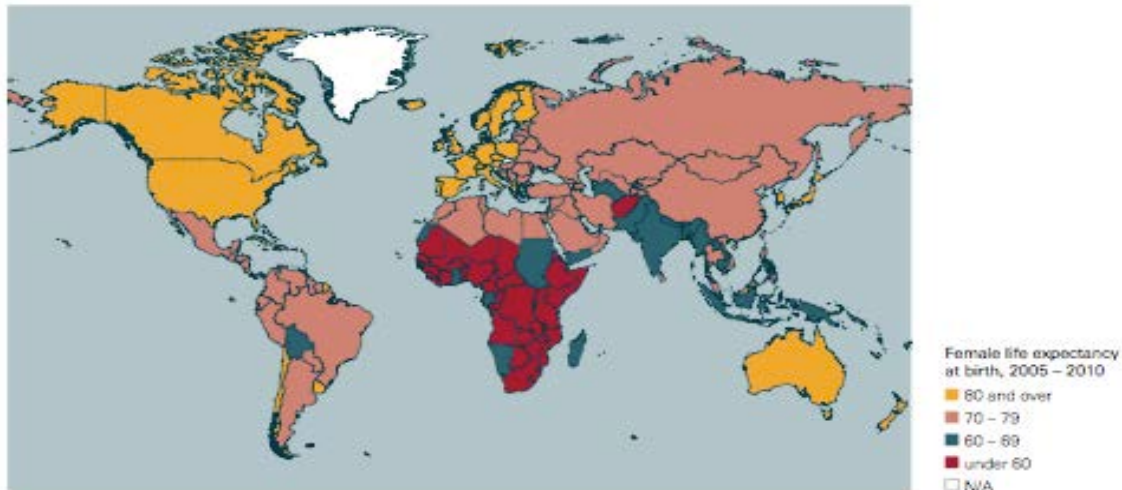
The demographic transition



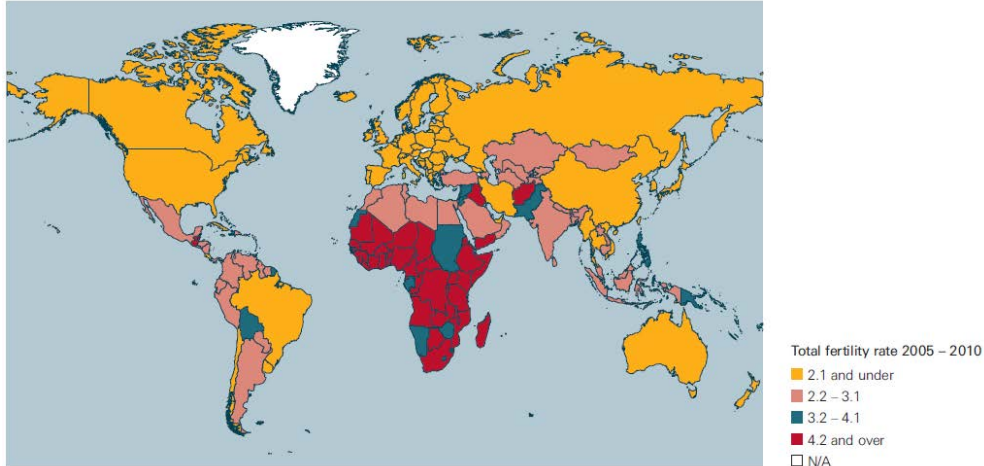
Global variation in male life expectancy at birth



Global variation in female life expectancy at birth



Global variation in total fertility rates



Why so much variation?

Drivers of and barriers to demographic change:

- **Fertility rate change:** improved health, education and empowerment of women, and increased use of modern family planning methods.

Economic development, cultural change and the spread of new ideas and technologies are important here.

Mortality rate change: social and economic development – improved nutrition, sanitation, public health, education, and medical care.

Why so much variation?

- **Migration:** driven by a combination of economic, demographic, political, social, technological and environmental factors.
- **Urbanisation:** urban areas are rapidly increasing in size both through natural population increase, and through steady in-migration from rural areas.

Consumption – an unequal world

Parfait Eloundou-Enyegoue, Cornell University

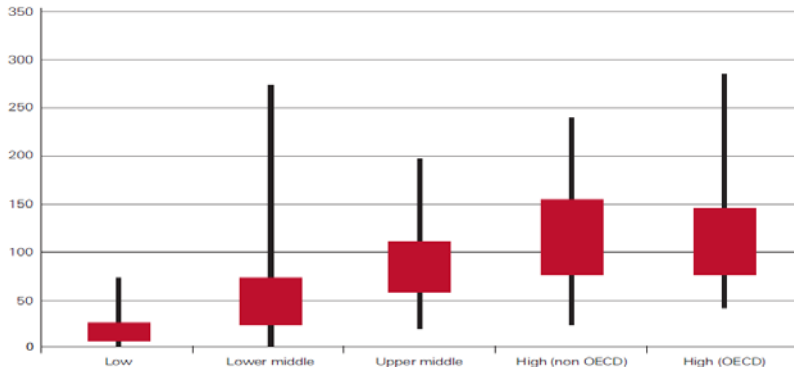
- Consumption of **material resources** (often of natural resources) or the consumption of **goods and services** (also known as economic consumption).
- Both necessary for meeting human needs and **delivering human wellbeing**, but they have different implications for the environment.
- Huge variations in consumption.

Consumption Issue 1– an unequal world

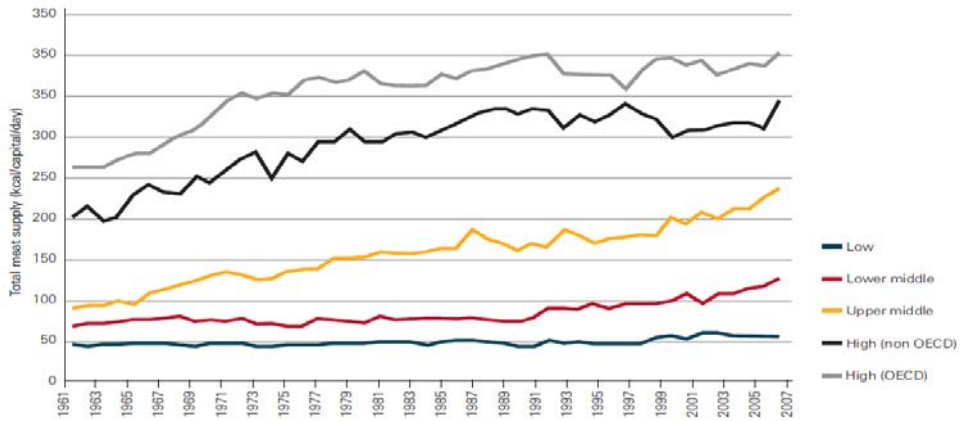
- Huge Variation in consumption
 - The most developed and emerging economies are consuming too much.
 - The least and some less developed countries are not consuming enough.
 - Convergence of aspirations – towards high consumption patterns
- Yet with a finite planet:
Sustainability = consumption that benefit the planet

Water

Municipal water withdrawal per capita
(total population) per year (m³).

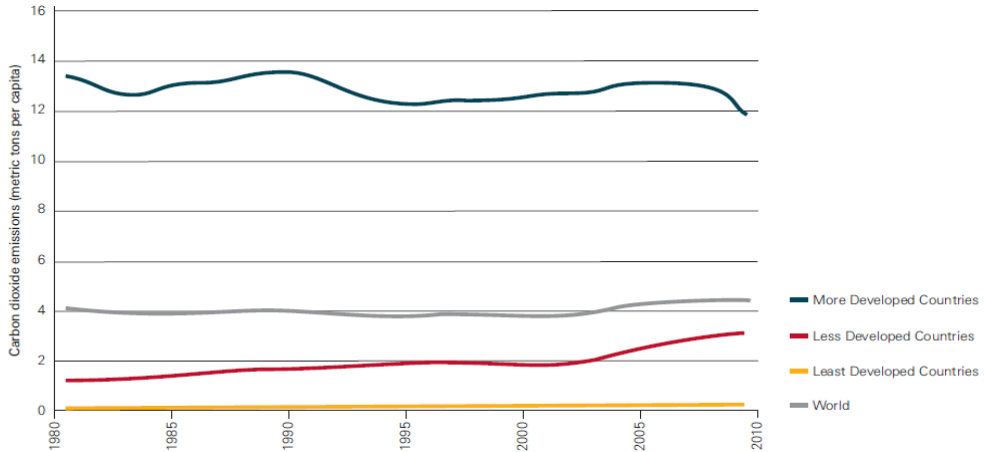


Food: meat supply



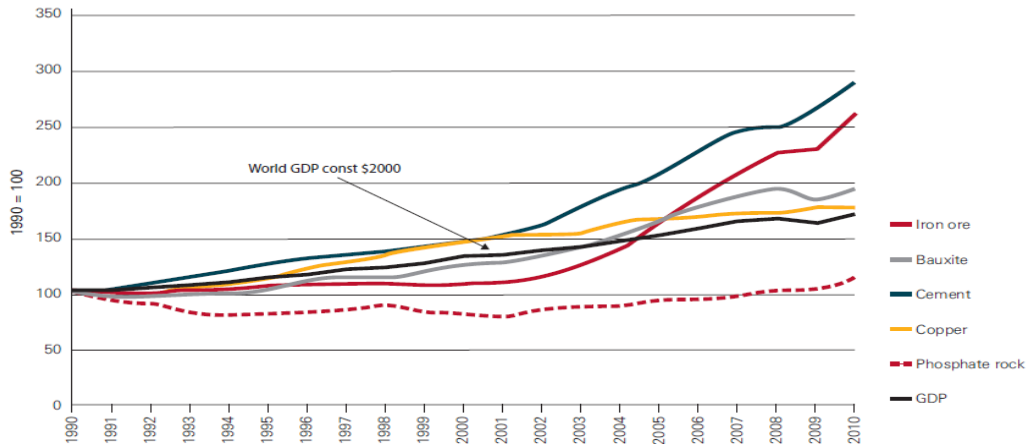
Source: FAOstat 'Food supply' database (see <http://faostat.fao.org/default.aspx>)

Energy – as CO₂ emissions



Source: Adapted from EIA data (2011)

Minerals: world mineral extractions



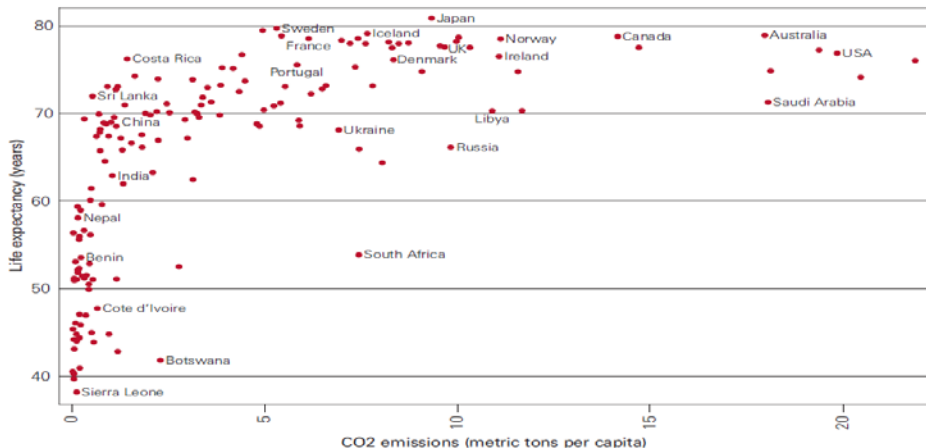
Consumption Issue 2: GDP focus

- Main current measure of consumption is GDP
- Yet this misses much **and** counts damage to the planet as success
- **Five key capital assets**
 - Natural Capital
 - Manufactured or reproducible capital
 - Human capital
 - Knowledge capital
 - Institutional or social capital

Consumption Issue 3– Different consumptions

- Consumption of **material resources** (often of natural resources) or the consumption of **goods and services** (also known as economic consumption).
- Both necessary for meeting human needs and **delivering human wellbeing**, but they have different implications for the environment.

Issue 4. Consumption # Wellbeing



Drivers of consumption

- Adequate living standards
- Increase in the population size
- Preferences and cultural factors
- Demographic changes, such as population ageing and changes in household structure, population movement.
- Resulting in aspirations and consumption patterns converging on levels that are unsustainable for a finite planet

A finite planet

- **Population** and **consumption** should be considered together, as it is the combination of the two that determines the **impact on the planet** and **wellbeing of people**
- On a planet with **finite resources** there are absolute limits to current growth patterns
- Need for consumption that benefits the planet
- How the limits of a finite planet are approached depends on **lifestyles, decisions on consumption** and **incentives to develop green economies.**

Wellbeing of people and the planet

Eliya Msiyaphazi Zulu

African Institute for Development Policy

Case study: Niger

- Improved life expectancy, reduced under-five mortality
- Very high rate of population growth: 3.5% annually, (i.e. doubling every 20 years)
- Endemic poverty, poor access to education and healthcare and little emphasis on making family planning available
- Polygamous culture and average fertility rate of seven children
- Insufficient material consumption

Case study: UK

- Low mortality rates and high life expectancy
- Ageing population and decreasing workforce: in 2010, 16% of population over the age of 65, predicted to rise to 24% by 2050
- High population density
- Population growth due to migration and natural increase, predicted to grow from 62 million in 2009 to 74.5 million by 2050
- High material consumption

Pathways towards sustainable development

- Reduce material consumption of those that consume the most.
- Measure what matters to people's lives, in addition to GDP
- Demography for wellbeing

Changing consumption patterns

- Economic models
- Technology and resource efficiency
- Incentives
- Behaviour change
- Measuring what matters

Demography for wellbeing

- Education
- Healthcare
- Voluntary family planning

Planning for change

- Planning for population decline and ageing
- Planning for urbanisation
- Planning for migration
- Planning for flourishing

Recommendations

1. The international community must **bring the 1.3 billion people living on less than \$1.25 per day out of absolute poverty.**
2. The most developed and emerging economies must **stabilise and then reduce material consumption.**
3. **Reproductive health and voluntary family planning programmes** urgently require political leadership and financial commitment.

Recommendations

4. **Population and the environment** should not be considered as two separate issues.
5. Governments should realise the **potential of urbanisation** to reduce material consumption and environmental impact.
6. Financial and non-financial barriers must be overcome to **achieve primary and secondary education for all.**

Recommendations

7. Natural and social scientists should increase research efforts on the **interactions between consumption, demographic change and environmental impact.**
8. National Governments should **accelerate the development of comprehensive wealth measures.**
9. Collaboration between National Governments is needed to develop **socio-economic systems and institutions** that are not dependent on continued material consumption.

What next?

- Rio negotiations in New York. Side-event on 1 May.
- Rio+20 conference

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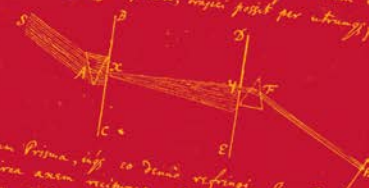
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 #RSpopulation



THE ROYAL SOCIETY

*... abinde distant, cui suffigetur alterum Prisma T.
nunc ad X et Y ita perforatur, ut aliquantulum
ad antemum Primate refracta, trajici possit per utrumq;*



*Et secundum Prisma, infra eo demum refringi. Jam Prisma
anterioris circa axem reciproco modo convertatur, et colores
in Tabulam posteriorem DE procedentes, per vias atolluntur
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