



ISTITUTO LIBERALE

Il miglioramento delle condizioni di vita dell'umanità e l'importanza del consumo energetico procapite

Dr. oec. Paolo Pamini

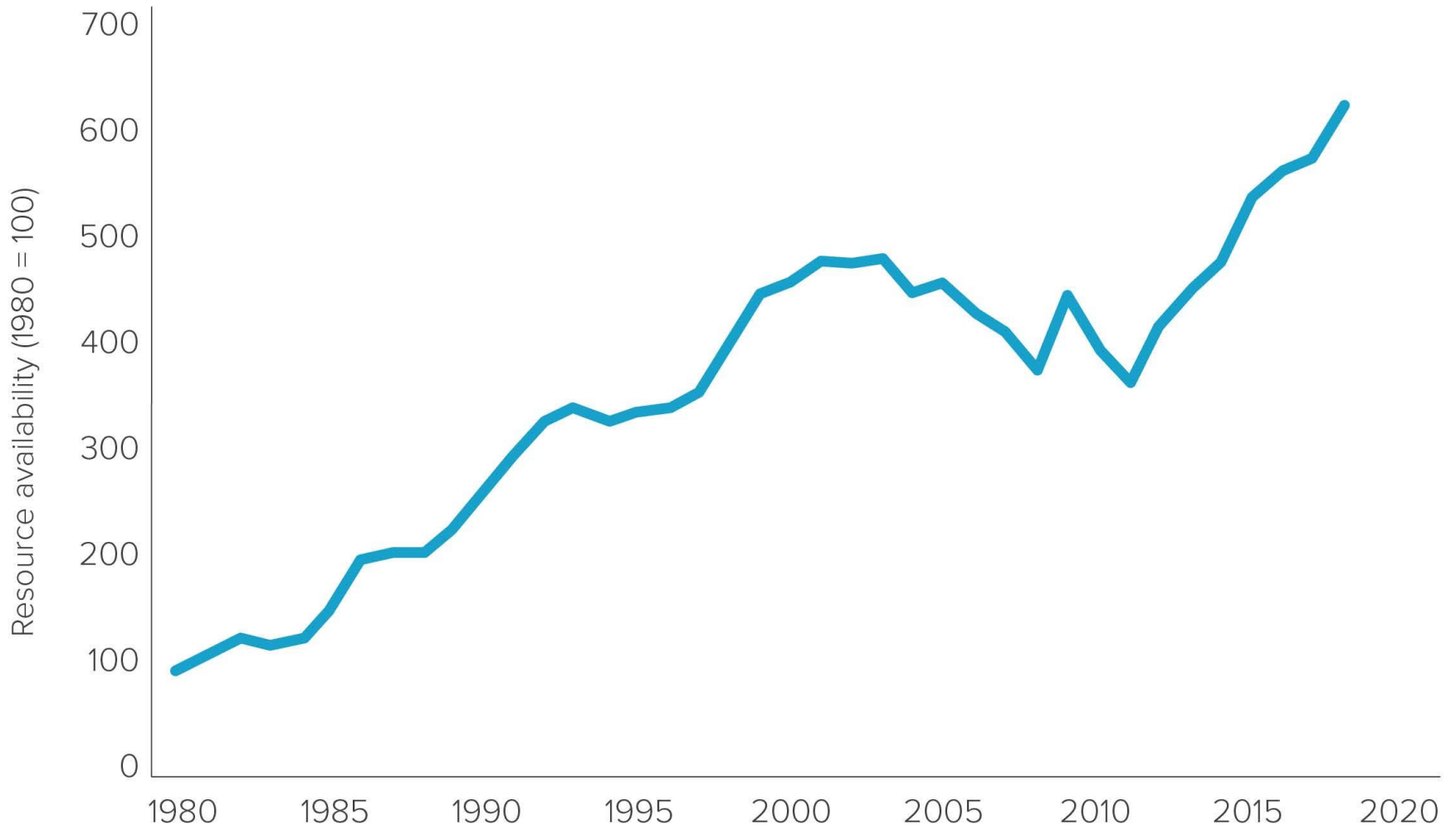
Club Plinio Verda – 23 settembre 2020 – Muralto

Produrre meno, produrre meglio

La tesi in breve

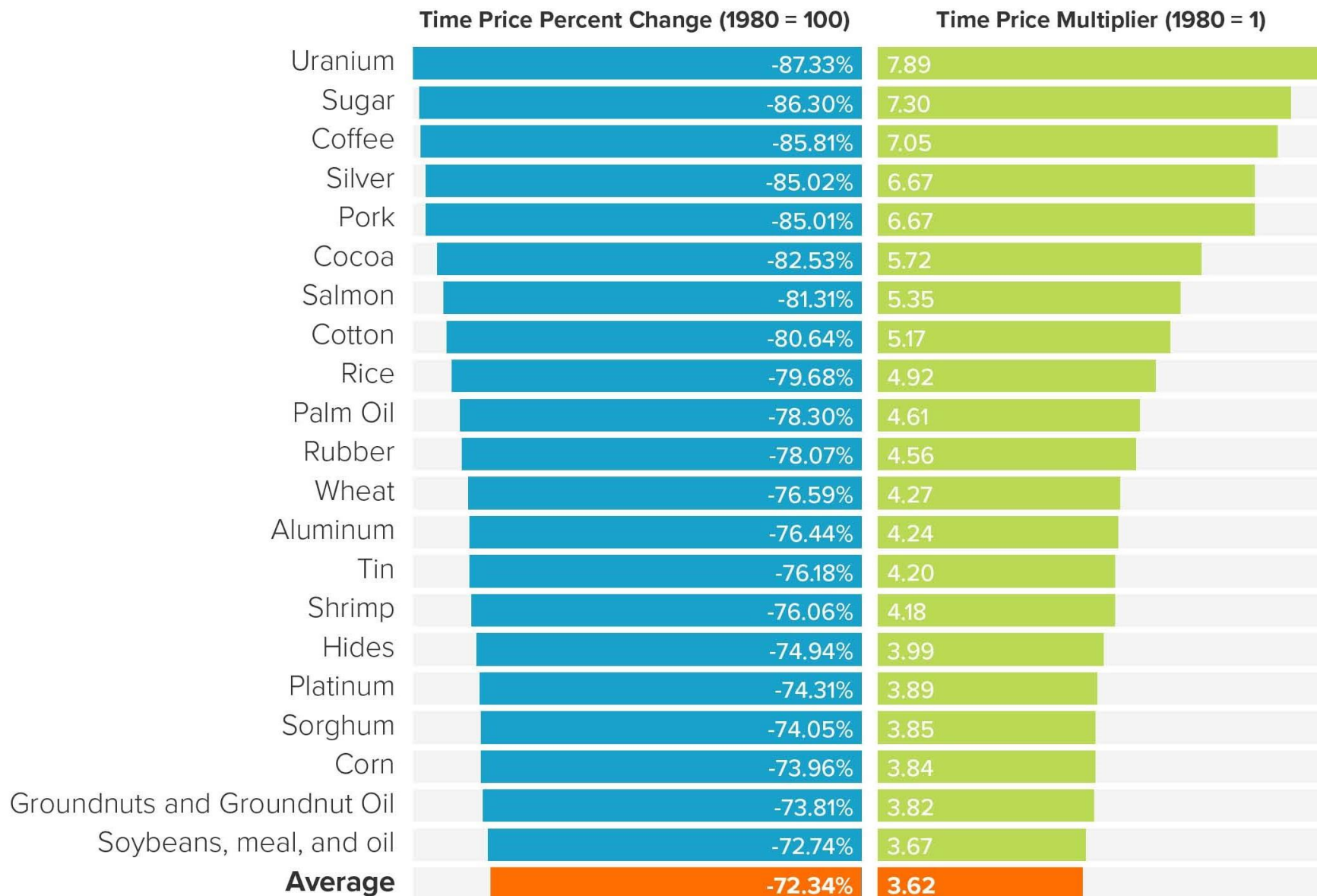
- D'accordo a non fare del PIL una religione
- Il **PIL procapite** correla con tutte le misure non monetarie di **benessere** (mortalità infantile, speranza di vita, alfabetizzazione,...)
- Il PIL procapite si spiega con il **consumo energetico procapite**: noi siamo l'energia che consumiamo
- Viviamo in un mondo di **sovraabbondanza**, le risorse naturali diventano sempre **meno scarse**, ossia più disponibili
- Oggi non esiste paese al mondo con la **speranza di vita** alla nascita sotto i 50 anni
- Entro il 2030 la **povertà assoluta** (< 2 USD/giorno) sarà di fatto abolita (< 1% dell'umanità)
- Già oggi solo il 10% dell'umanità vive con meno di 2 USD/giorno, nel 1999 era il 29%, nel 1979 il 49% e nel 1959 il 54%! Il tutto con una popolazione in aumento
- A 5 miliardi di persone servono **fonti energetiche ad alto rendimento** rispetto agli investimenti necessari..Carbone e petrolio sono state una benedizione, ora è in arrivo il **gas naturale**. Solo il **nucleare** è al momento un'alternativa di massa se il CO2 dovesse essere un tema

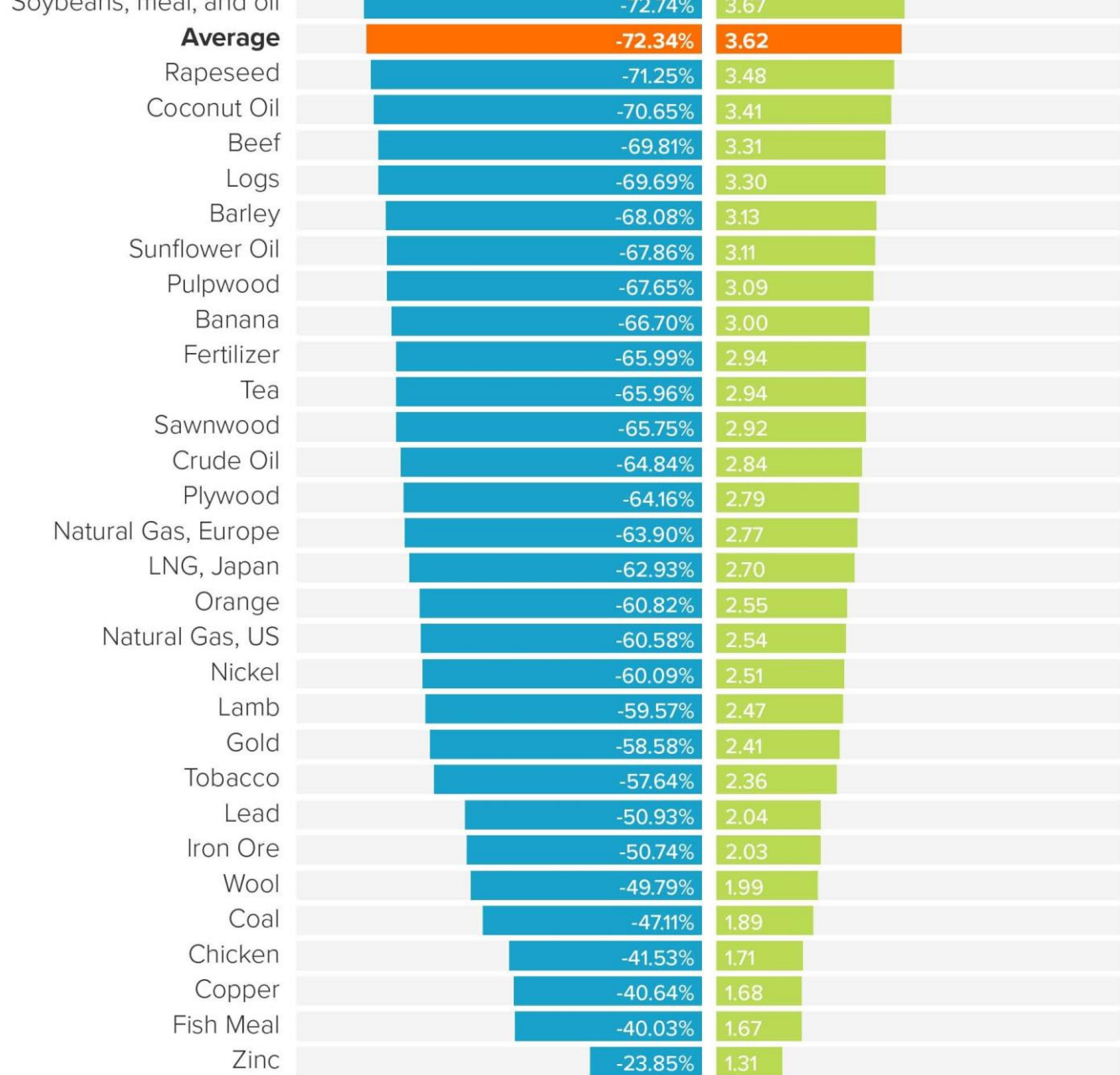
SIMON ABUNDANCE INDEX[®] (1980–2018)



SIMON ABUNDANCE INDEX[®] (1980–2018)

50 basic commodities





"One of the most important books I've ever read—an indispensable guide to thinking clearly about the world." —Bill Gates

FACT

New York Times
Bestseller

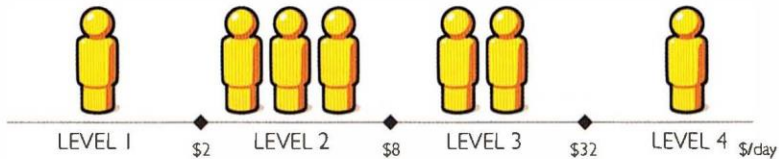
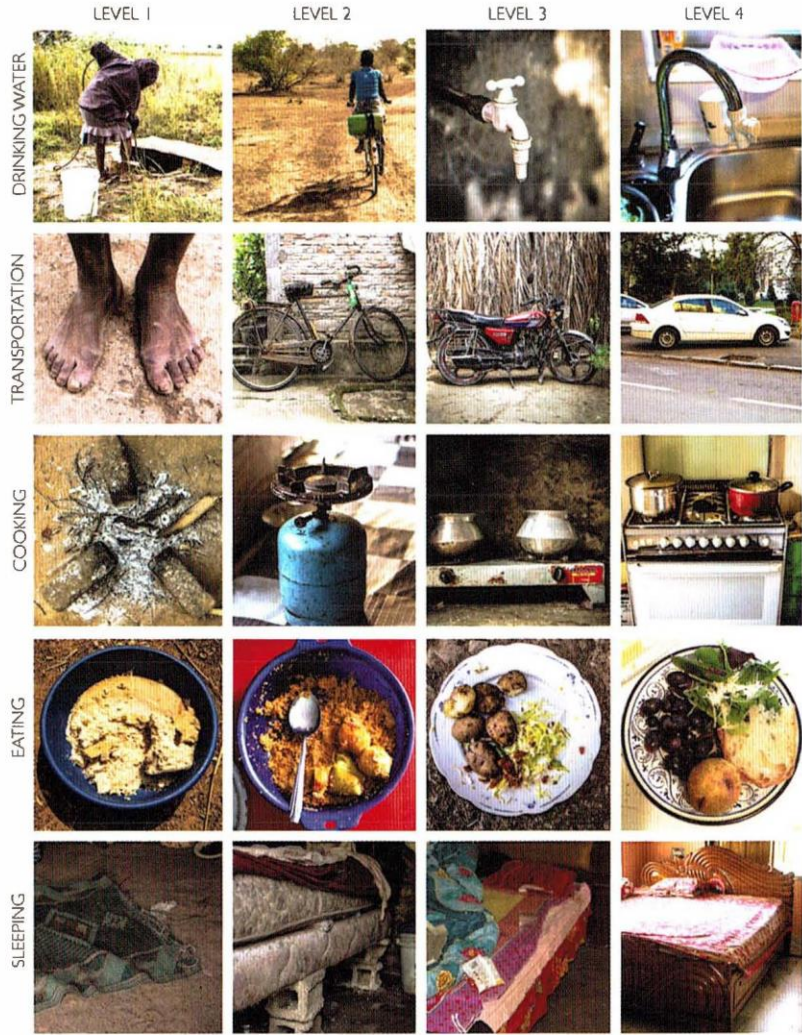
FUL

Ten Reasons
We're Wrong About
the World—and Why
Things Are Better
Than You Think

NESS

Hans Rosling with Ola Rosling and
Anna Rosling Rönnlund

LIFE ON THE FOUR INCOME LEVELS



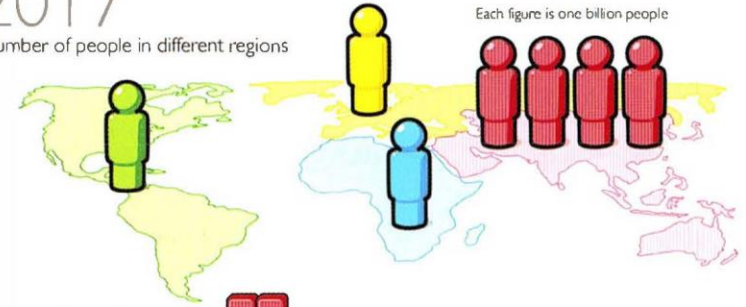
The world population in billions of people

Sources: Gaillardet [3] & Dollar Street

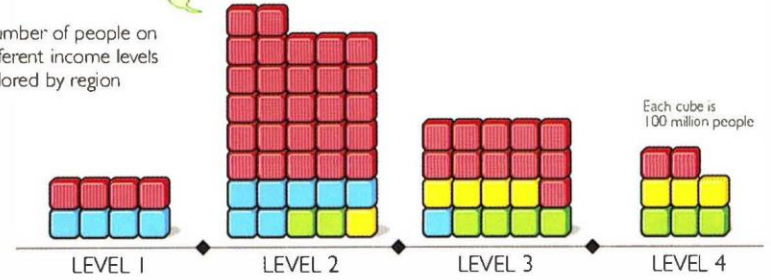
PEOPLE BY REGION AND INCOME

2017

Number of people in different regions

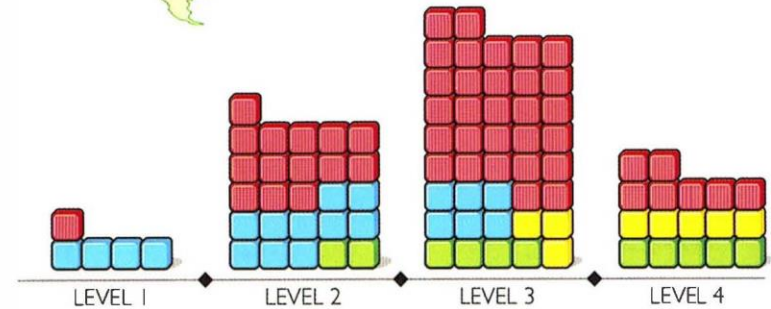


Number of people on different income levels colored by region



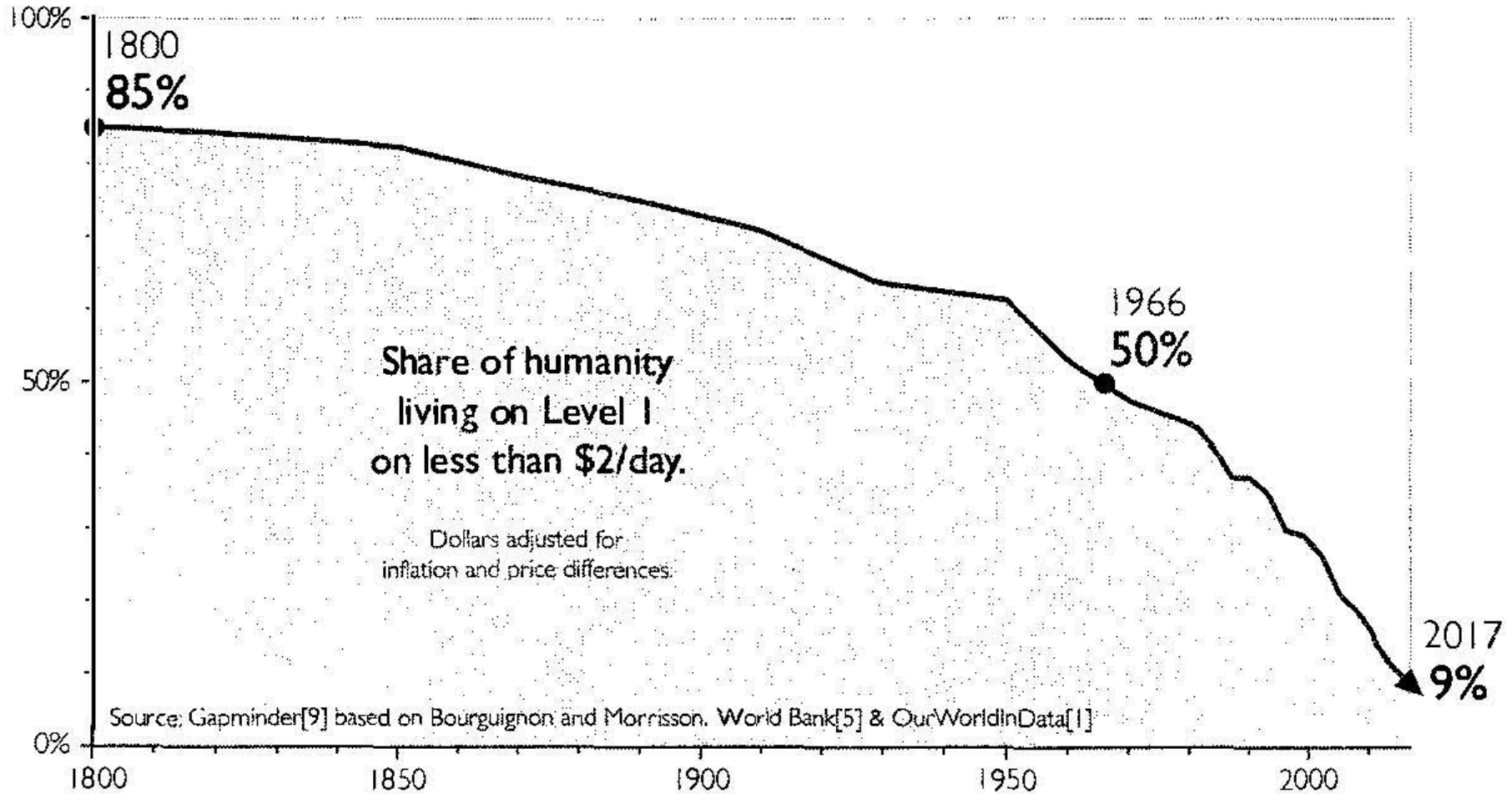
Assuming that current trends continue, this is what the world might look like in 2040.

2040

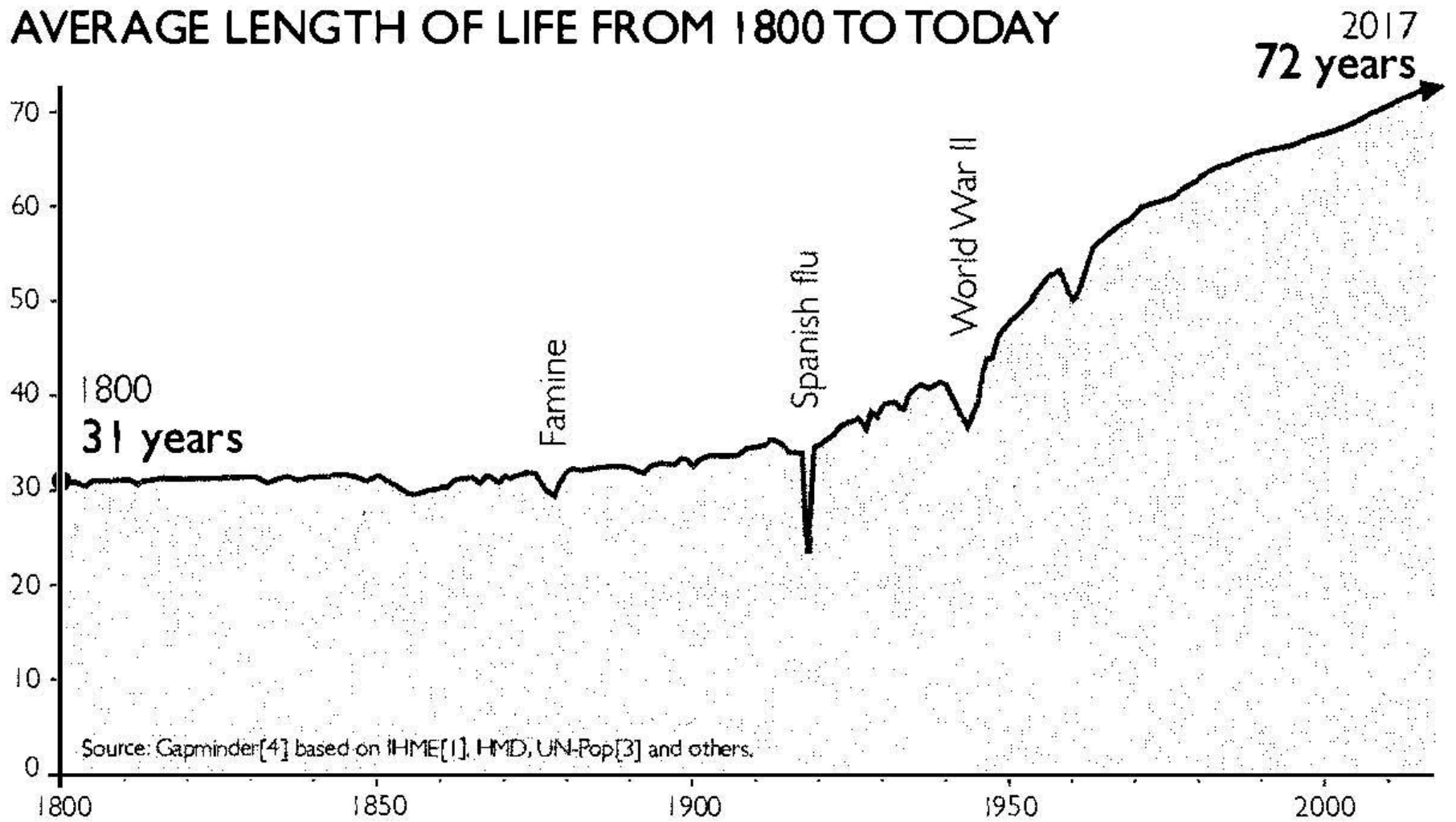


Sources: Gaillardet [3,8] based on PovcalNet, UN Pop [1], IMF [1] & van Zanden [1]

EXTREME POVERTY RATE FROM 1800 TO TODAY



AVERAGE LENGTH OF LIFE FROM 1800 TO TODAY

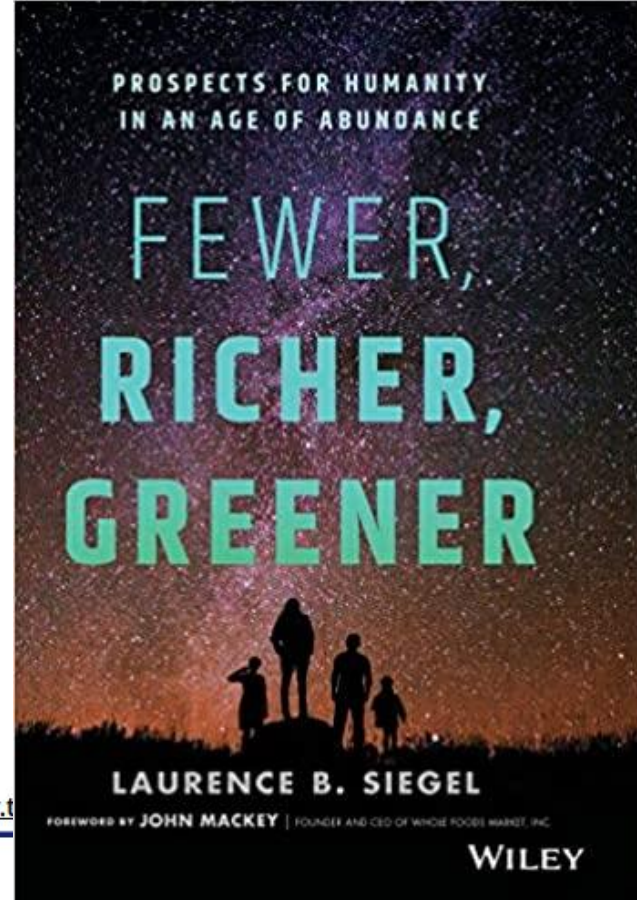


Laurence Siegel (fino al 2009
Direttore della ricerca della
Ford Foundation)



Financial Analysts Journal

ISSN: 0015-198X (Print) 1938-3312 (Online) Journal homepage: <https://www.faj.org>



Fewer, Richer, Greener: The End of the Population Explosion and the Future for Investors

Laurence B. Siegel

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To link to this article: <https://doi.org/10.2469/faj.v68.n6.2>

Figure 2. Historical and Forecast Population Growth on Logarithmic Scale, 1500–2100

World Population (billions)

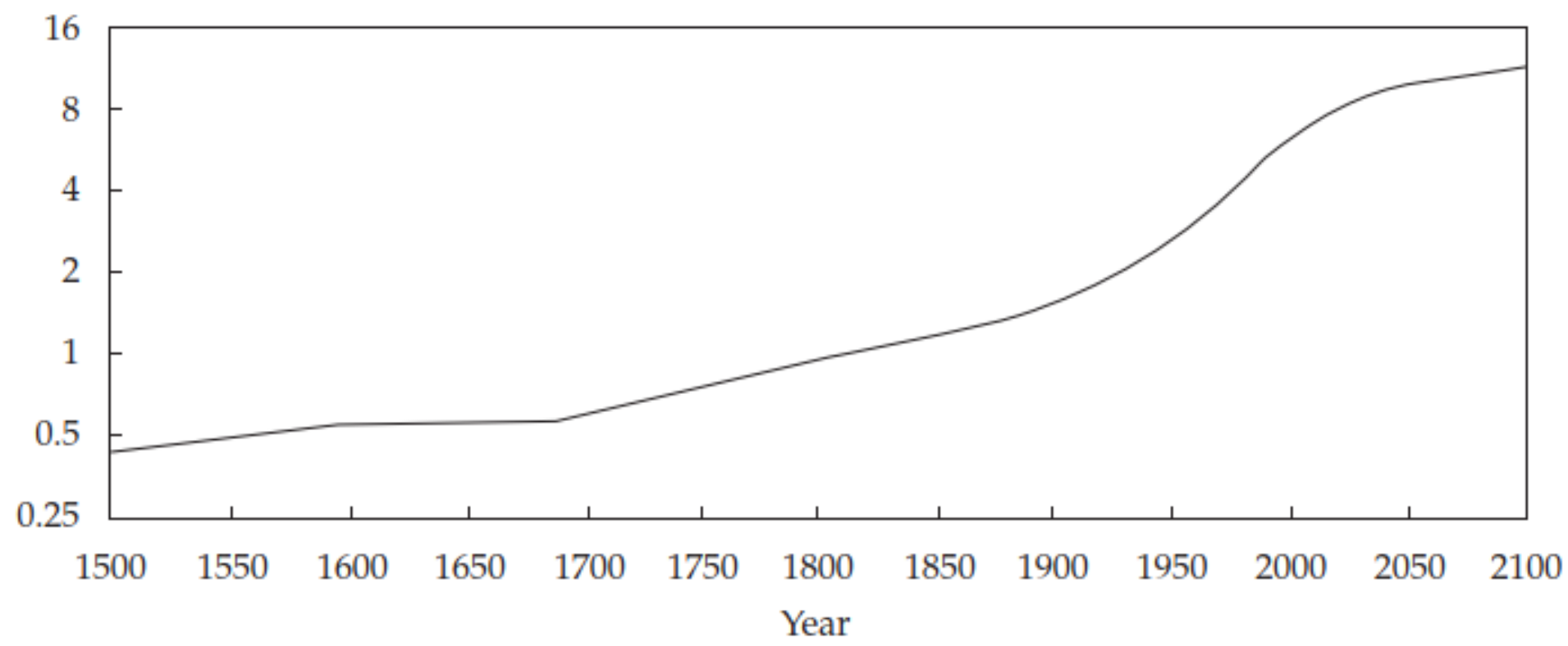
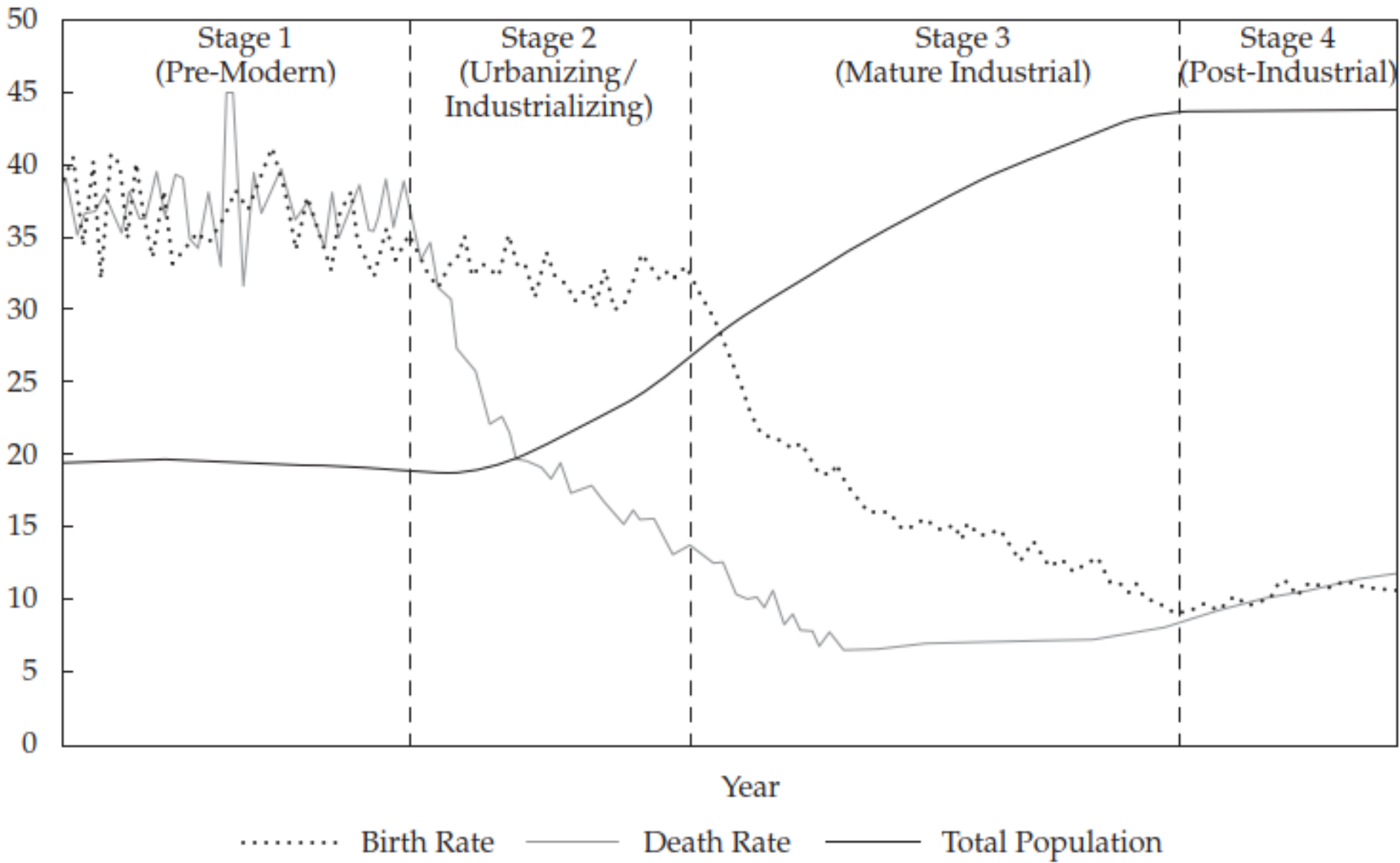


Figure 3. The Demographic Transition

Birth and Death Rates per Year (per 1,000 persons)



INCOME LEVELS ▶

LEVEL 1

LEVEL 2

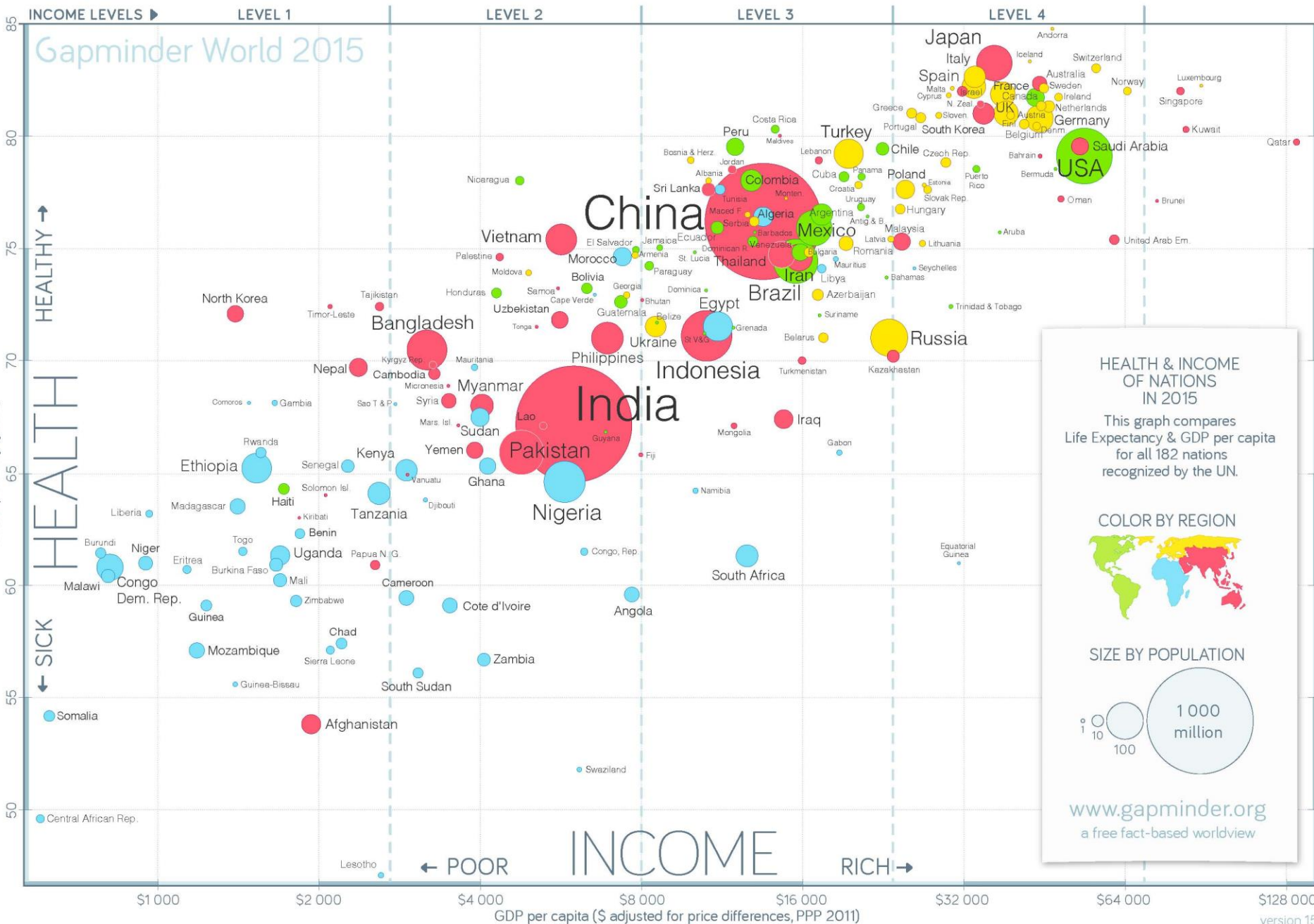
LEVEL 3

LEVEL 4

Gapminder World 2015

HEALTHY →
HEALTH
← SICK

Life expectancy (years)



HEALTH & INCOME OF NATIONS IN 2015

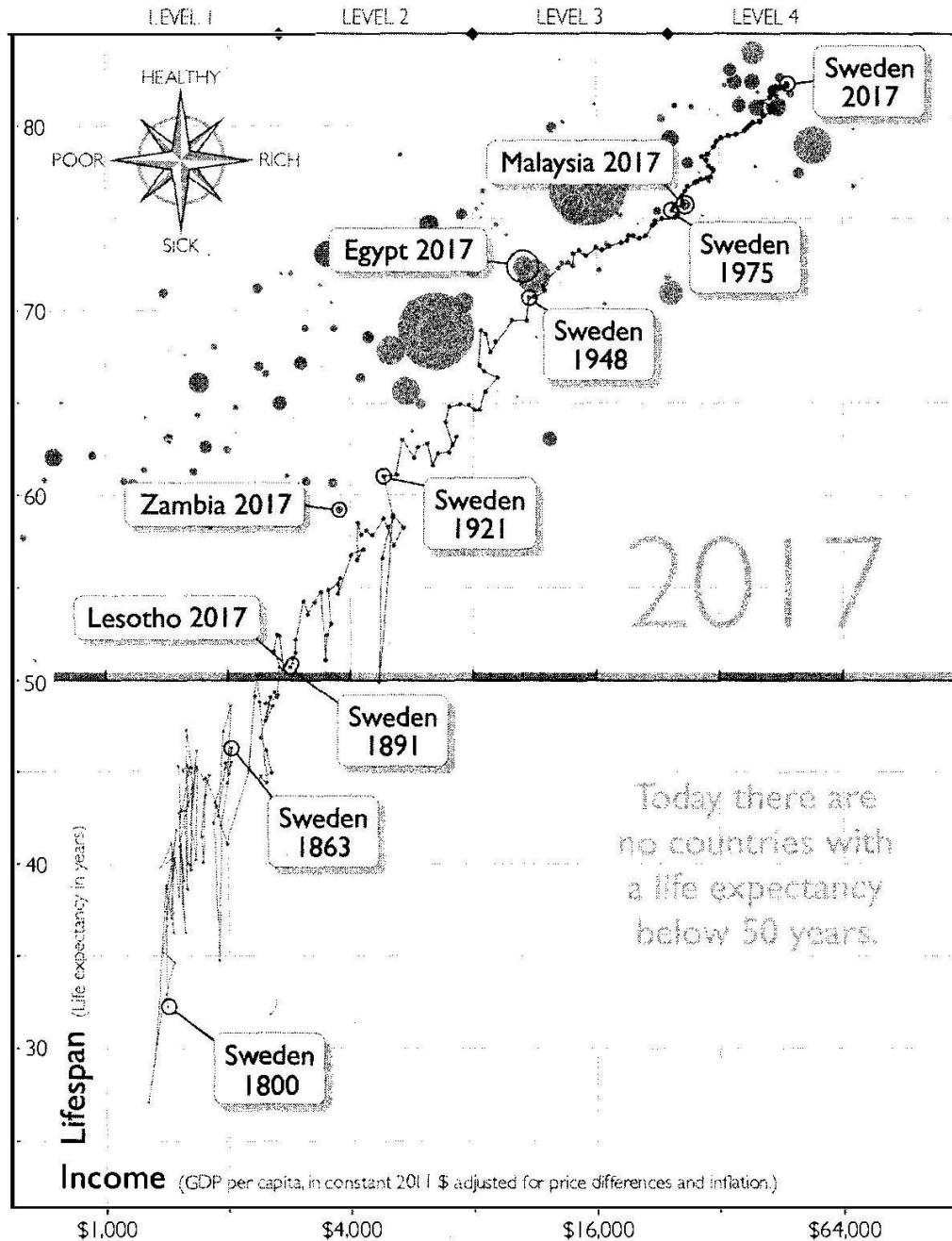
This graph compares Life Expectancy & GDP per capita for all 182 nations recognized by the UN.

COLOR BY REGION

SIZE BY POPULATION

www.gapminder.org
a free fact-based worldview

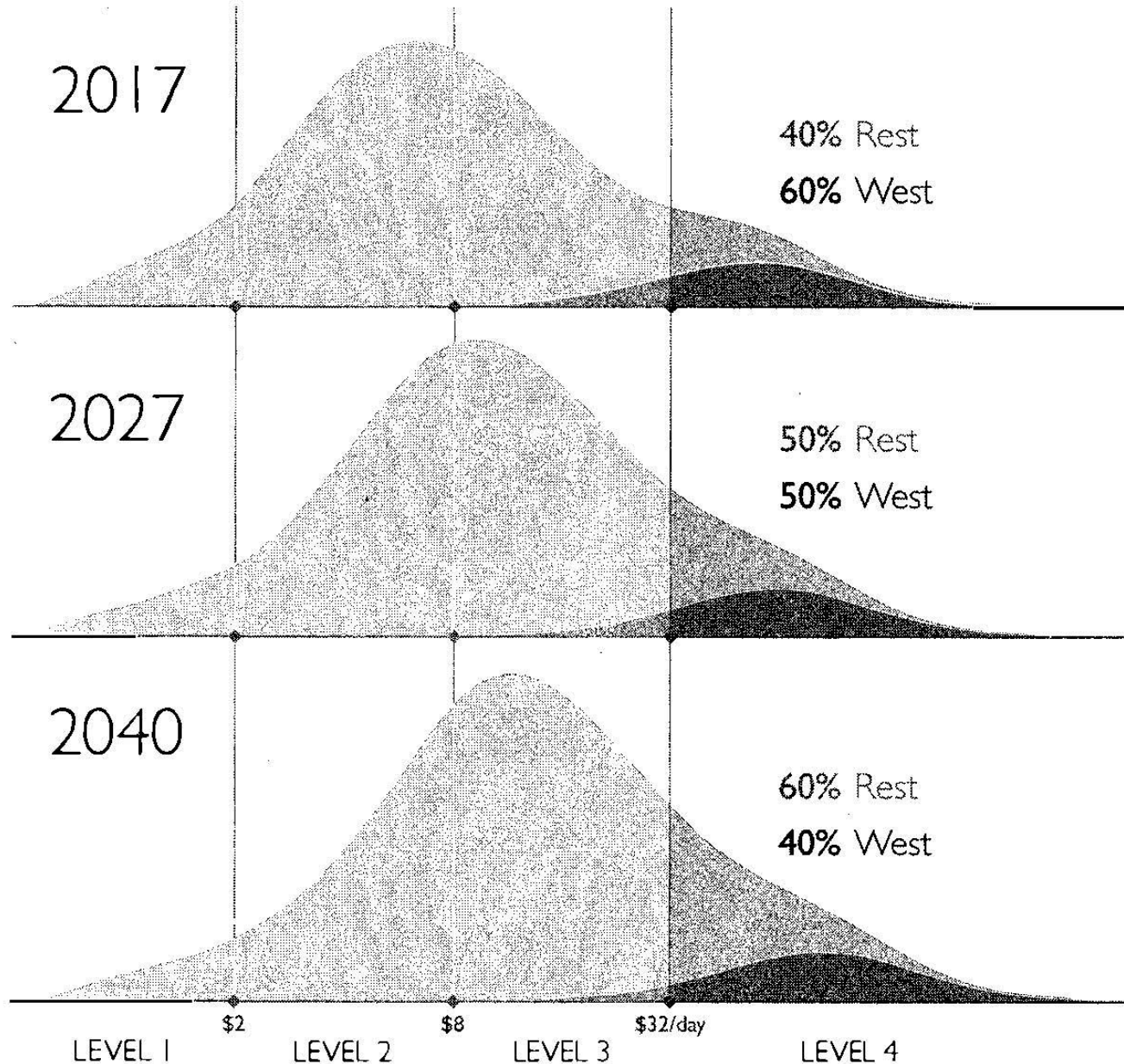
SWEDEN'S HEALTH AND WEALTH FROM 1800 TO TODAY



Sources: World Bank [1], IMF [1], IHME [1], UN-Pop [1] & Gapminder [1,2,3,4] based on Maddison [1,2]

SOON, MOST PEOPLE ON LEVEL 4 WILL BE NON-WESTERNERS

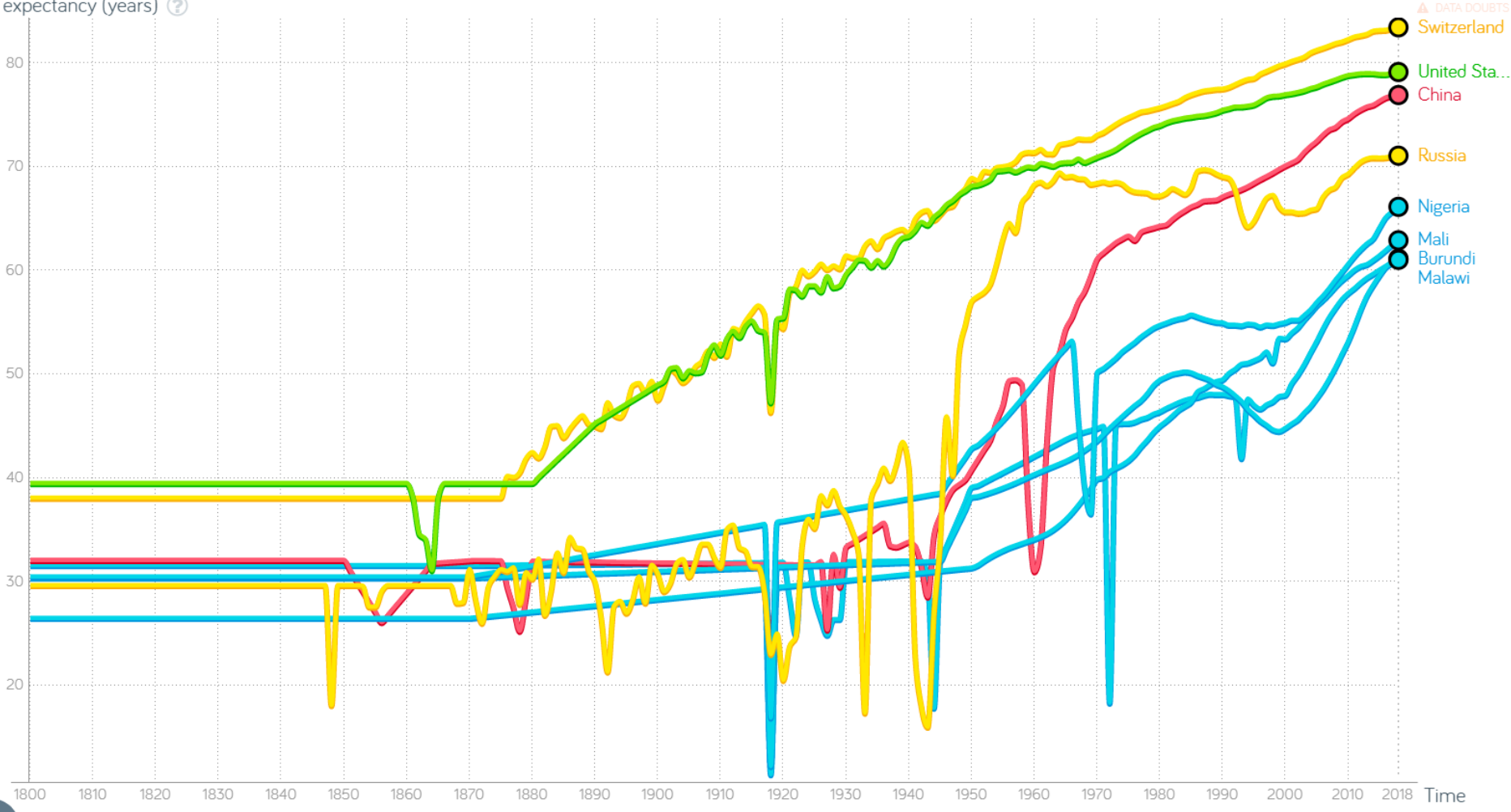
The world population divided into West and Rest, distributed over incomes.



Incomes in constant 2011 \$/day, adjusted for prices and inflation

Source: Gapminder[8] based on PovcalNet, IMF[1] & van Zanden[1]

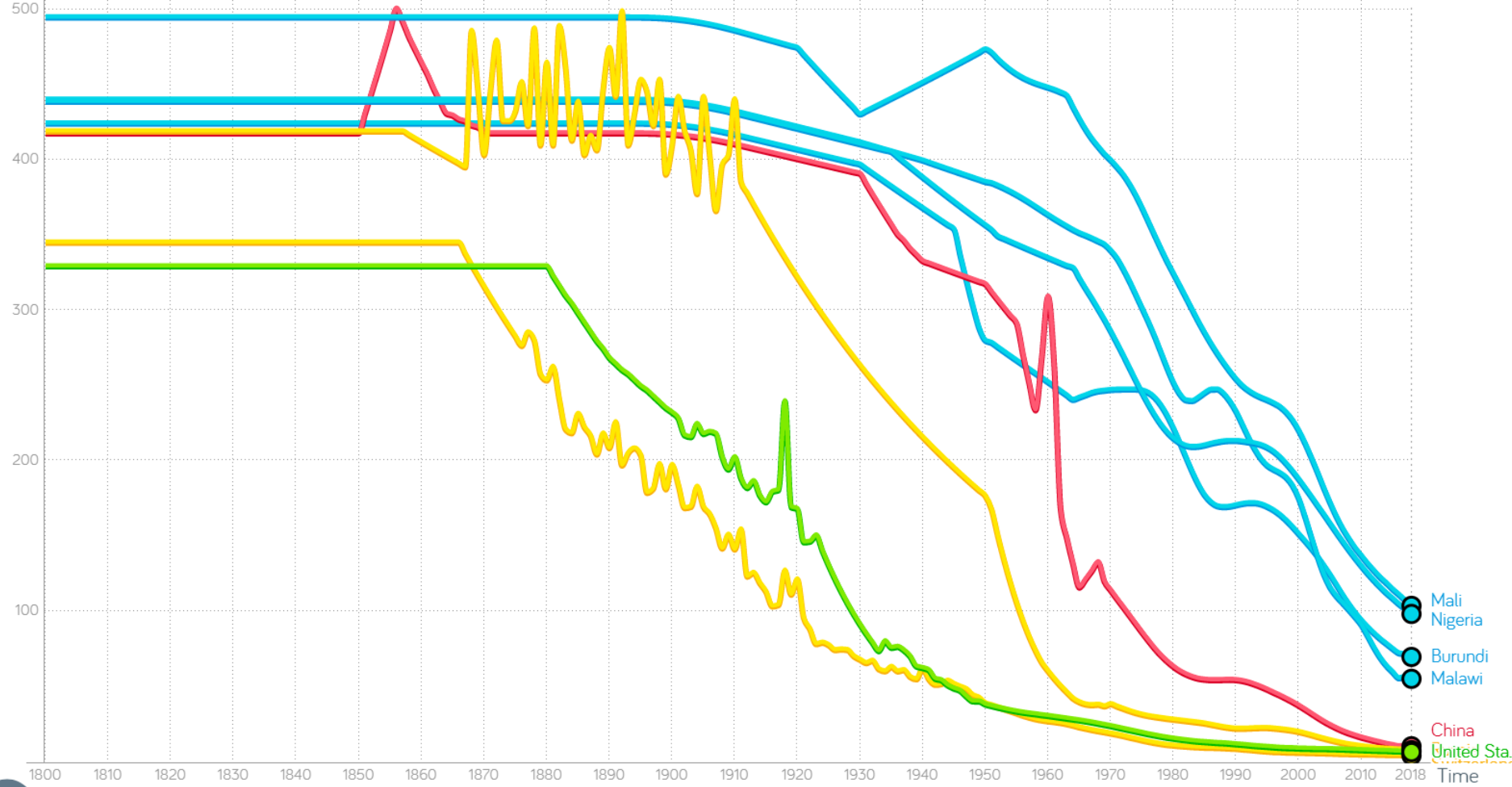
Life expectancy (years) ?



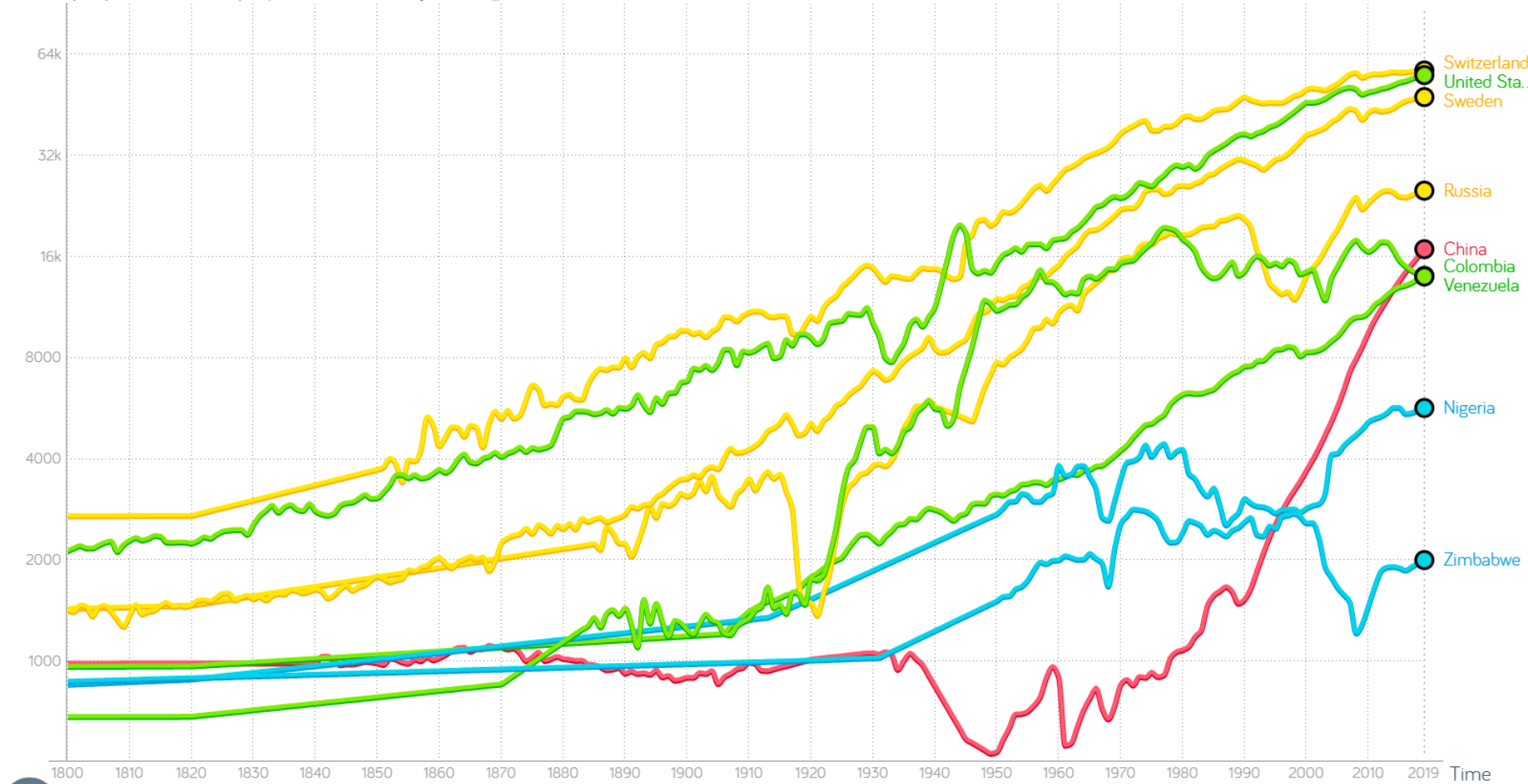
Time

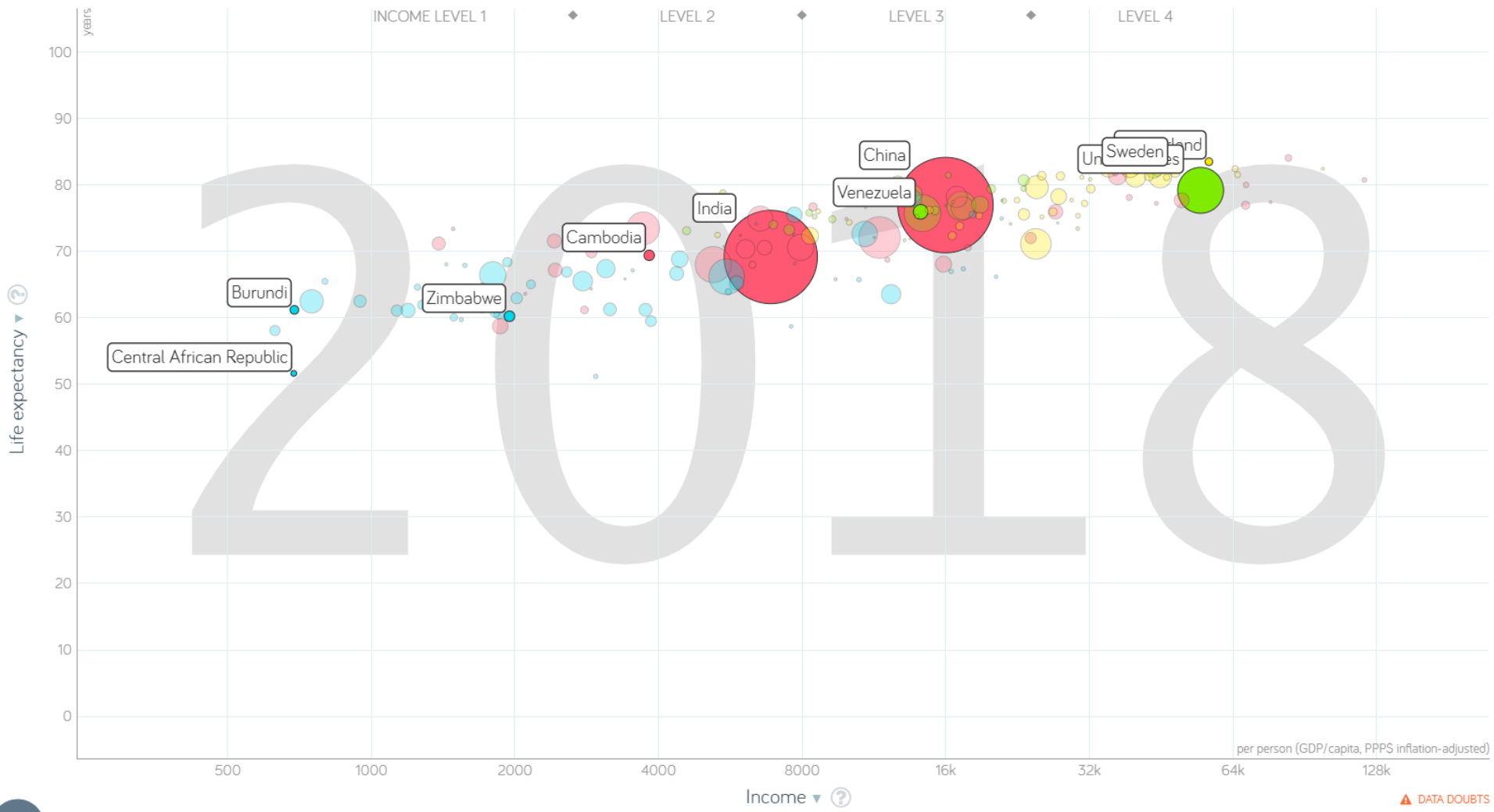
Child mortality (0-5 year-olds dying per 1000 born) ?

DATA DOUBT



Income per person (GDP/capita, PPP\$ inflation-adjusted) ?





DATA DOUBTS

Number of people by income ?

DATA DOUBTS

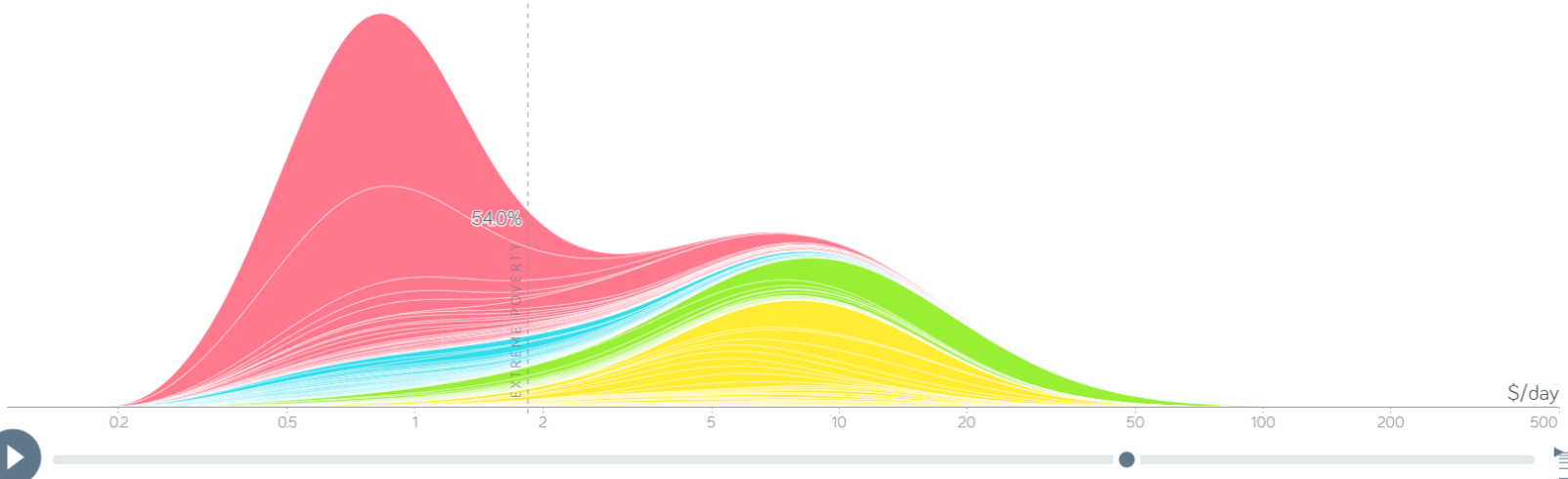
INCOME LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

1959



Color World Regions

- Select Search...
- Afghanistan
 - Albania
 - Algeria
 - Andorra
 - Angola
 - Antigua and Barbuda
 - Argentina
 - Armenia
 - Australia
 - Austria
 - Azerbaijan
 - Bahamas
 - Bahrain
 - Bangladesh
 - Barbados
 - Belarus
 - Belgium
 - Belize
 - Benin
 - Bhutan
 - Bolivia

Stack

None
 By colors
 World

Number of people by income ?

DATA DOUBTS

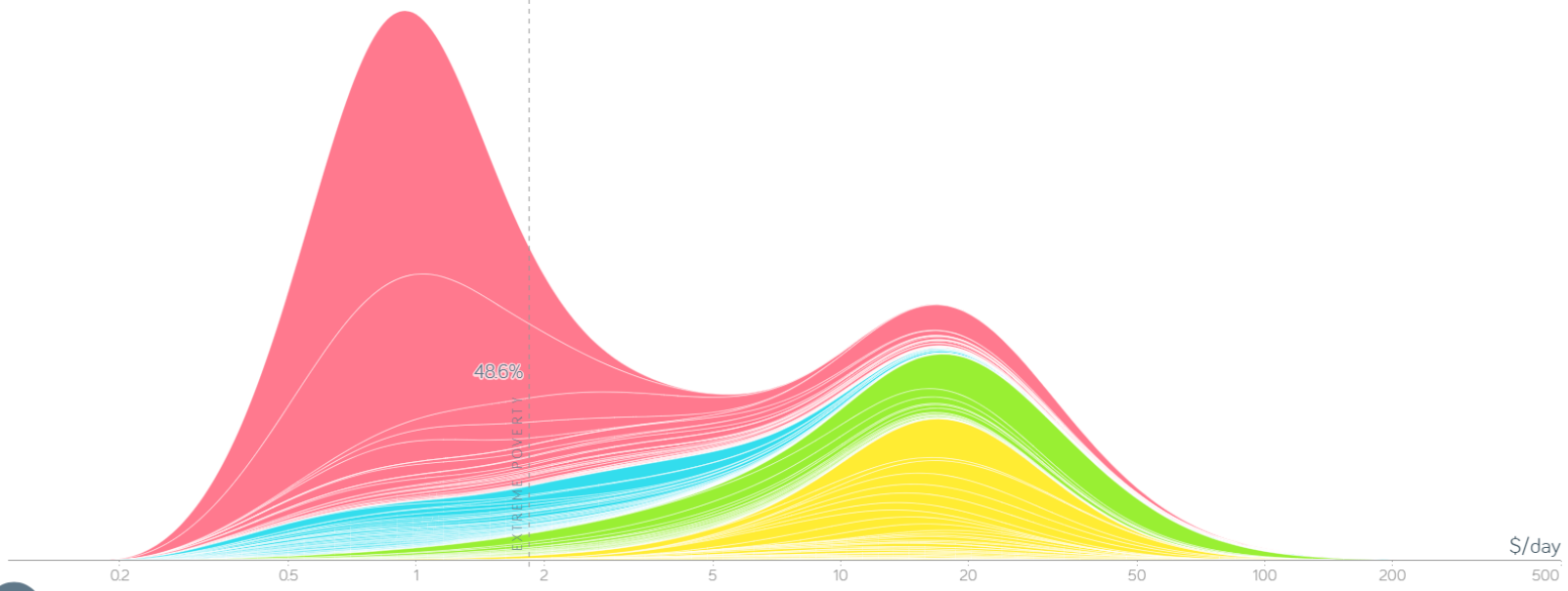
INCOME LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

1979



Color World Regions



Select Search...

- Afghanistan
- Albania
- Algeria
- Andorra
- Angola
- Antigua and Barbuda
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bhutan
- Bolivia

Stack
 None By colors World

OPTIONS PRESENT EXPAND

Number of people by income ?

DATA DOUBTS

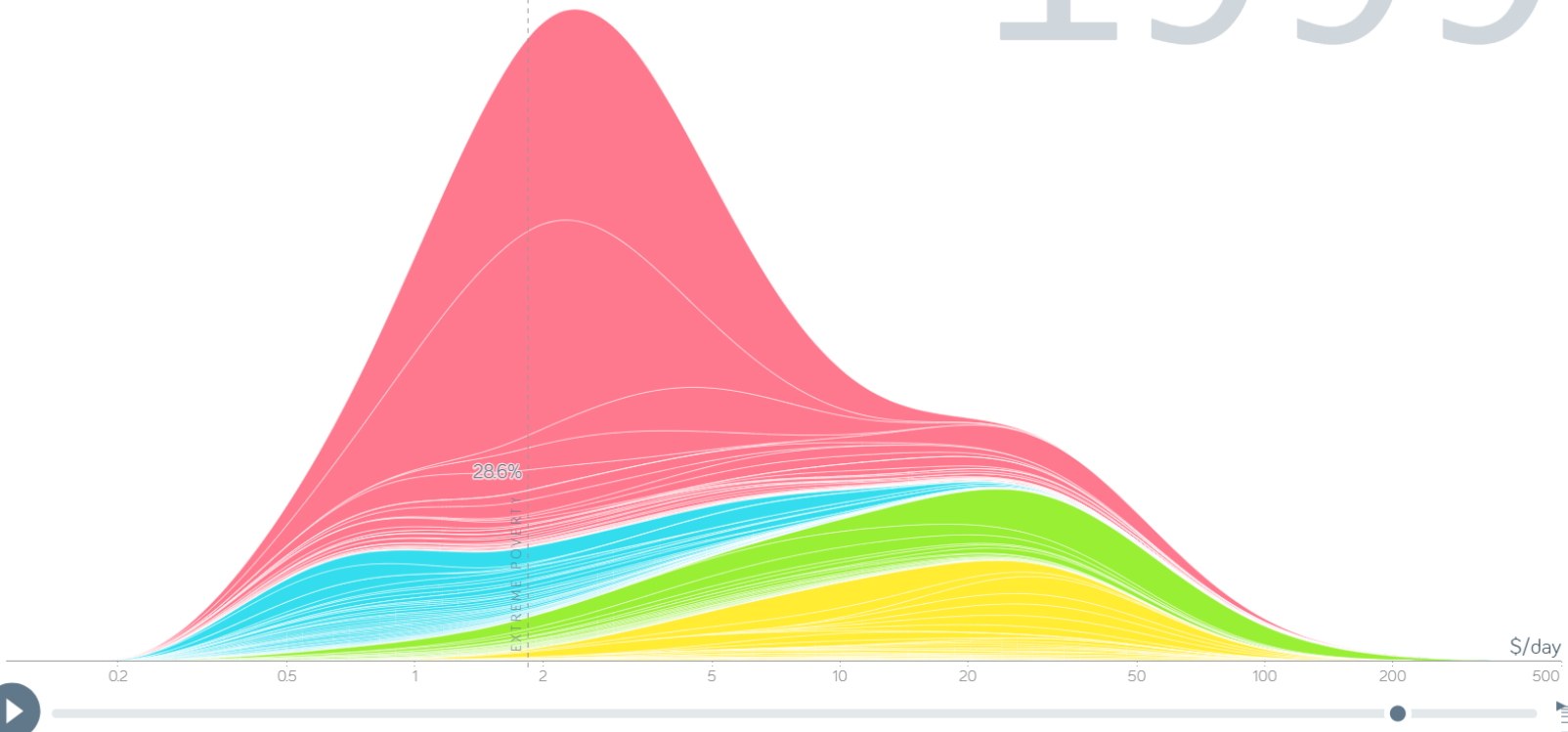
INCOME LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

1999



Color World Regions



Select Search...

- Afghanistan
- Albania
- Algeria
- Andorra
- Angola
- Antigua and Barbuda
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bhutan
- Bolivia

Stack
 None By colors World

OPTIONS PRESENT EXPAND

Number of people by income ?

DATA DOUBTS

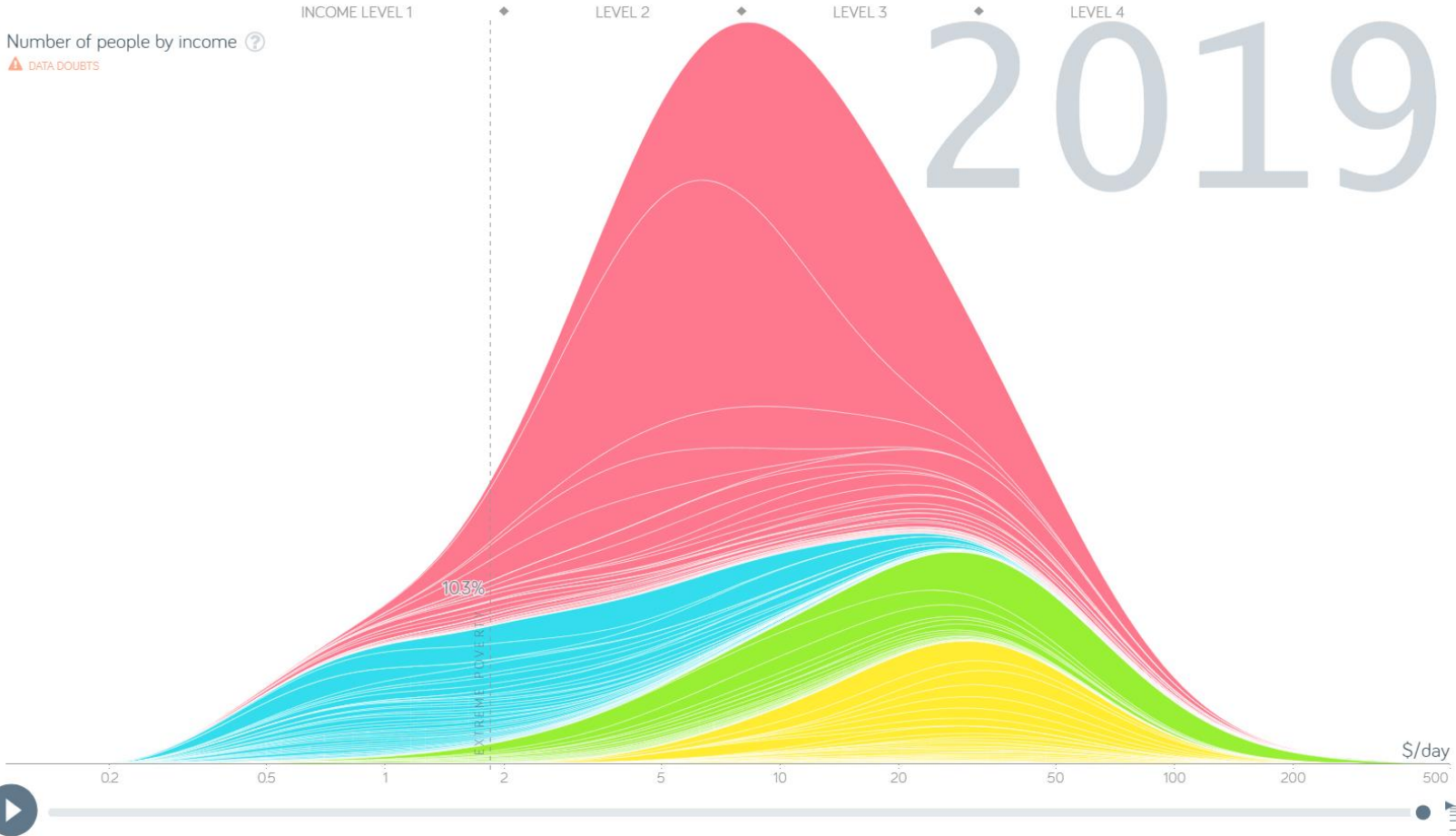
INCOME LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 4

2019



Color World Regions



Select Search...

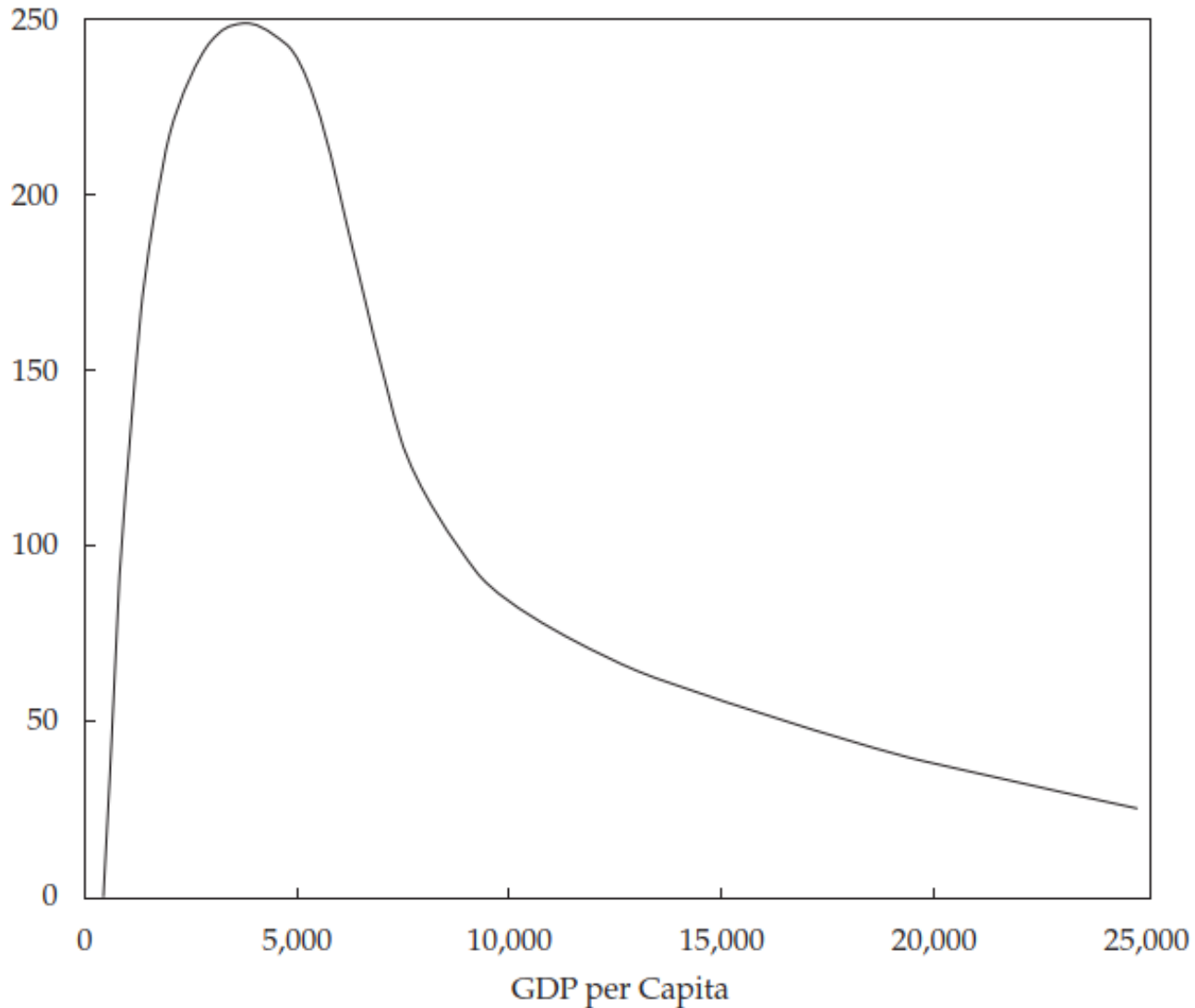
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- Albania
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- Andorra
- Angola
- Antigua and Barbuda
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bhutan
- Bolivia

Stack
 None By colors World

OPTIONS PRESENT EXPAND

Figure 7. Hypothetical Environmental Kuznets Curve for a Generic Pollutant

Pollution per Capita

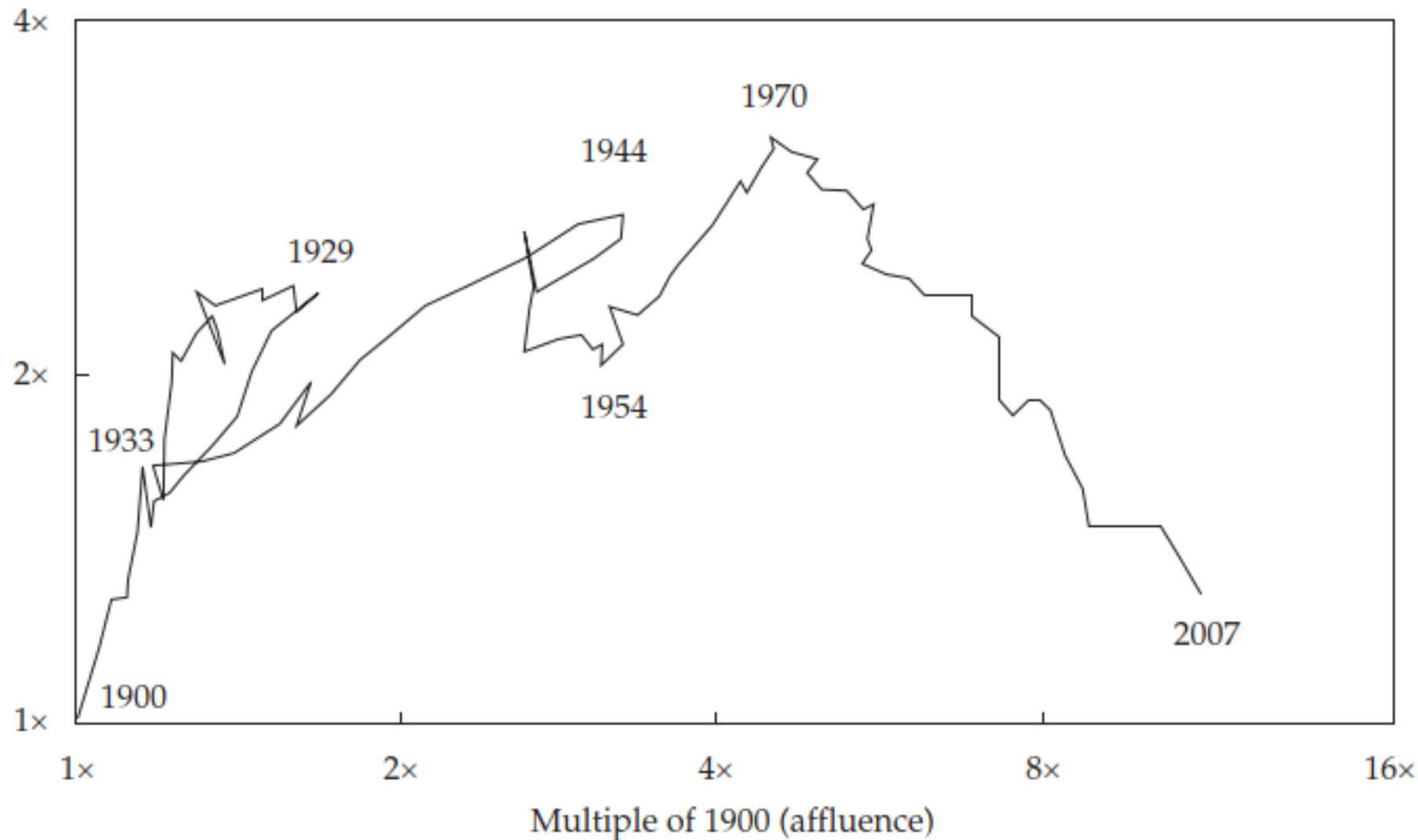


Note: GDP is measured in dollars.

Source: Gallagher (2009).

Figure 8. Environmental Kuznets Curve for U.S. Sulfur Dioxide Emissions

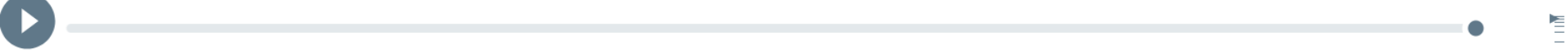
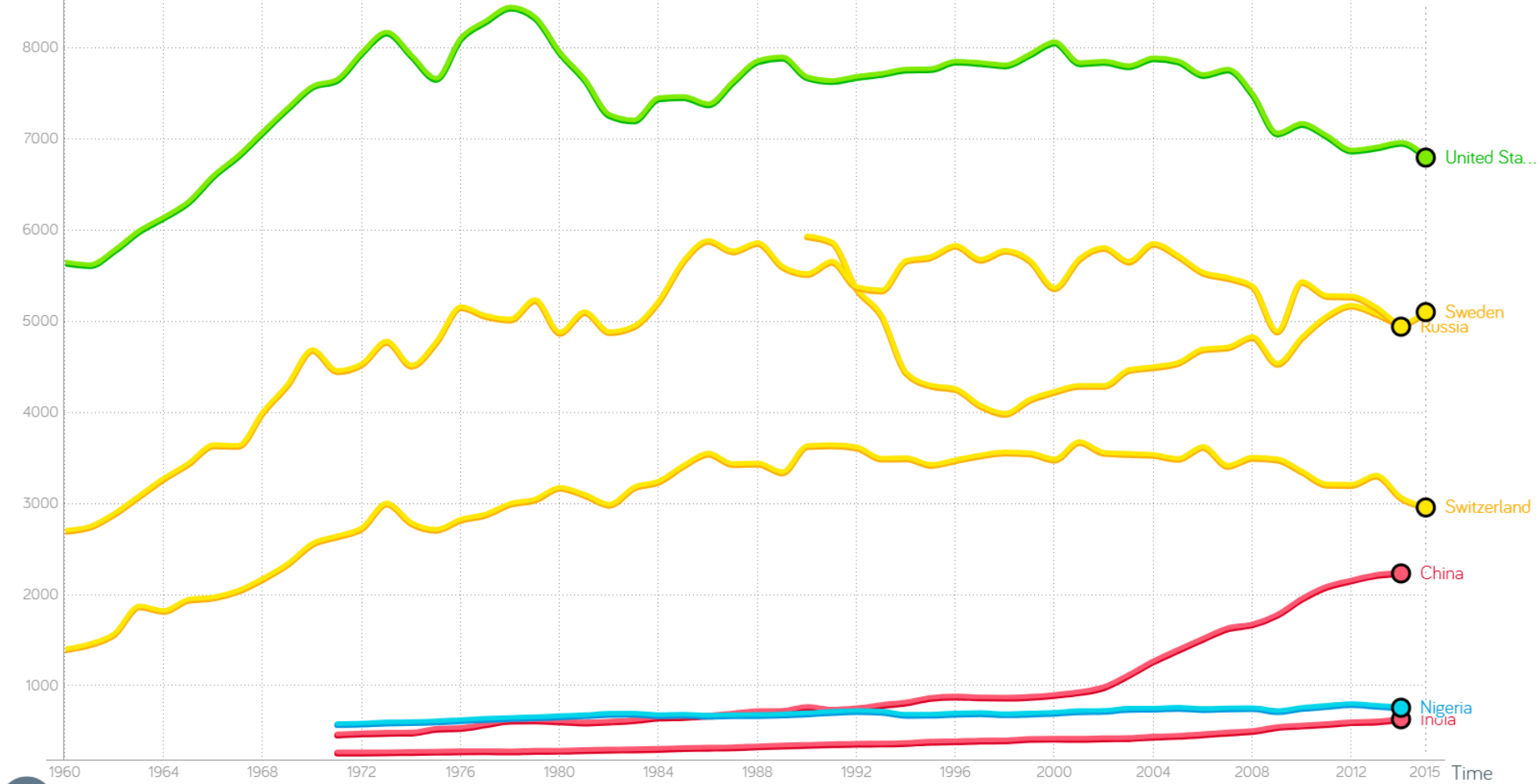
Multiple of 1900 (emissions)



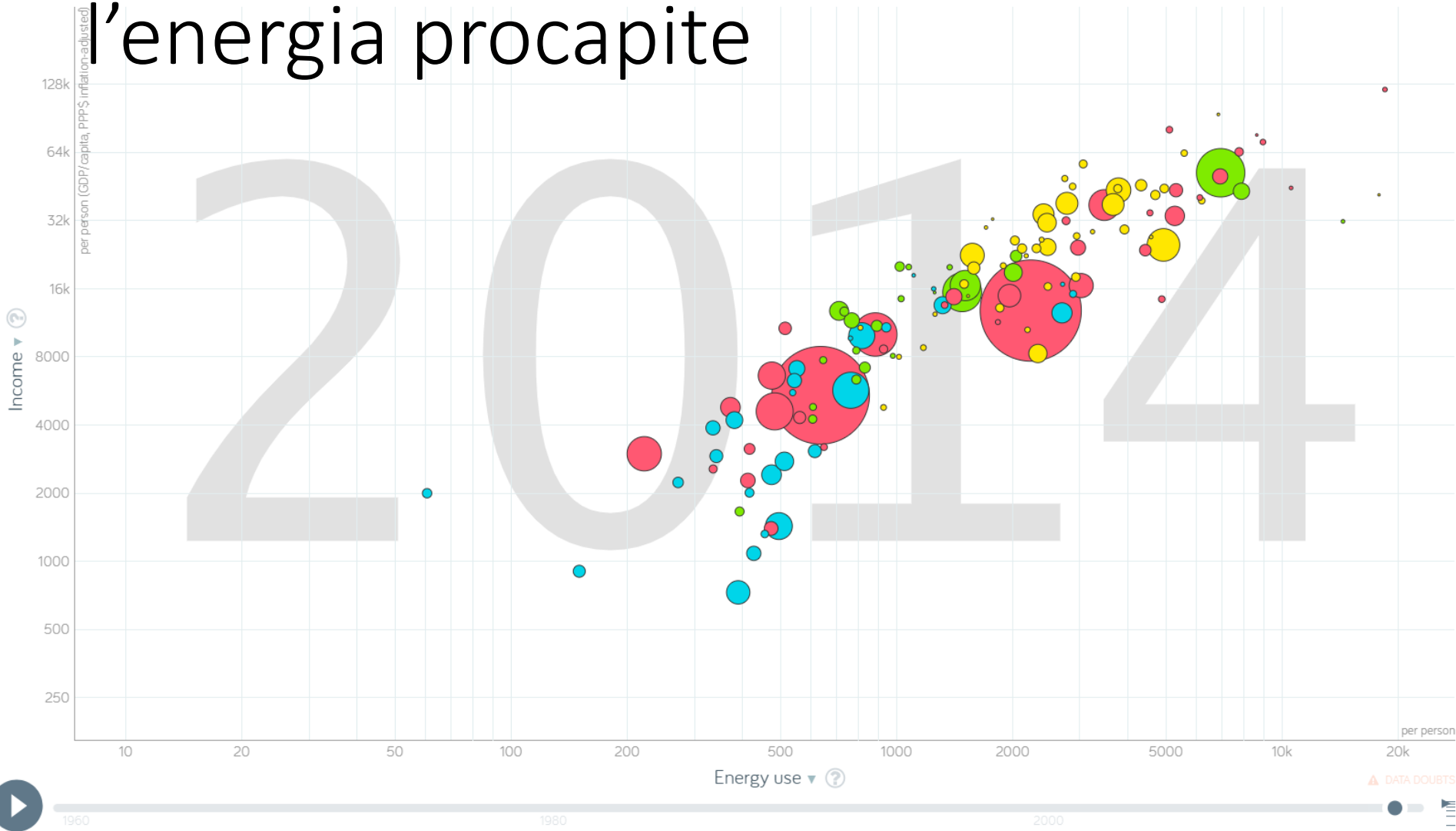
Source: Ausubel and Waggoner (2009), cited in Tierney (2009a).

Energy use, per person ?

DATA DOUBTS



Il PIL procapite si spiega con l'energia procapite



Lambert et al (2014) ricordano la piramide dei fabbisogni energetici

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J.G. Lambert et al. / Energy Policy 64 (2014) 153–167

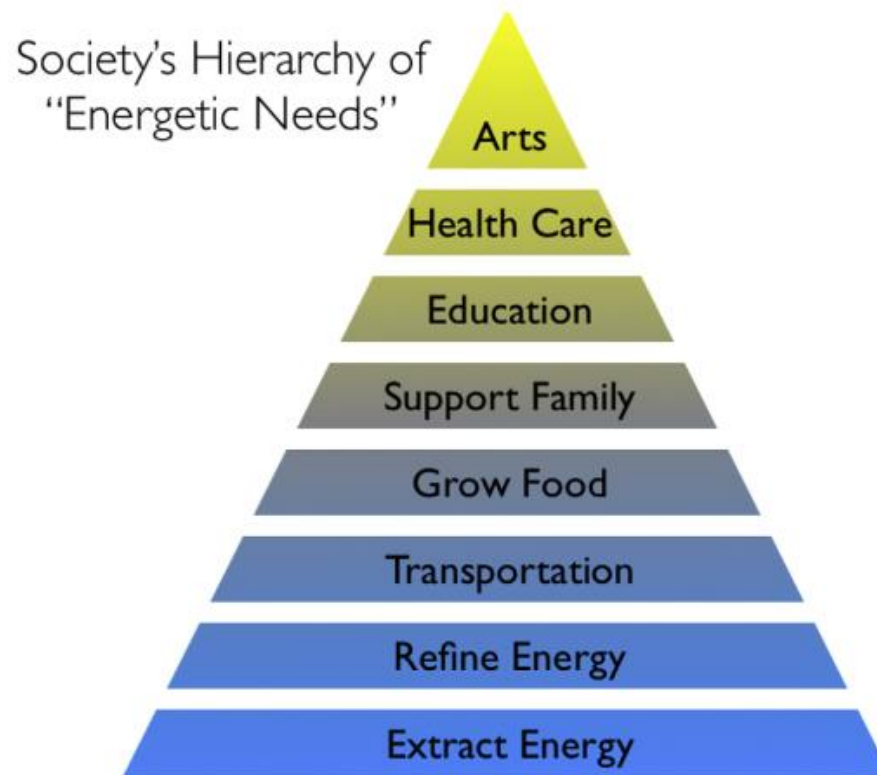
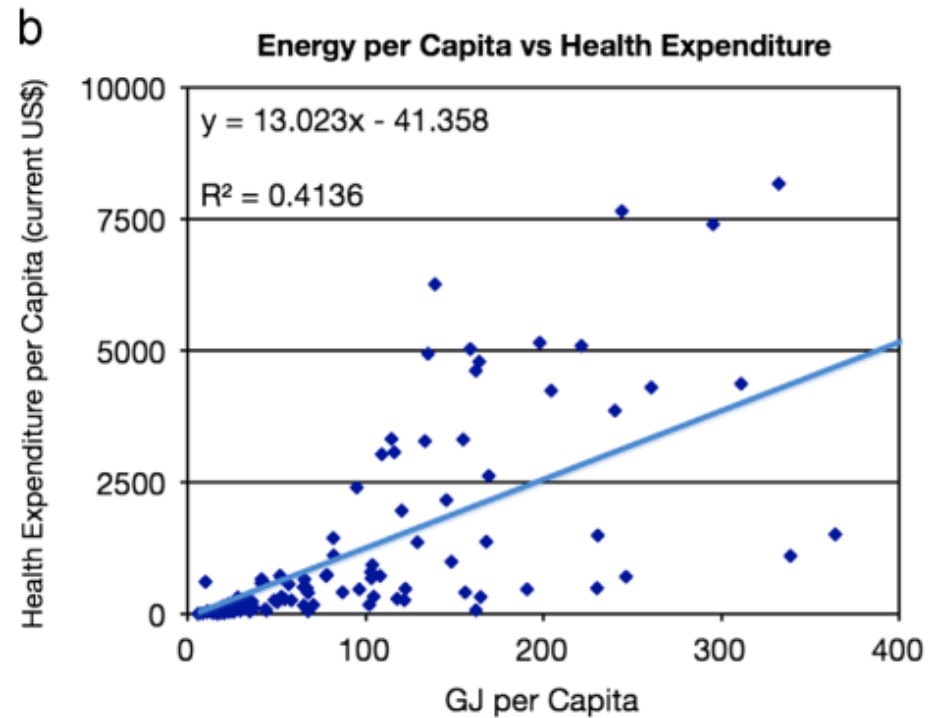
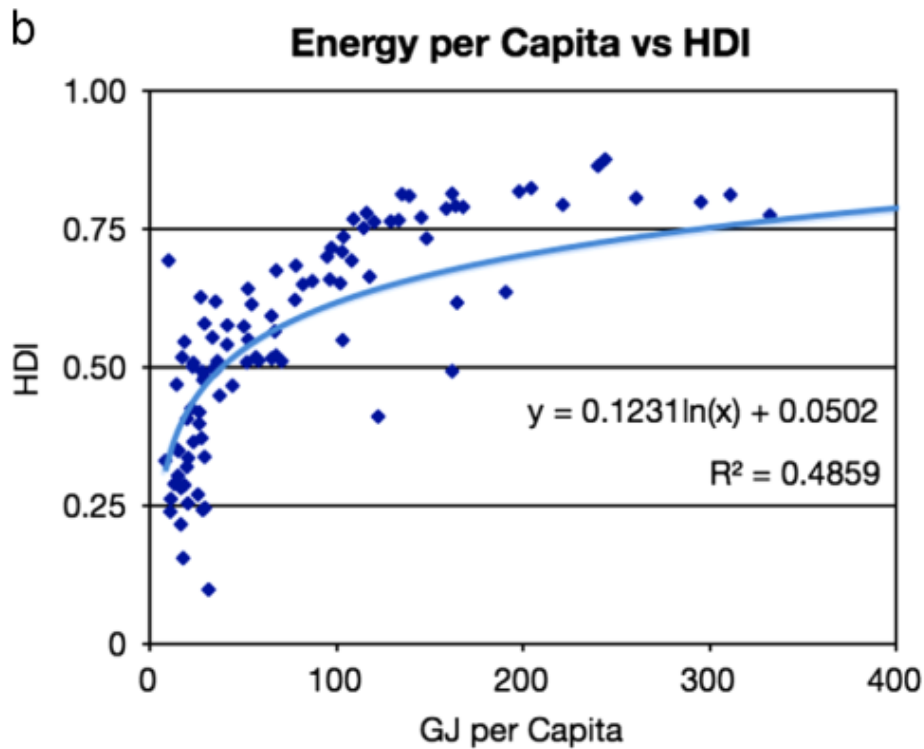
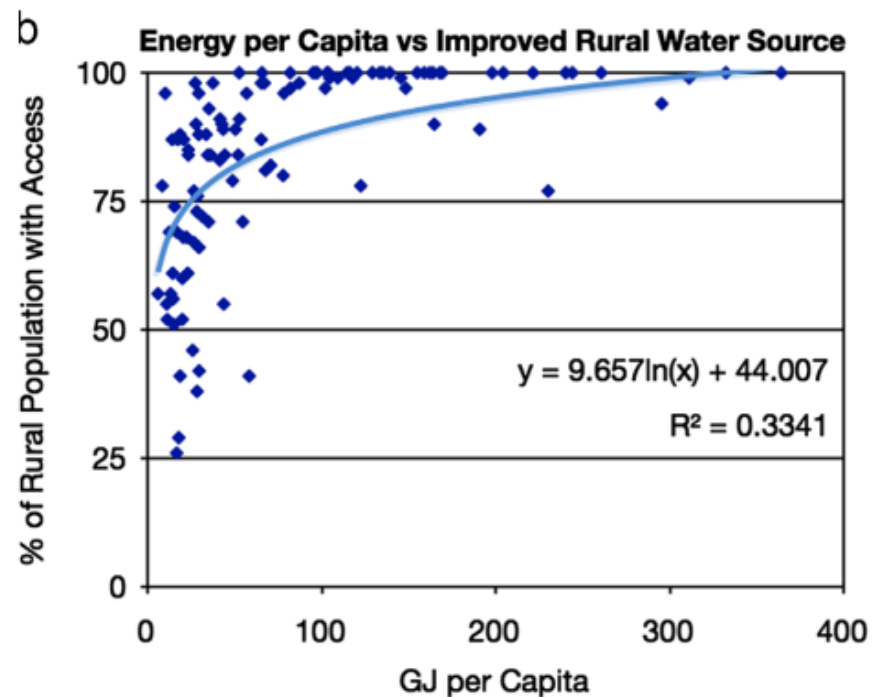
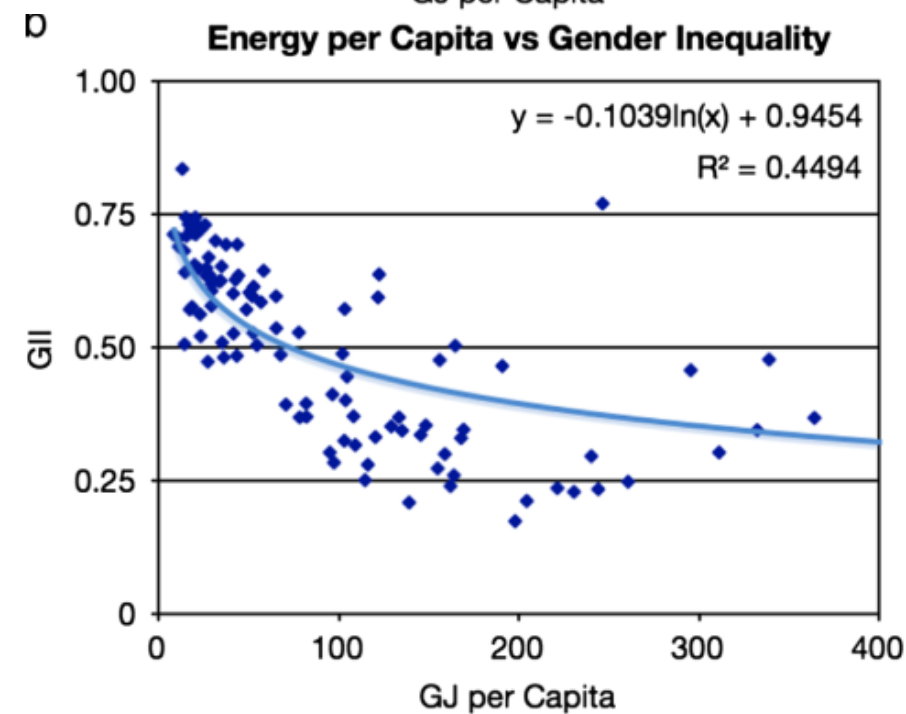
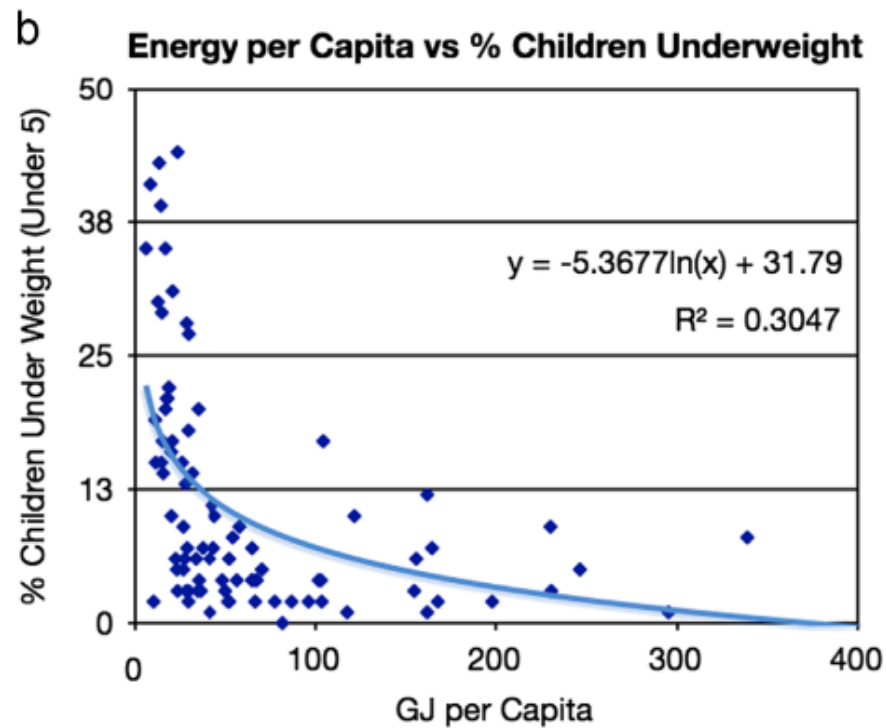
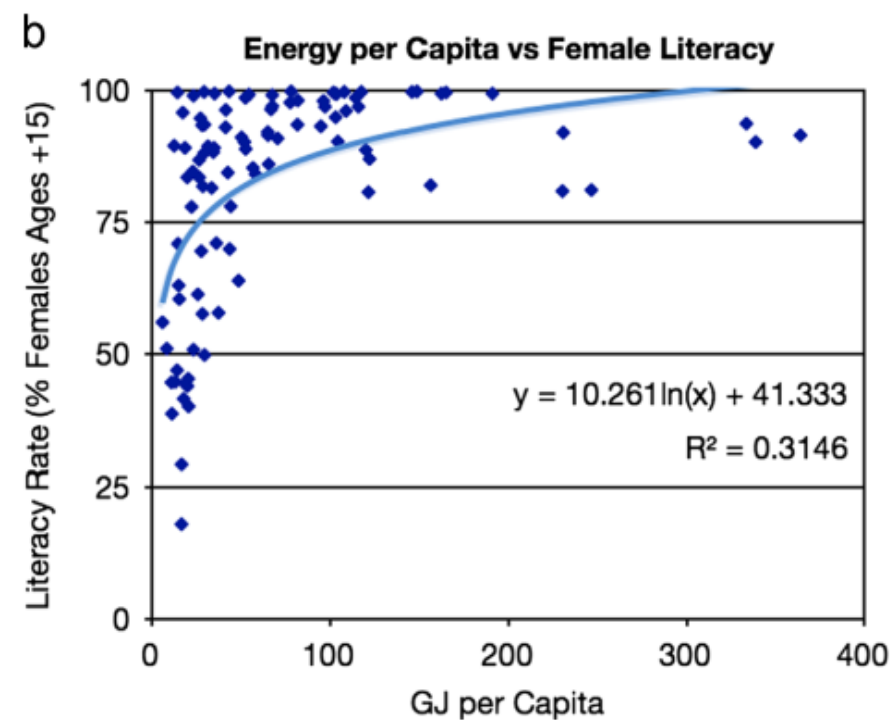


Fig. 12. "Pyramid of Energetic Needs" representing the minimum EROI required for conventional oil, at the well-head, to be able to perform various tasks required for civilization. The blue values are published values; the yellow values are increasingly speculative (figure from Lambert and Lambert (in preparation)). If the EROI of a fuel (say oil) is 1.1:1 then all you can do is pump it out of the ground and look at it. Each increment in EROI allows more and more work to be done (Hall et al., 2009). (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Lambert et al (2014) mostrano pure molto bene come il consumo energetico procapite spieghi vari indicatori di benessere





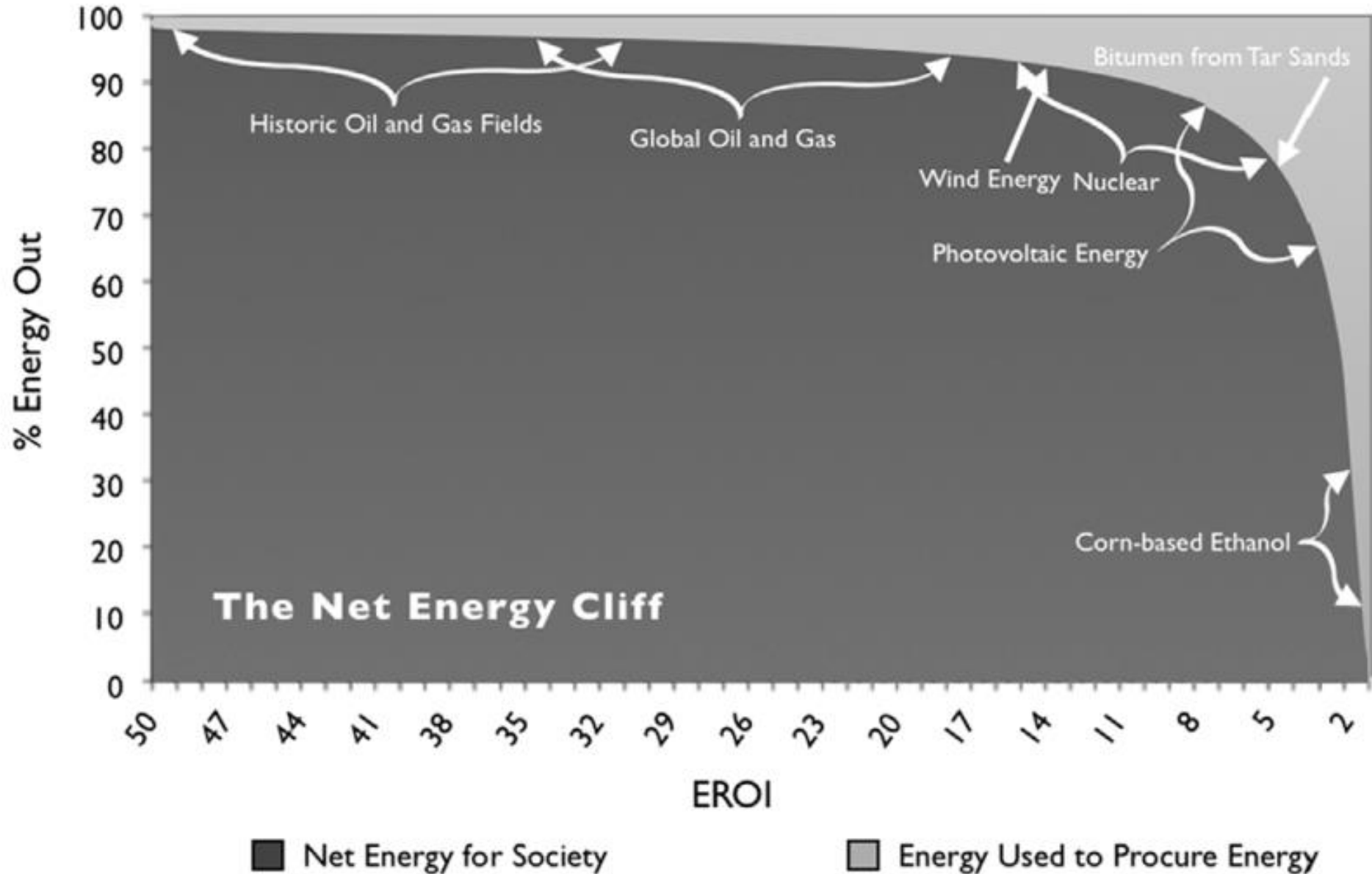


Fig. 1. The “Net Energy Cliff” with EROI expressed as the number of the horizontal axis to one, i.e. 20:1 (figure from [Lambert and Lambert \(in preparation\)](#), adapted from [Murphy and Hall \(2010\)](#)). Concept courtesy of Euan Mearns.

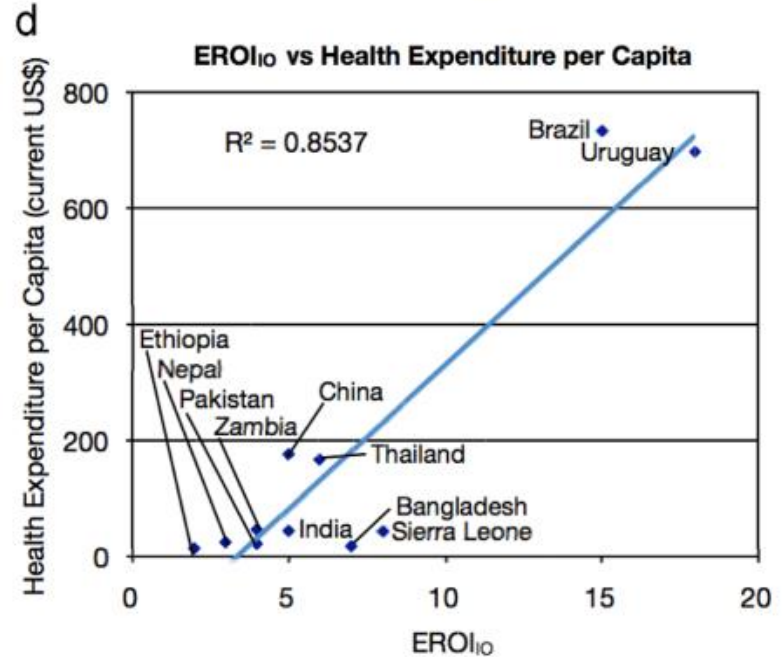
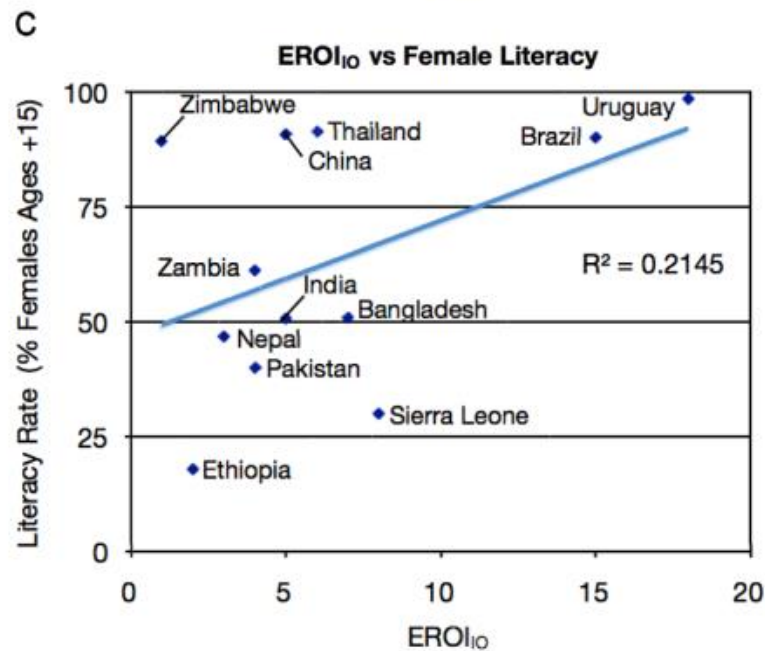
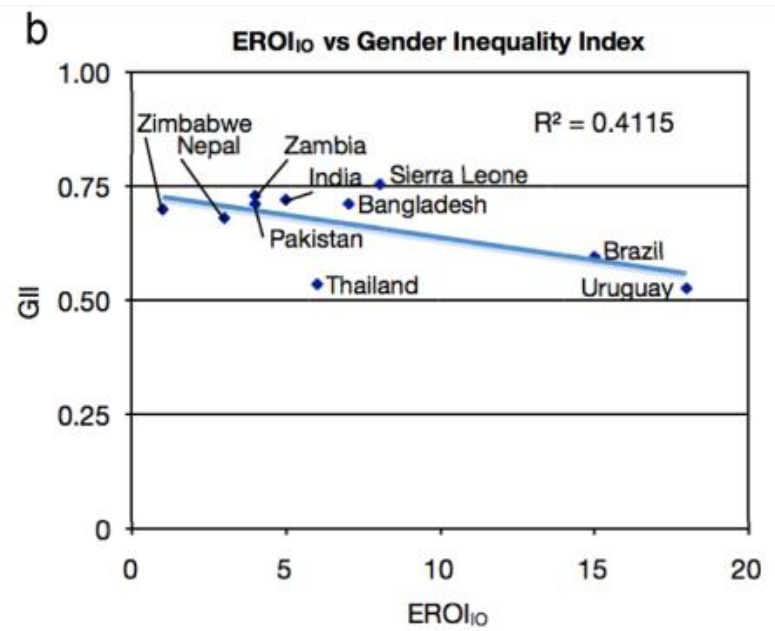
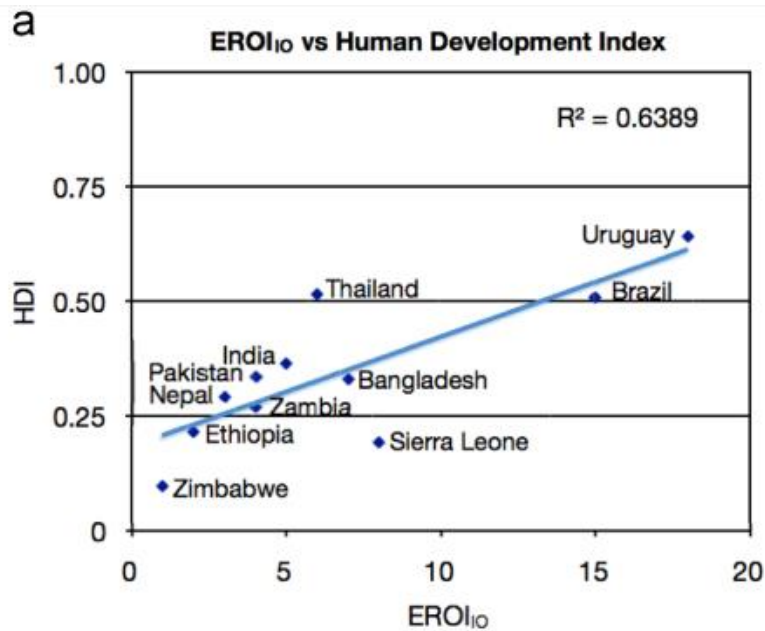
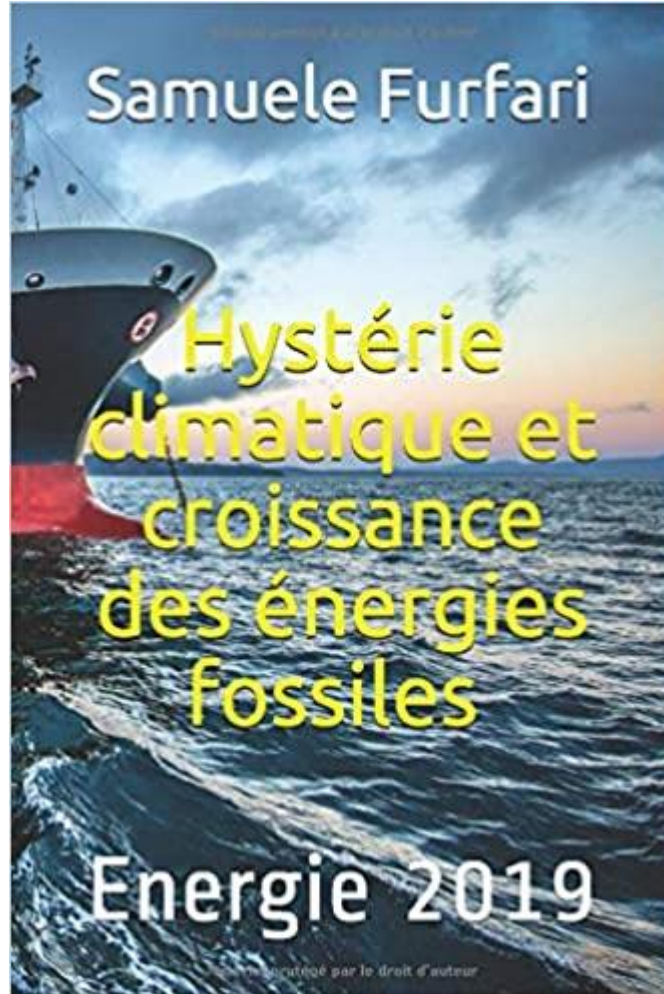


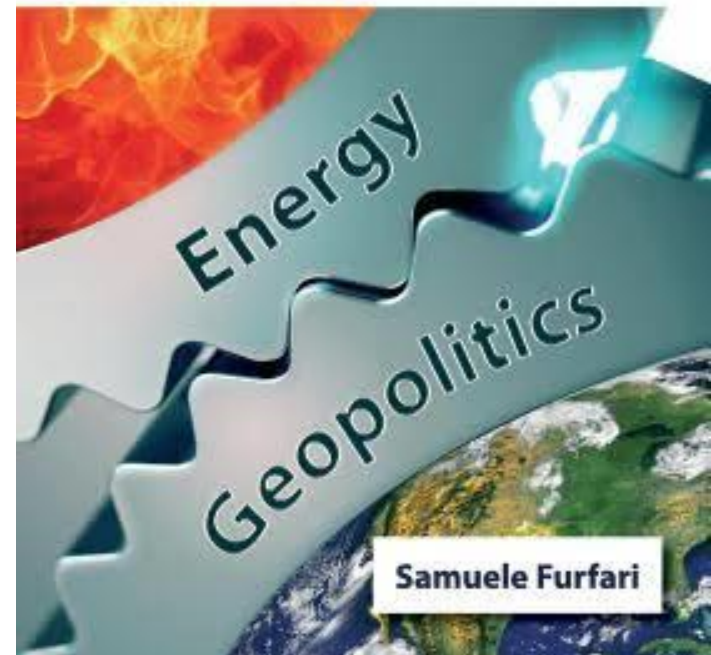
Fig. 11. Comparison of HDI (a), GII (b), literacy (percent of females ages 15 and up) (c) and health expenditures per capita (d) with EROI₁₀ values (The World Bank, 2012; FAO, 2012).

Il gas naturale sta cambiando la geopolitica energetica mondiale

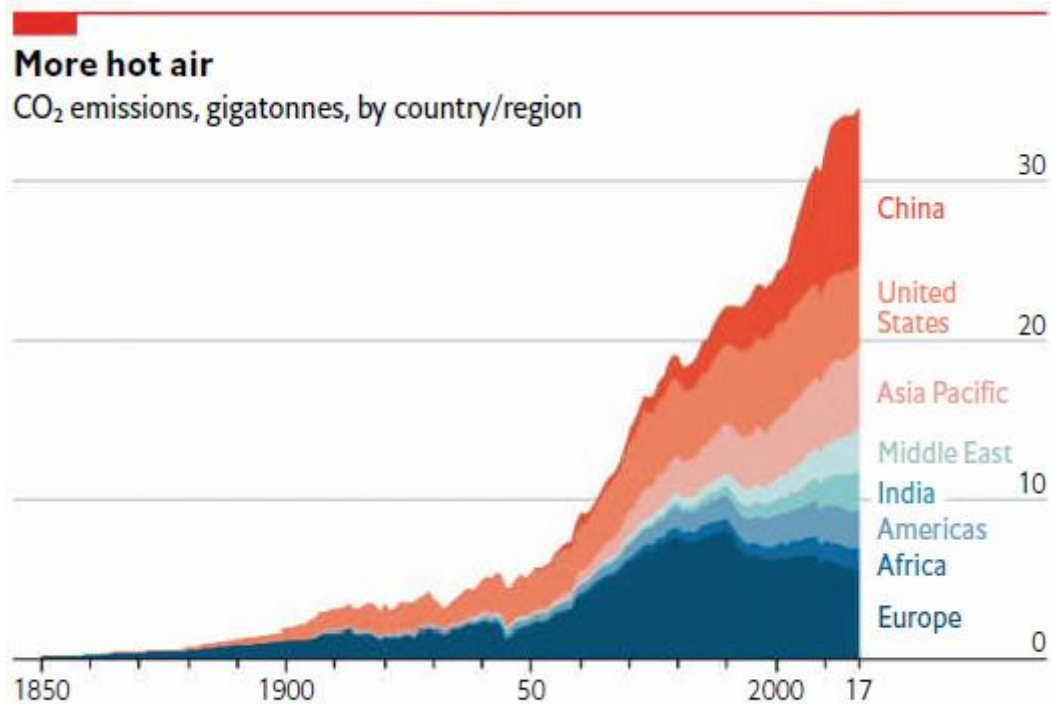


**The changing world of
energy and the geopolitical
challenges**

1. Understanding energy developments



Emissioni di CO₂ – 1850-2017



Sources: Global Carbon Project; Carbon Dioxide Information Analysis Centre

Fonte: The Economist 19.9.2020, pag. 6 Special report Business and climate change

Sole e cambiamenti climatici

Environmental Earth Sciences (2018) 77:262
https://doi.org/10.1007/s12665-018-7438-y

ORIGINAL ARTICLE

An updated review about carbon dioxide and climate change

Rex J. Fleming¹ 

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Abstract

This manuscript will review the essence of the role of CO₂ in the Earth's atmosphere. The logic of CO₂ involvement in changing the climate will be investigated from every perspective: reviewing the historical data record, examining in further detail the twentieth-century data record, and evaluating the radiation role of CO₂ in the atmosphere—calculating and integrating the Schwarzschild radiation equation with a full complement of CO₂ absorption coefficients. A review of the new theory of climate change—due to the Sun's magnetic field interacting with cosmic rays, is provided. The application of this new theory is applied to climate-change events within the latter part of the Earth's interglacial period. The application to the Earth's Ice Ages is not detailed here due to manuscript size constraints, but is referenced for the reader. The results of this review point to the extreme value of CO₂ to all life forms, but no role of CO₂ in any significant change of the Earth's climate.

Keywords Carbon dioxide · Climate change · Solar magnetic field · Cosmic rays · Chaos

FALSE ALARM
THE RISE AND FALL OF THE CARBON DIOXIDE
THEORY OF CLIMATE CHANGE



REX J. FLEMING

Conclusioni

- Nella storia dell'umanità non c'è stato momento migliore di oggi per vivere.
- Considerata l'altissima vulnerabilità di un neonato, la mortalità infantile (0-5 anni) è un indicatore comprensivo di sviluppo, perché incorpora la qualità del sistema fognario, dell'approvvigionamento idrico, dei valori nutrizionali nella popolazione, del sistema sanitario nonché la capacità economica delle famiglie di far fronte a spese impreviste, a sua volta possibile a fronte di un avvenuto risparmio personale. **Oggi la mortalità infantile nei paesi più poveri al mondo è paragonabile a quella in Svizzera negli anni 1930-1940!**
- **Non vi è oggi paese con una speranza di vita alla nascita minore di 50 anni.**
- Gli indicatori materiali di benessere correlano in modo chiaro con il prodotto interno lordo procapite.
- Gli indicatori di benessere materiale e il prodotto interno lordo procapite dipendono in modo evidente dal **consumo energetico procapite**. Da solo, questo è capace di spiegare l'80% della variazione nel tempo e tra diversi paesi del potere d'acquisto medio procapite.
- Attualmente solo il 10% della popolazione mondiale vive in **povertà assoluta**, definita secondo l'ONU come meno di USD 1.80 al giorno. Si conta che entro il 2030 essenzialmente tutta la popolazione mondiale sarà uscita dalla povertà assoluta, salvo cause umane come **guerre** o esperimenti di **economia comunista** o centralmente pianificata (si pensi al caso del Venezuela).
- La cornice socioeconomica alla questione climatica e delle emissioni di CO2 pone il **requisito centrale di continuare ad aumentare la disponibilità di energia procapite** ad un numero sempre crescente di persone (la popolazione mondiale dovrebbe stabilizzarsi attorno ai 10-11 mrd. di persone entro il 2100), in particolare in Asia e in Africa. Tutto il resto sono proposte letteralmente inumane e incoerenti con lo studio dello sviluppo umano ed economico.

Libri utili connessi alle presenti tesi

