



**CaixaForum**  
Zaragoza



**Jueves 4 mayo**  
**10:00**

**“Come on! Pasos hacia una sociedad realmente sostenible”**

**Come on! Steps towards a truly sustainable world society**

**Prof. Ernst Ulrich von Weizsäcker**

**Co-President**





# Come On!

is likely to be the first  
Report **by** the Club of Rome, after  
some fifty Reports **to** the Club of Rome.  
Because it has been written by some thirty  
members of the Club of Rome and because it  
attempts to break new ground  
for the 21st century.

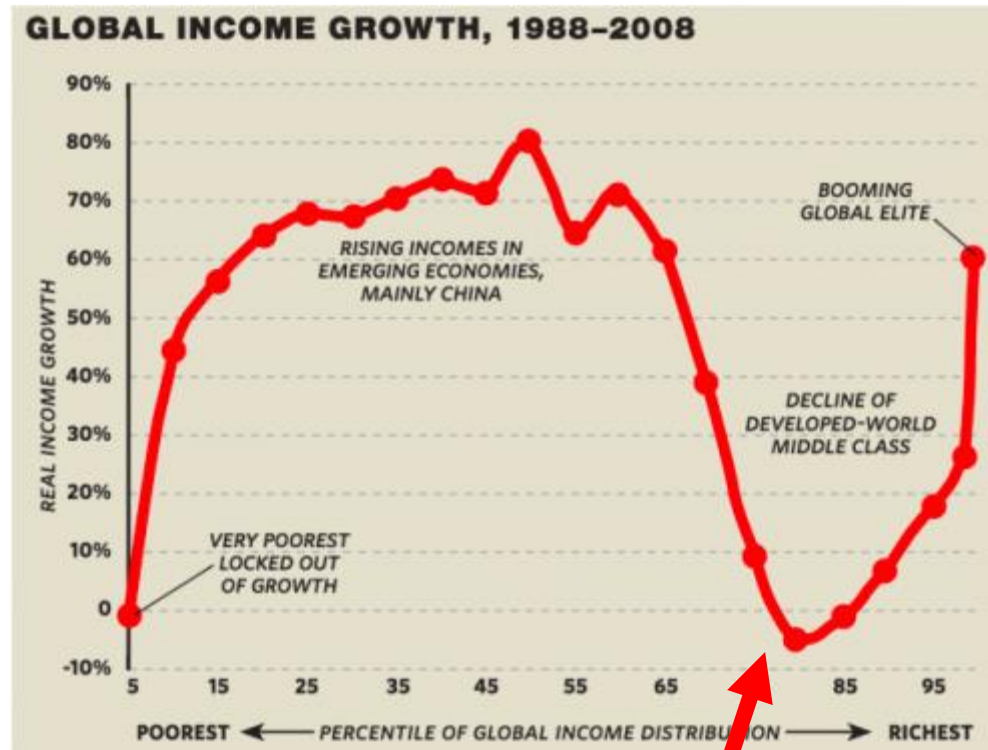
**The book starts with a chapter  
„The world in disarray“.**

**We all know that. Despite unprecedented  
wealth and incredible technological  
achievements, the overall sentiments tend to  
be angry, pessimistic, lacking orientation.  
We see terrible situations in places like  
Somalia, Yemen, Afghanistan, Venezuela ...**



**Donald Trump and his allies in Britain, Turkey, Philippines and elsewhere express anger against „the establishment“, globalization and other imagined enemies.**

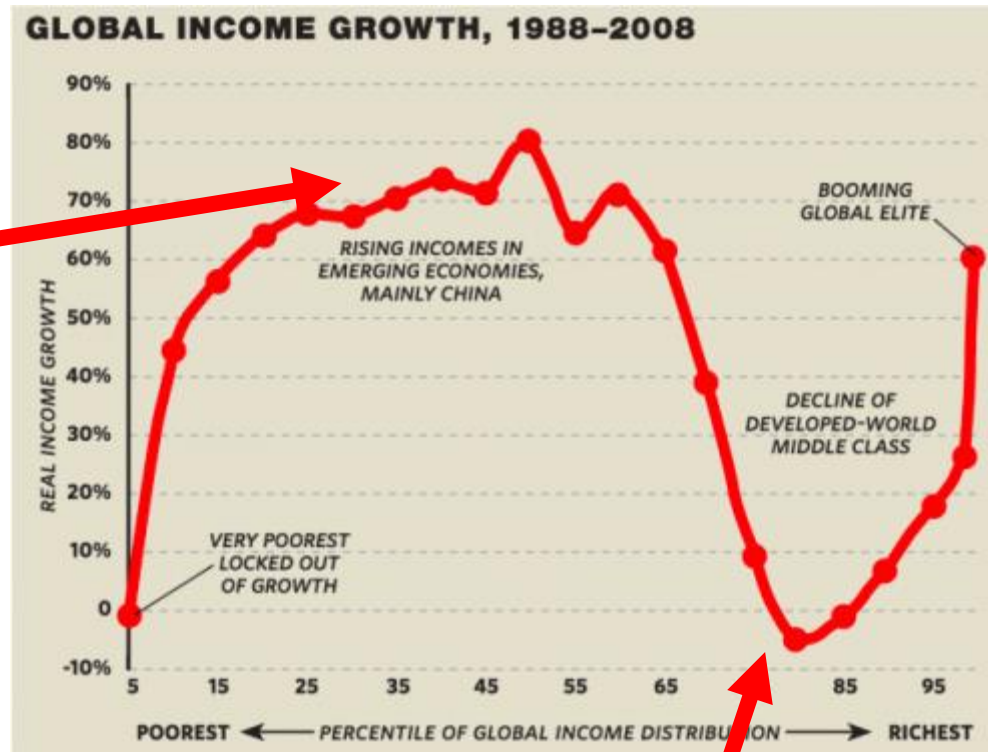
# Much of the explanation relates to the „Elephant Curve“



Here are the Brexit and Trump voters, and, alas, millions of Spaniards.

**We in the West tend to ignore that globalization also had billions of real winners. But they were mostly in Asia.**

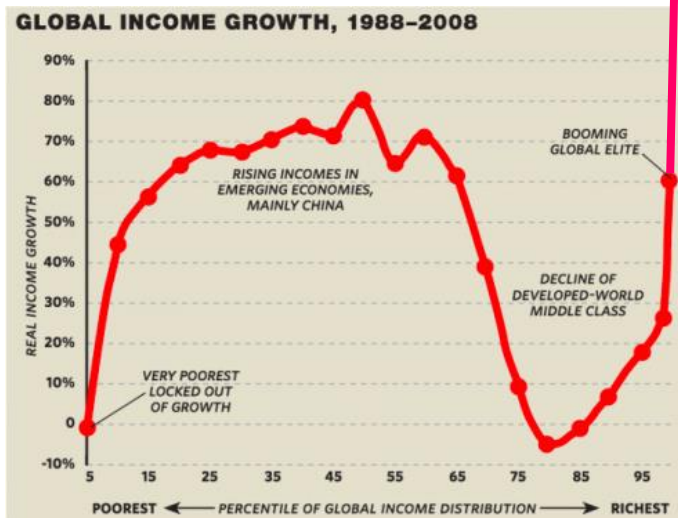
**Here are  
China and the  
Asian tigers**



**Here are the Brexit and Trump voters,  
and, alas, millions of Spaniards.**

Besides: the Elephant Curve is incomplete. The real winners were the very rich, the billionaires!

- at Wall Street
- in California
- in China
- in Russia
- in India
- in Brazil
- etc.



But the Elephant Curve is only at the surface of our „disarray“.

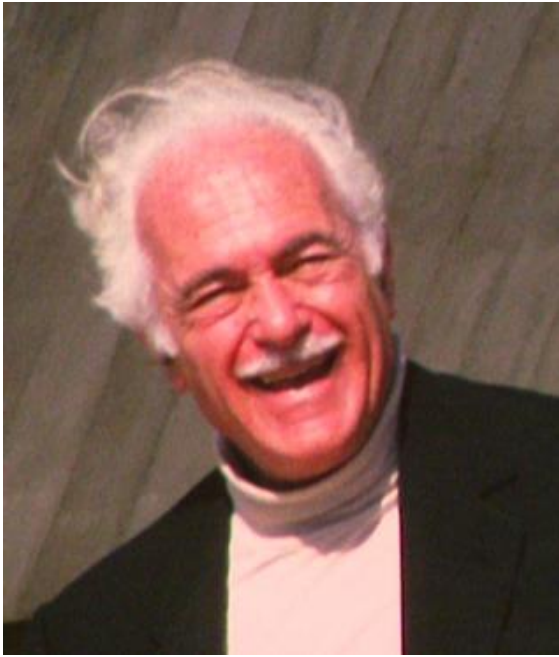
More alarming for all of humanity is climate change, wrotten oceans, and the death of millions of species. Here some government change will not help. **We are in need of a new philosophy!**

That's at the core of „Come On!“



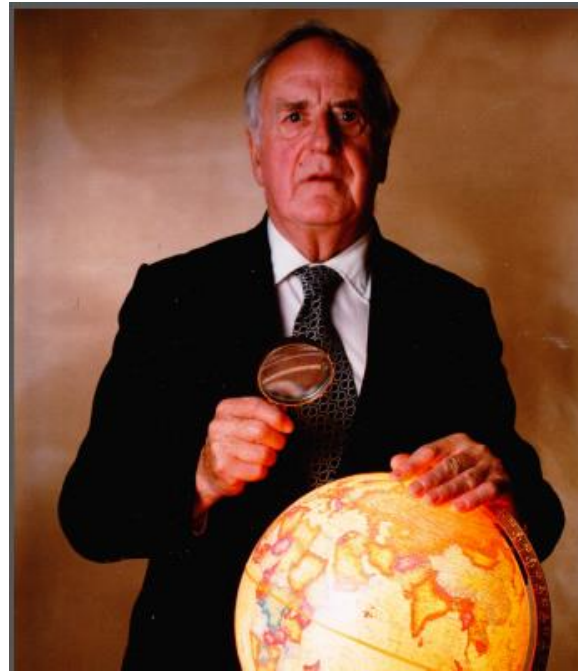


**But let me first offer a glimpse  
at the history of the Club of Rome**



**Aurelio Peccei 1908 – 1984**

Source: lastcallthefilm.com



**Alexander King 1909-2007**

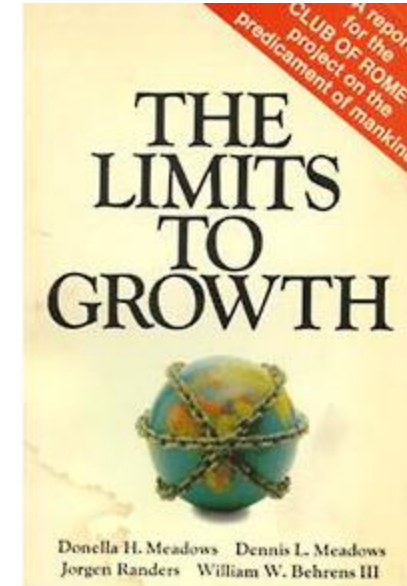
courtesy Catherine Peckham (daughter)

**Founders were Aurelio Peccei and Alexander King.**

**The fame of the Club came with  
*The Limits to Growth.***

# The team writing *The Limits to Growth*.

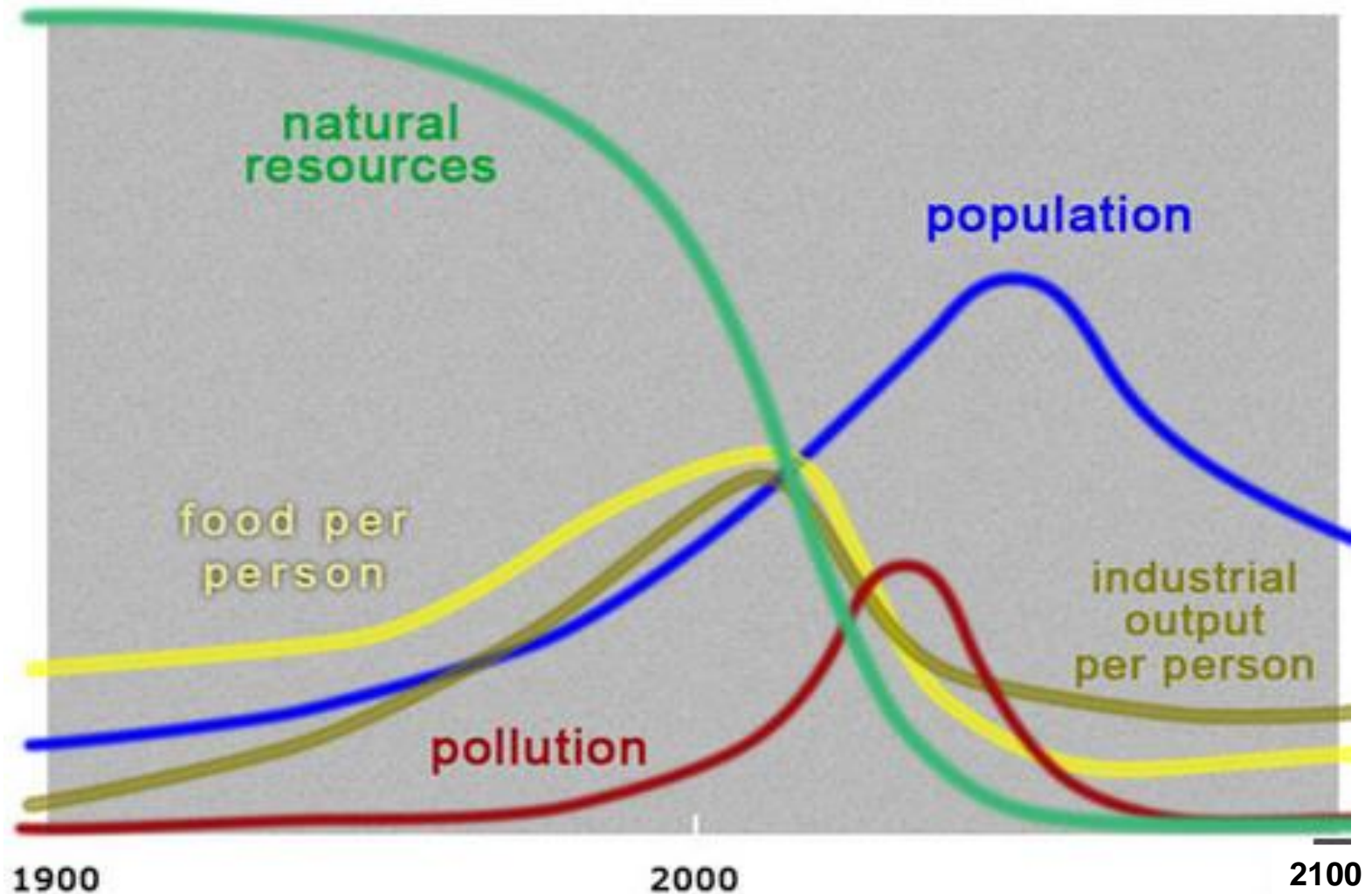
The book became a mega bestseller (ca 30 million copies sold)



**Jørgen Randers, Jay W. Forrester, Donella Meadows, Dennis Meadows, William Behrens**

Source: [raunerlibrary.blogspot.com](http://raunerlibrary.blogspot.com)

**Limits to Growth (1972): collapse of natural resources**  
(geologically a mistake, but the general *limits* message is correct).





## But some people *hated* Limits to Growth.



[www.reagan.utexas.edu](http://www.reagan.utexas.edu)

Ronald Reagan said : "**There are no such things as limits to growth**", and got very popular with such statements. (1983)

Thatcher about Reagan: "**Others saw only limits to growth. He transformed a stagnant economy into an engine of opportunity.**" (2004, obituary comments)

**Some twenty good reports followed,  
including**

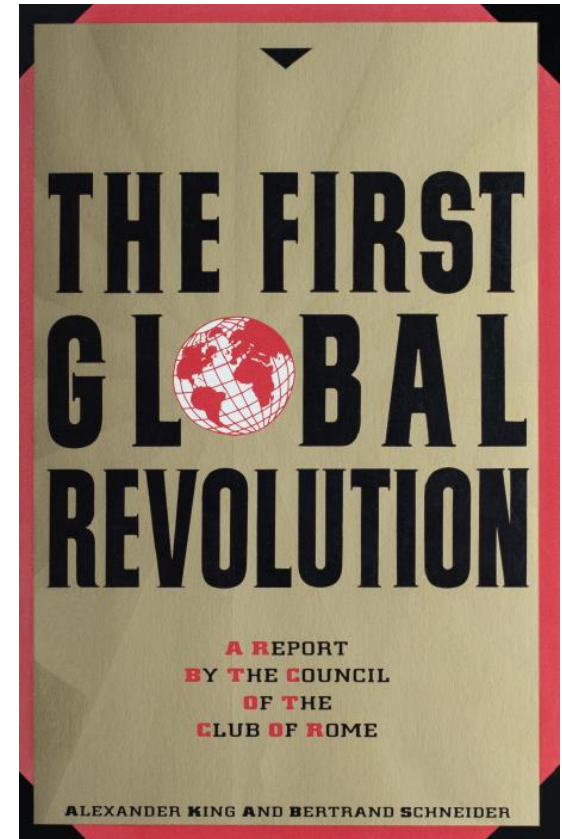
*Mankind at the Turning Point,  
Reshaping the International Order,  
Beyond the Age of Waste,  
Microelectronics and Society,  
and The Barefoot Revolution,*

**But none of them enjoyed anything  
like the spectacular sales number as  
The Limits to Growth.**

Some twenty good reports followed, including **Mankind at the Turning Point, Reshaping the International Order, Beyond the Age of Waste, Microelectronics and Society, and The Barefoot Revolution,**

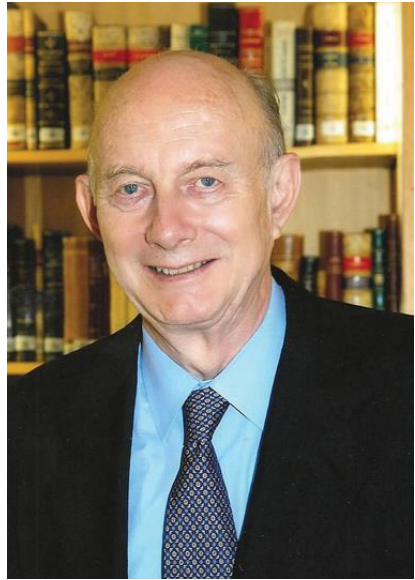
But none of them enjoyed anything like the spectacular sales number as **The Limits to Growth.**

Only one made comparable headlines, in 1991, after the end of the Cold War.



A report **by** the Council of the Club of Rome!

# Leaders after Aurelio Peccei and Alex King



**Ricardo Díez Hochleitner**  
President 1990-2000



**H.R.H. Prince El Hassan  
Bin Talal, President**  
2000 - 2006

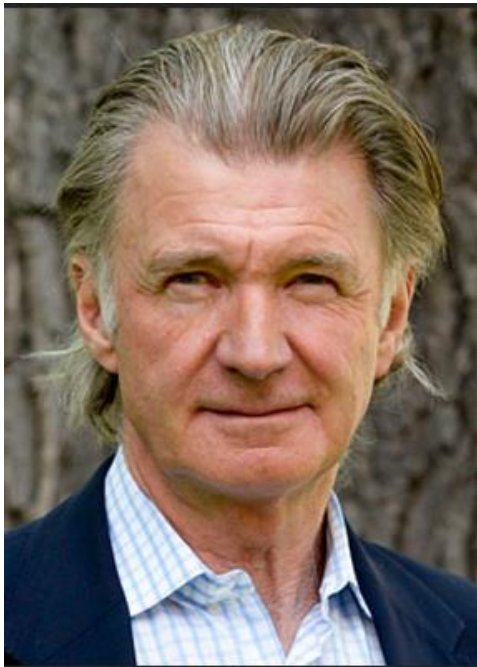


**Dr. Ashok Khosla and Eberhard von Koerber**  
Co-Presidents 2008 - 2012





# Since 2012 I am sharing the Presidency with Dr. Anders Wijkman



**Anders Wijkman  
Former MEP!**



**... and since 2014 we have Graeme Maxton  
as Secretary General**

# We strategically rejuvenated the Club.



**Dr. Michael Dorsey**  
**USA**



**Dr. Maja Goepel**  
**Germany**



**Dr. Charlie Hargroves**  
**Australia**



**Dame Ellen MacArthur**  
**UK**

**Some of the new members**

**We also added prominent members,  
among them.**



**Dr. Mathis Wackernagel**  
Ecological Footprints

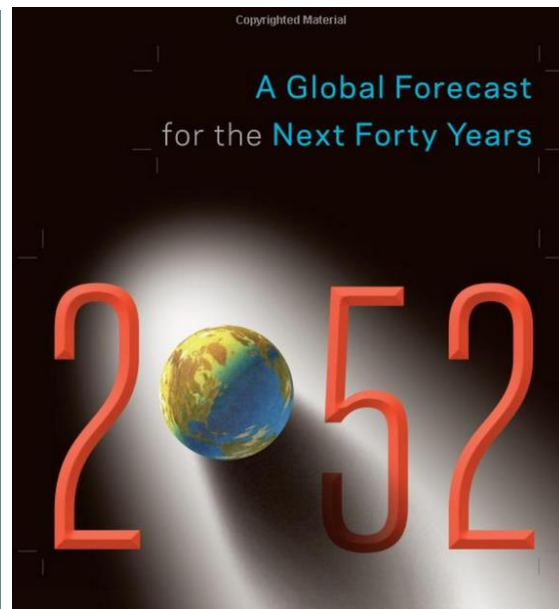
**Prof. Joseph Stiglitz**  
Nobel Prize

**Prof. Yoshitsugu Hayashi**  
Guru of mobility science

**Alfred Ritter**  
,Chocolate King‘

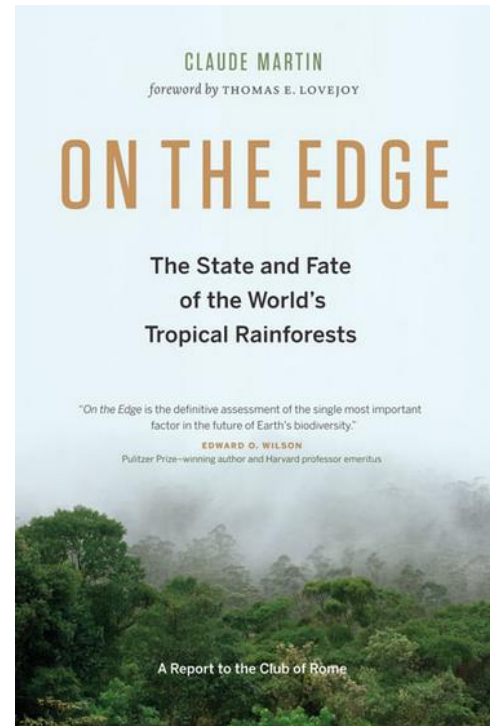
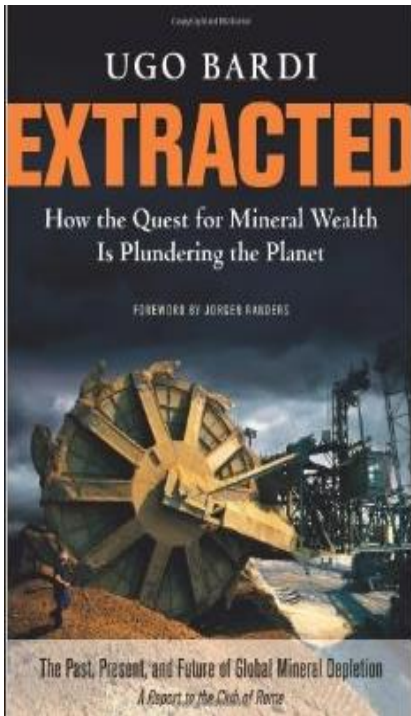
**(„We“, that is the Executive Committee, including Joan Rosas Xicota!)**

And we received more good reports, including  
**2052** by Jørgen Randers, in 2012.





# Other new Reports included:



2014

Ugo Bardi



2014

David Korten



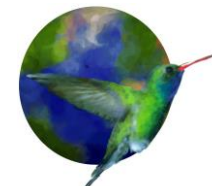
2015

Claude Martin





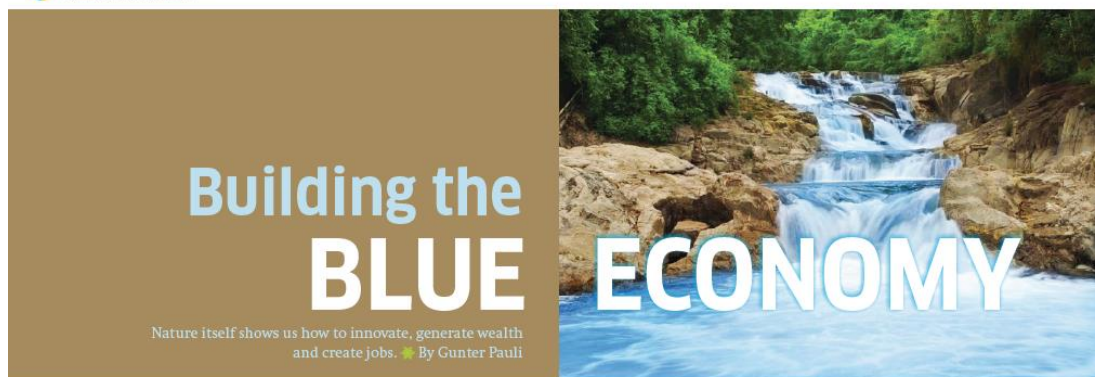
# The most successful report after *Limits to Growth*



The Blue Economy

## Building the Blue Economy

10 years, 100 innovations, 100 million jobs



Gunter Pauli

## Blue economy examples

- attracted ca \$4 billion
- creating 3 million jobs.

**So much for the history. Let us now return to „Come On!“ The title has two different meanings.**

**C‘mon, don‘t try to fool me! And Come on! Join me on an exciting adventure!**

**The book has three parts:**

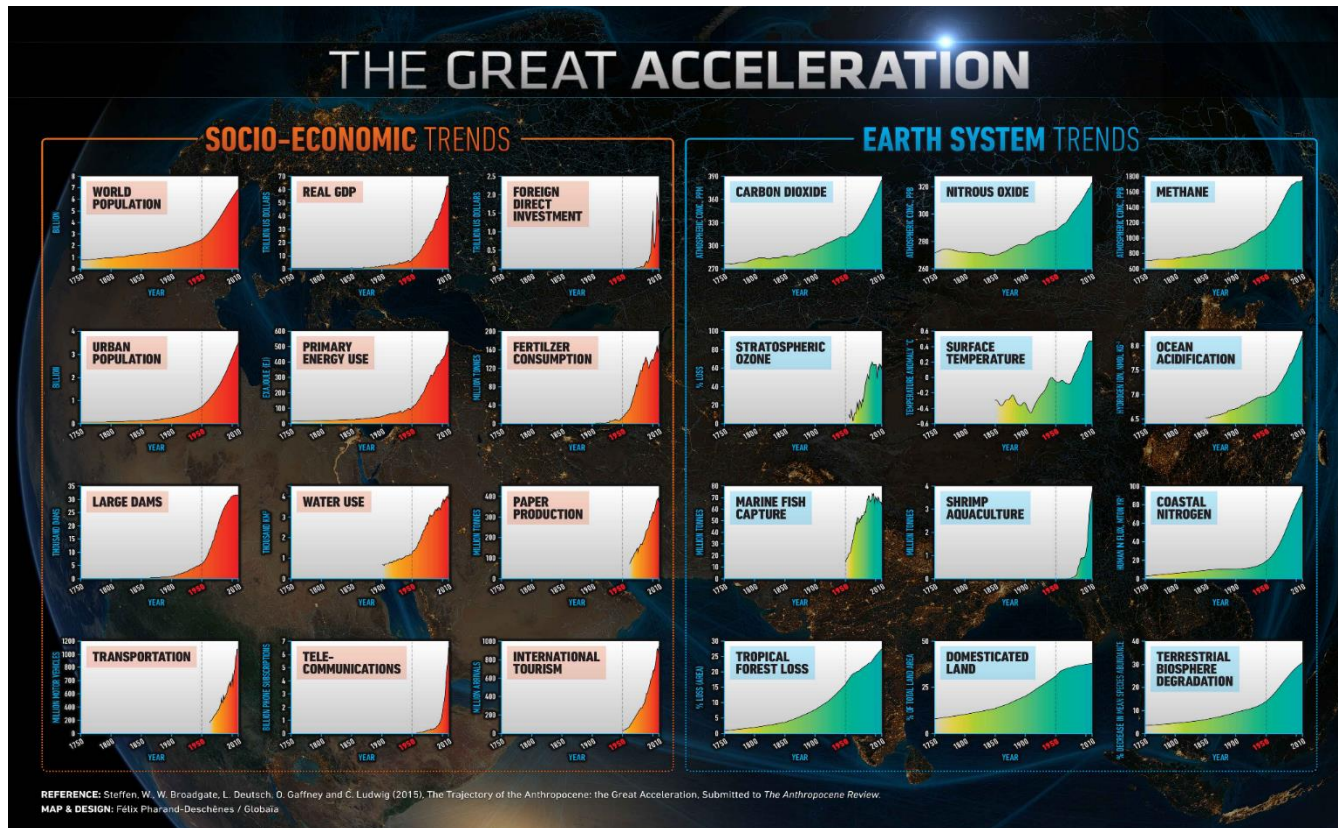
**Part One: C'mon Don't tell me the current trends are sustainable!**

**Part Two: C'mon! Don't stick to outdated philosophies!**

**Part Three: Come On! Join us on an exciting journey towards a sustainable world!**



# Part One is kind of an update of *Limits*. It addresses the **Anthropocene**. 50 years of explosive acceleration.



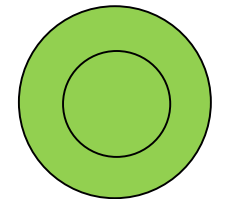
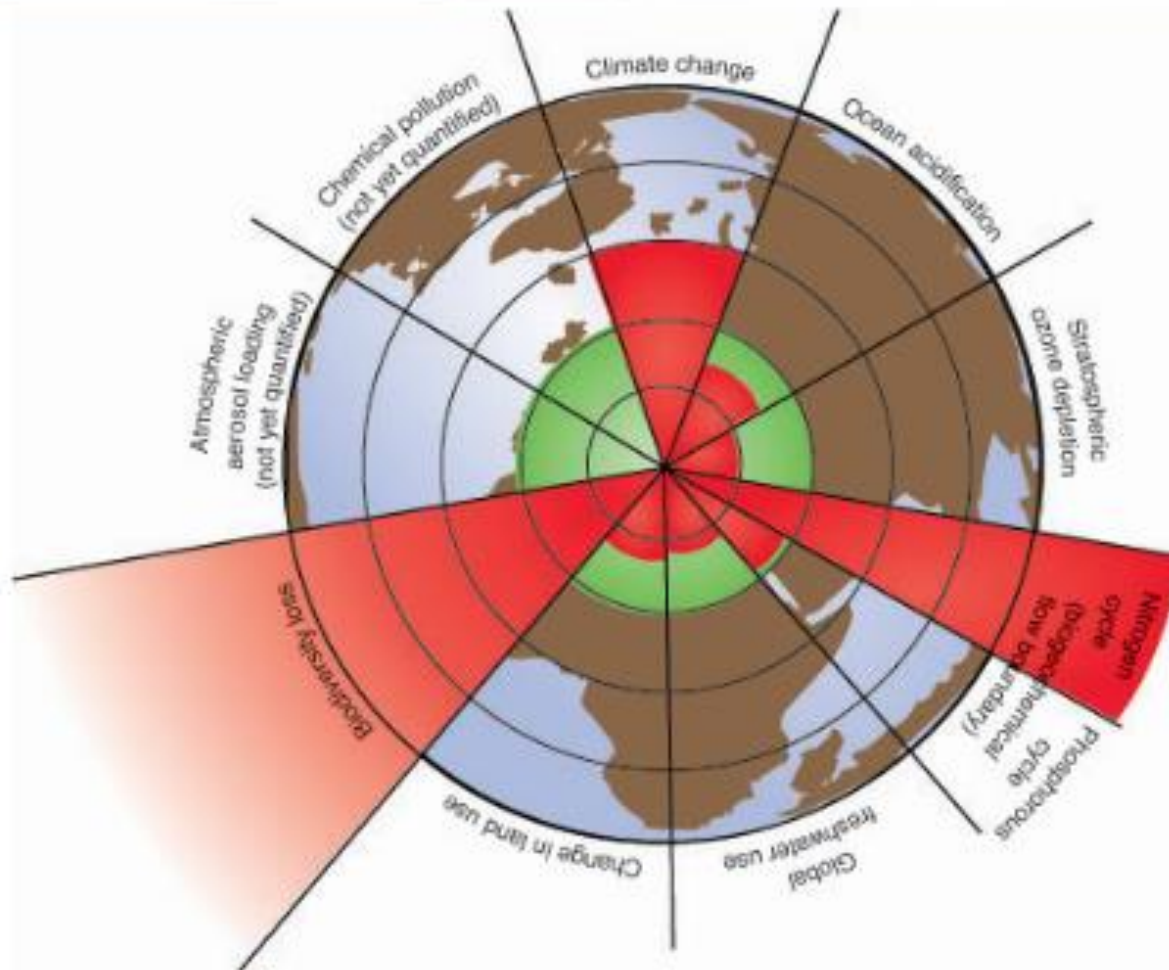
Source: Globaia 2011. Picture after Will Steffens, Paul. J. Crutzen, John R. McNeill. 2007. The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature? *Ambio* 36

**Part One: One paradigm for the anthropocene are the  
body weights of land-living vertebrates:  
30% humans, 66% domesticated animals, - leaving a mere 3% for wild animals!**





# Part One also refers to the Planetary Boundaries (J. Rockström)



„Safe  
operating  
space“

# Part One has a big chapter on the 17 Sustainable Development Goals.

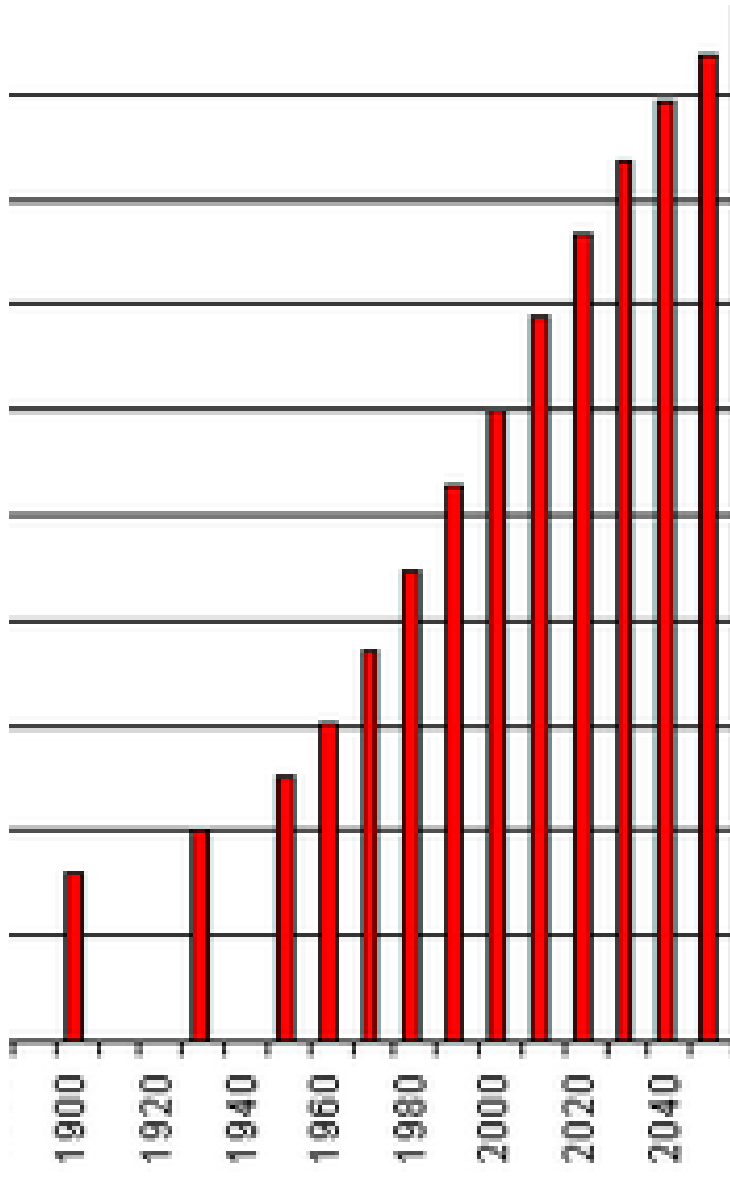


## **Part One**

**But if 8 or 9 billion people enjoy**

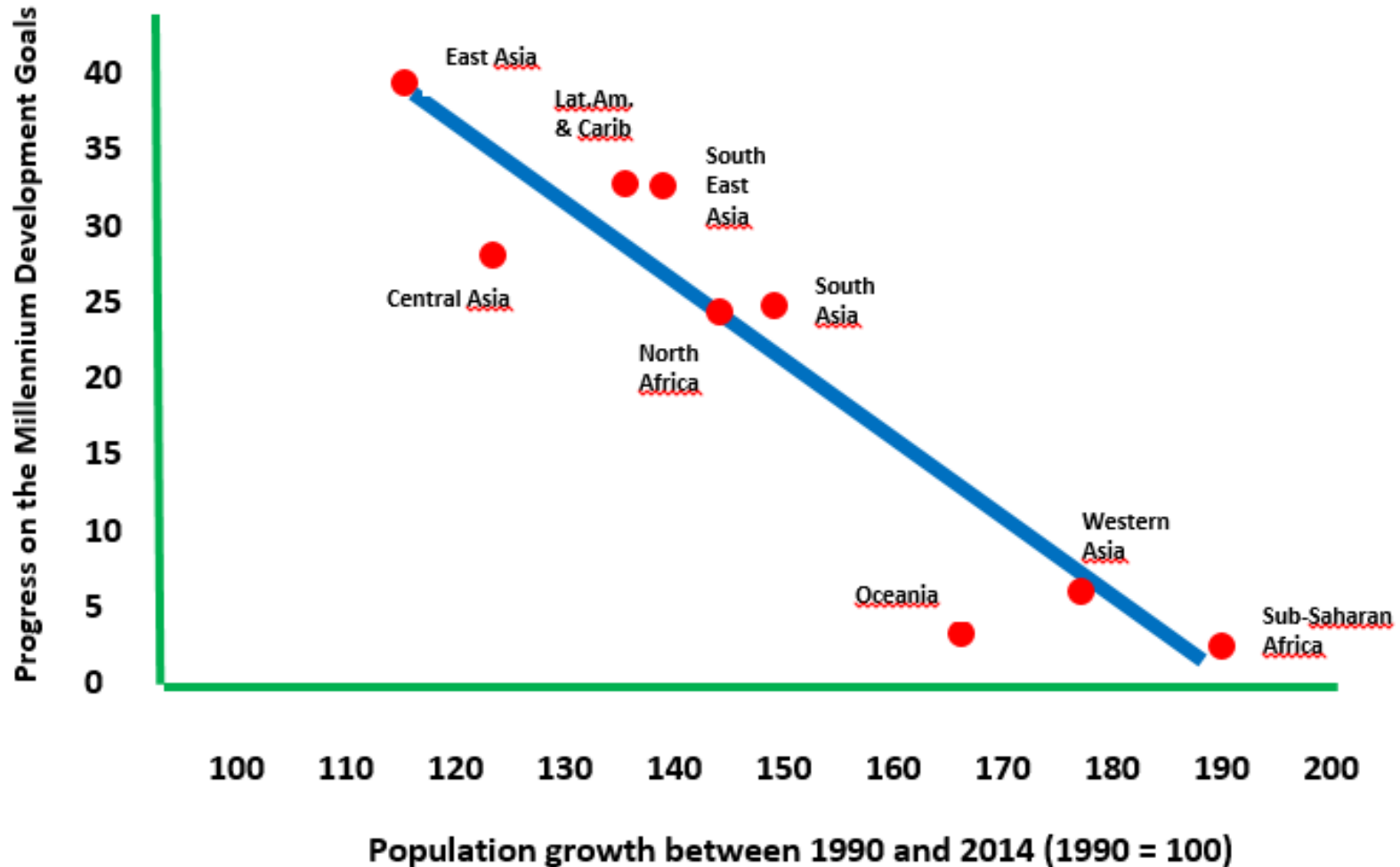
- the end of poverty,**
- the end of hunger,**
- the end of unemployment etc.,**

**the conditions for climate, biodiversity,  
oceans would be positively disastrous!**



**Part One:**  
**Population growth**  
**has to return to the**  
**international**  
**agenda!**

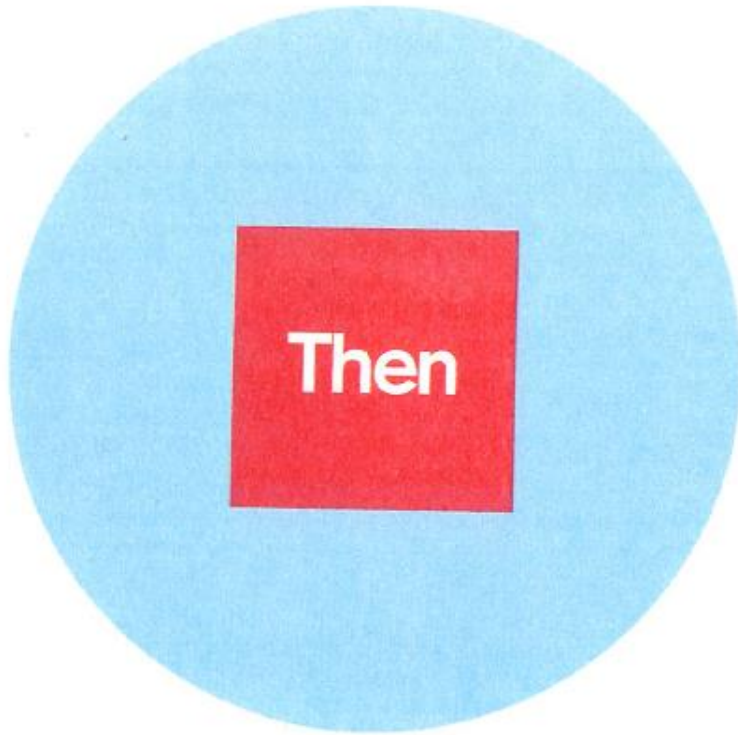
# Strong economic reasons speak for stable population



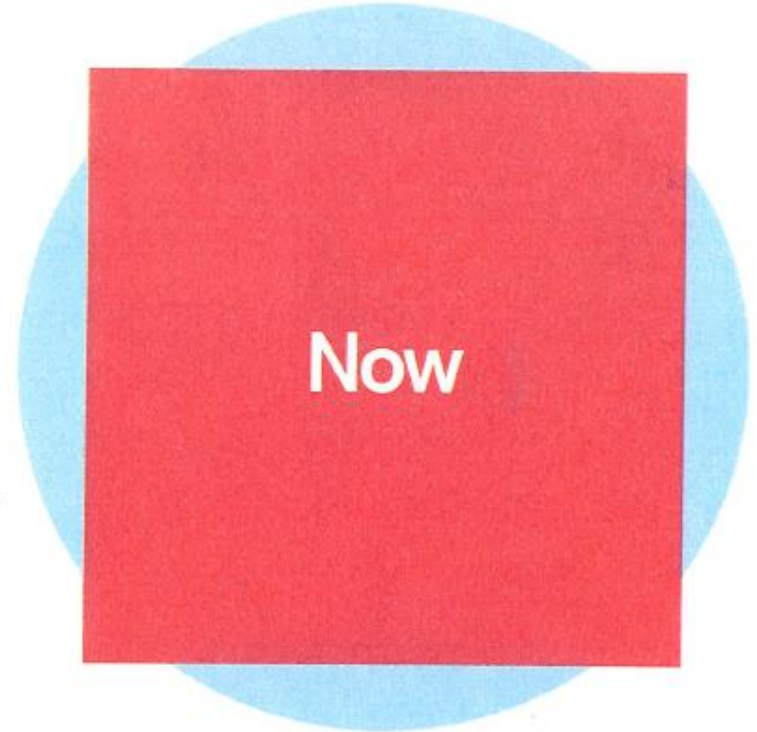
Nach Michael Herrmann, Reiner Klingholz. 2015. Consequential omissions. How demography shapes development – Lessons from the MDGs for the SDGs. Abb. 11

**Part One: Growth economics was ok for the *Empty World*.  
But it can be wrong for the *Full World*. (Herman Daly)**

**Empty World**



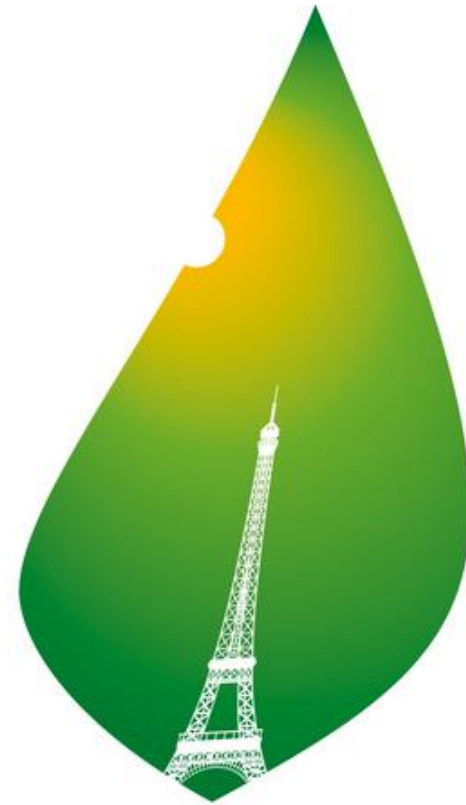
**Full World**





**Of course, we are proud and happy having the Paris Climate Agreement. But how do countries respond to it? Their first reaction worldwide is: well, we have to do something on climate. But it's going to be very expensive. So we need a lot more growth!**

**Is that the right answer??**

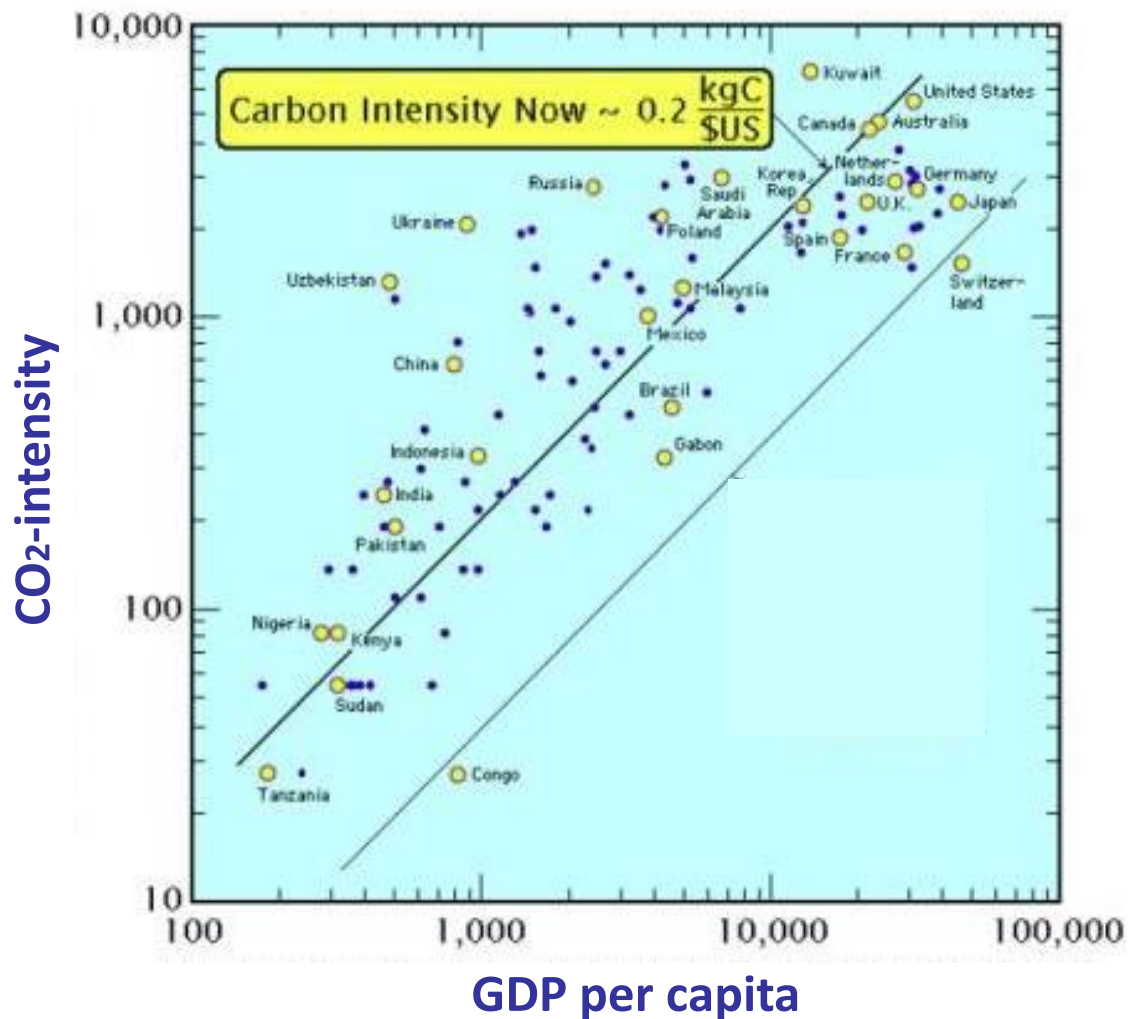


COP21 • CMP11

**PARIS 2015**

UN CLIMATE CHANGE CONFERENCE

# Under current conditions GDP runs solidly with CO<sub>2</sub>-emissions.



**Part Two** The response to the climate challenge is just one example of the „wrong philosophy“:

Asking the right questions but invariably giving wrong and even counterproductive answers!

## **Part Two : Pope Francis addresses the „Philosophical Crisis‘**



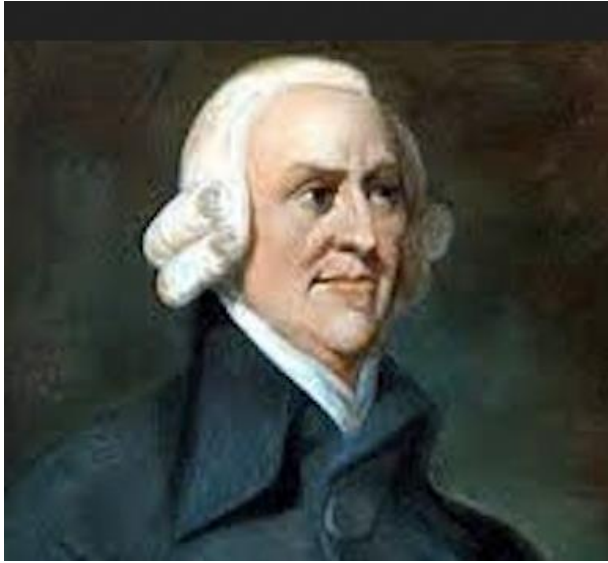
**The 2015 Encyclical Letter invites all into a dialogue to save the Common House. The Club of Rome accepts the invitation.**

**Part Two** Rethinking economics  
includes *re-reading* some of the heroes  
of economics:

- **Adam Smith**
- **David Ricardo**
- **Charles Darwin.**

**They were all living in the Empty World.**

## Part Two



Picture: [Blogs.telegraph.co.uk](https://blogs.telegraph.co.uk)

**For Adam Smith it was clear that the geographical reach of the markets (,invisible hand‘) was identical with the reach of the law and of morale!**

## Part Two

**For David Ricardo,**  
capital was not moving  
across borders, but  
goods and traders were  
moving, - using the „com-  
parative advantages“.



picture: david-rick.blogspot.com

**But today, capital is racing around the world in milliseconds and is dominating the material trade. Ricardo would turn in his grave if he was seeing it!**

## Part Two



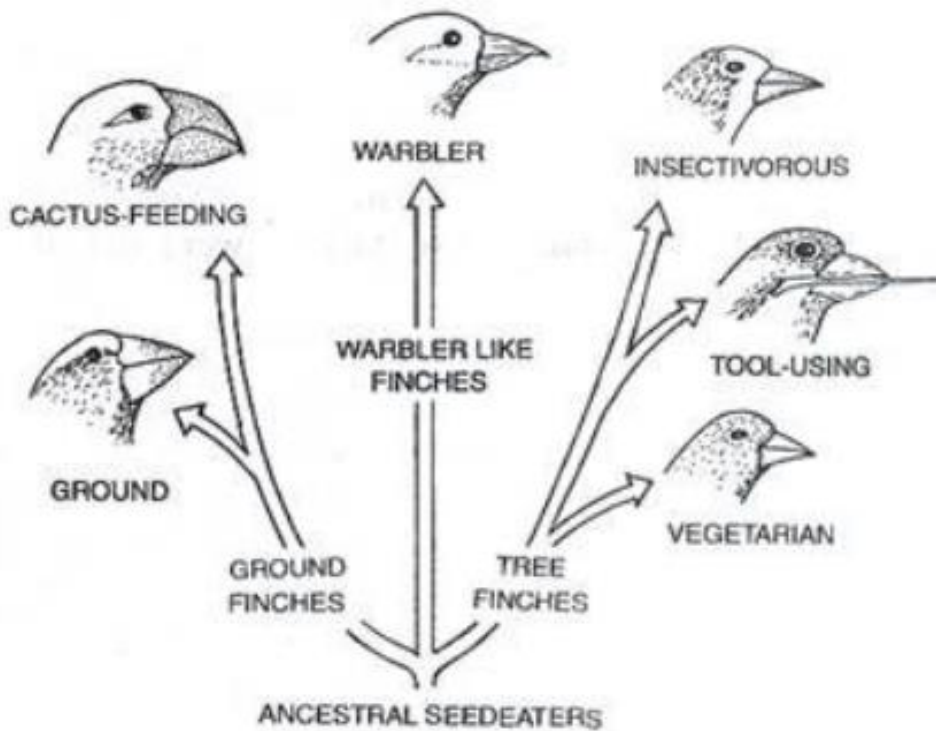
Picture: [falmouthartgallery.com](http://falmouthartgallery.com)

For **Charles Darwin**,  
competition was mostly  
a local affair.

Geographical borders  
he saw as *helpful for*  
*evolution.*

Magnificently con-  
firmed on Galápagos.

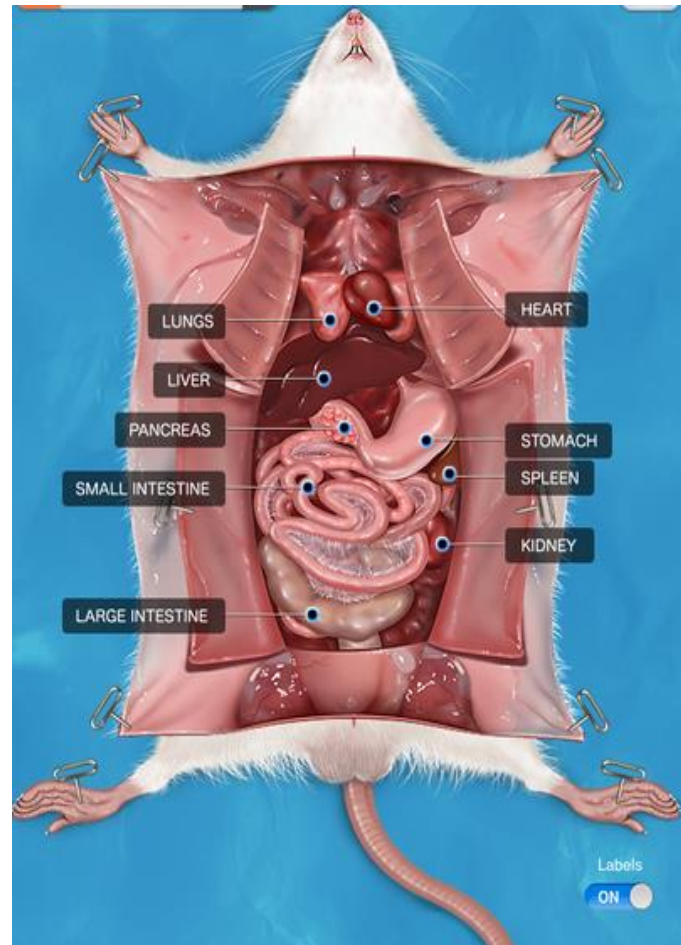




Variety of beaks of finches that Darwin found in Galapagos islands.

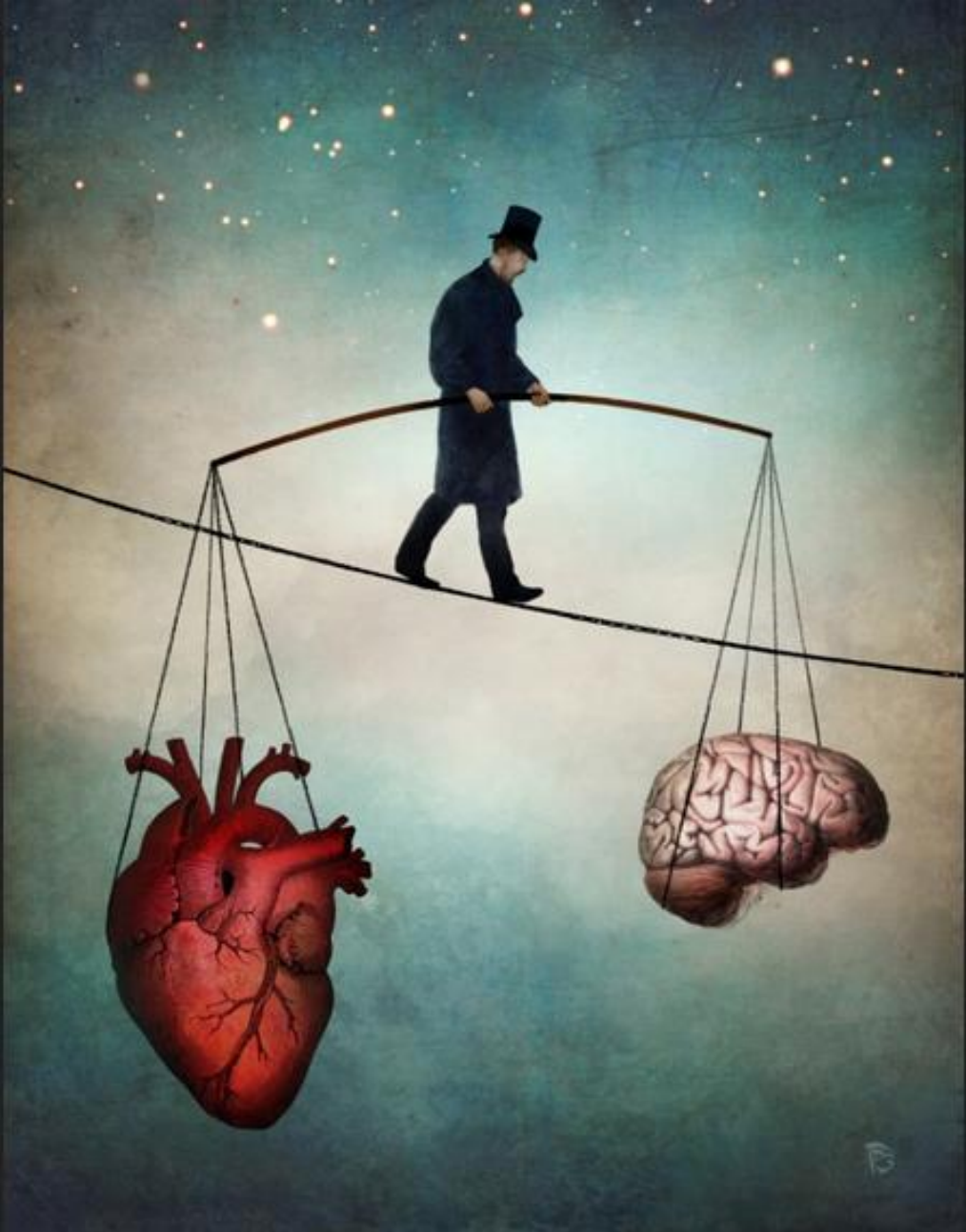
**Darwin finches were able to evolve *in the absence of competition* from birds from the South American continent. Economists always want to maximise competition.**

**Part Two: Reductionist philosophy is good at dissecting but cannot say much about life, the future, and complex systems**



**Part Two** Responding to the „Philosophical crisis“, we suggest to engage in a new Enlightenment:

## **Enlightenment 2.0**



## **Part Two**

# **Balance**

**is at the core  
of the**

**New Enlightenment!**

# Part Two

## Balance where?

e.g. between

- humans and nature
- heart and brain
- short term and long term,
- public and private, (state and markets)
- religion and state,
- speed and stability, (beware of „disruption“!)
- feminine and masculine,
- equity and rewards for achievement.

Asian thinking may actually be closer to balance than „Western“ thinking (including Islam).

everything is YANG

POSITIVE  
MALE  
DAY  
ACTIVE  
SUN  
LOGICAL  
HOT  
HARD

YANG is everything

everything is YIN

NEGATIVE  
FEMALE  
NIGHT  
PASSIVE  
MOON  
INTUITIVE  
COLD  
SOFT

陽

陰

EyeSeeYou

**Let us optimistically assume that we are on the right track postulating a new Enlightenment.**

**But can we wait until 7.5 billion people have gone through the troubles of a new enlightenment.**

**By that time the Planet Earth will be irreversibly wrotten.**

**We have to act now. That is **Part Three.****

**Part Three** of the book is pragmatic, political, and optimistic.

- **Energy decentralization**
- **Circular economy creating jobs**
- **„Blue Economy“**
- **Engaging civil society**
- **Financial reform curbing speculation, tax havens („Panama“) etc.**

**(5 out of 20 items)**



**Part Three** Let us start with Ashok Khosla's „Development Alternatives“.



**Over some 30 years, they created some three million sustainable jobs in rural India. Creating livelihoods even for the „untouchable“ cast.**



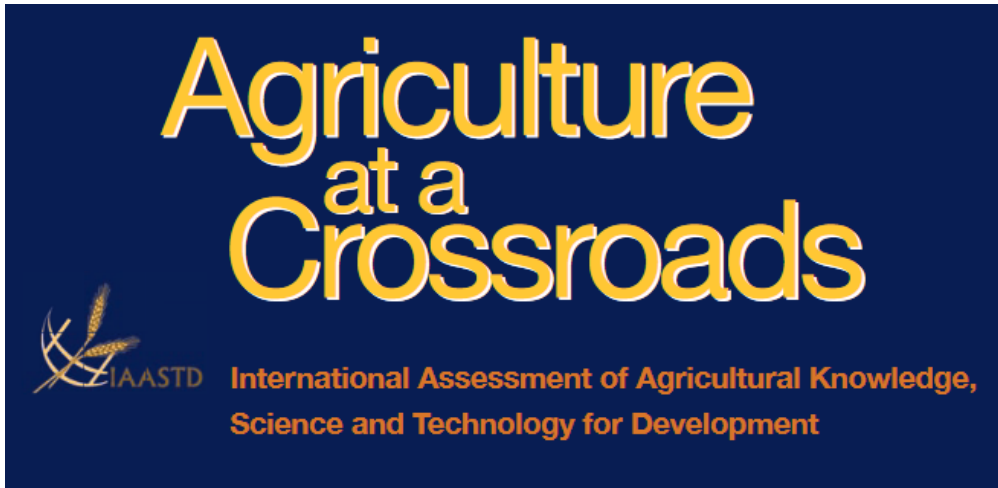
## Part Three Gunter Pauli's Blue Economy: Cascades of energy and matter, and circular economy



**Mushrooms growing on coffee biomass**



# Part Three Sustainable agriculture



**Hans Herren**



**Judy Wakhungu**

## **Part Three** Decentralized energy



**The German feed-in tariffs law boosted wind, solar, hydro, biomass, - but caused headaches to the centralized utilities.**



**70+ countries including Spain more or less copied the law.**





**Part Three: A fivefold increase of energy and resource productivity is technically available.**

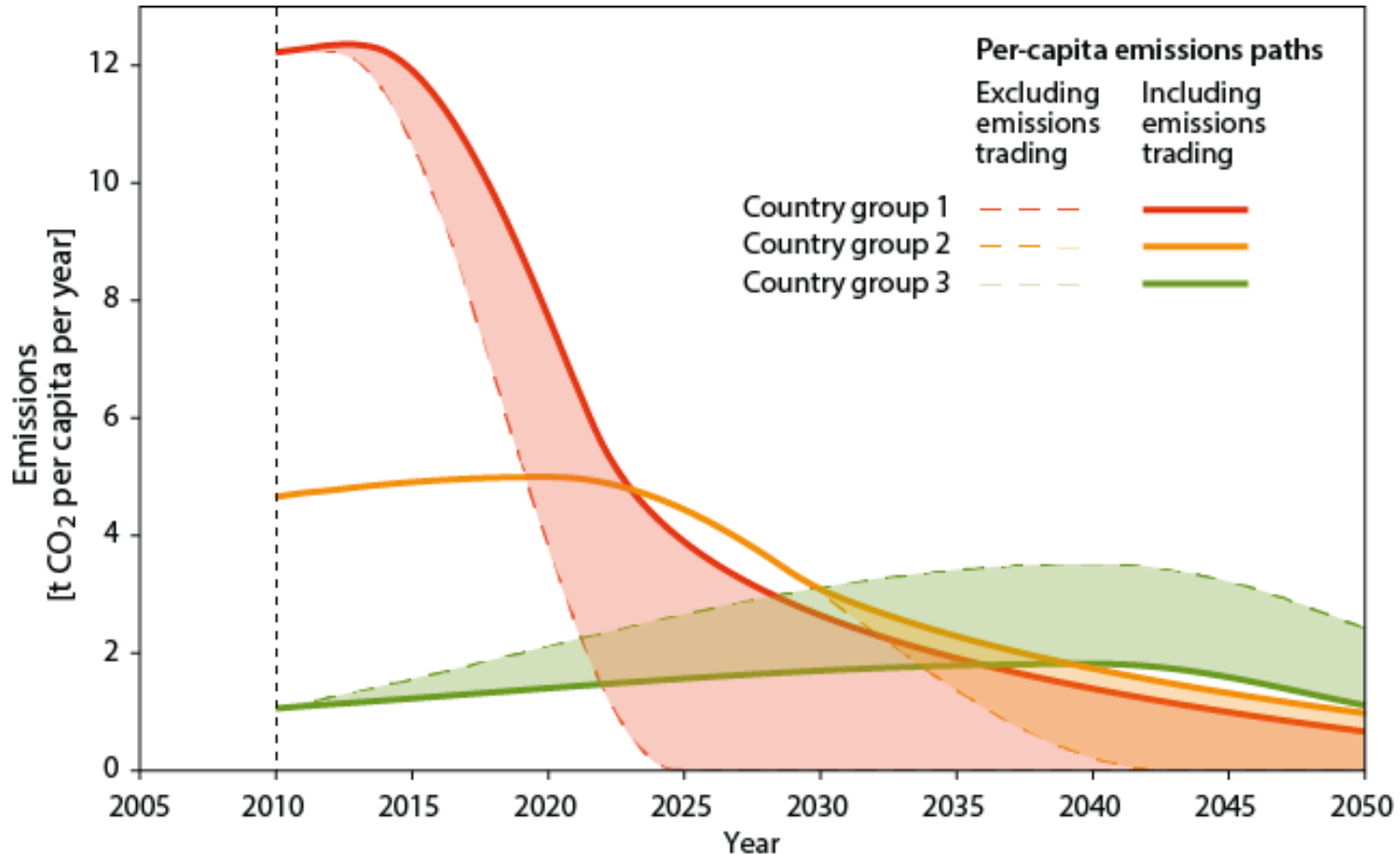
# What could politics do?

Some preliminary suggestions.

1. **Climate: the budget approach.**
2. **New progress (Factor Five etc.):**
3. **A „ping-pong“ between energy efficiency gains and energy prices.**
4. **Tobin tax.**
5. **Remove labour taxes, introduce „Bit Tax“.**



**The „Budget Approach“. The old industrialized countries (red line) have almost exhausted their carbon budget and will have to go shopping to developing countries (green line) for new permits.**

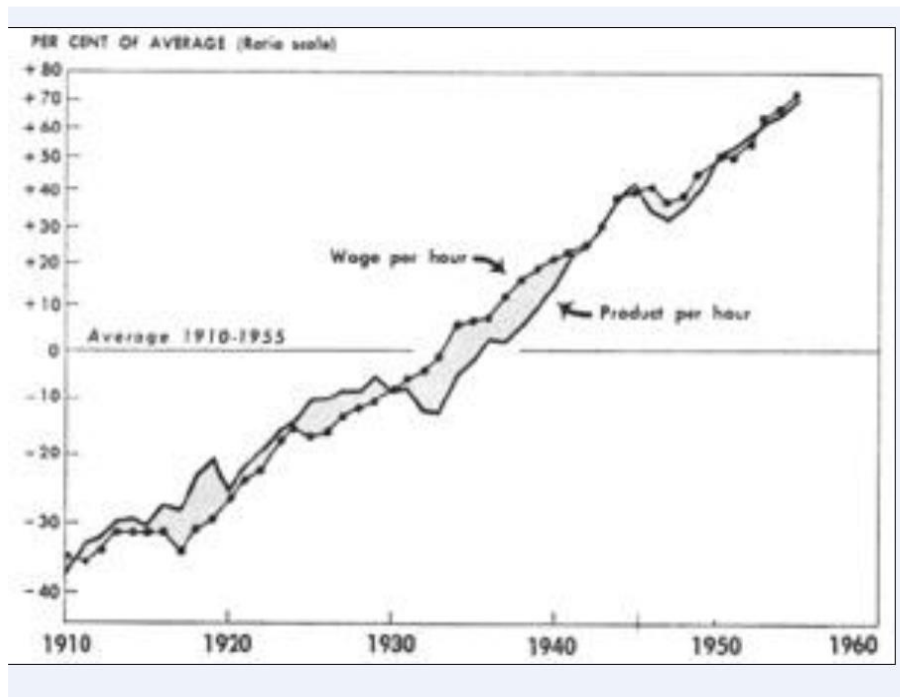


Let me briefly explain what I mean by „ping-pong“:  
Make energy and resource prices rise *slowly*,  
in proportion to the documented average  
efficiency increases .

... meaning a ping-  
pong, similar to the  
one we had in the  
Industrial Revolution



# Labour productivity rose roughly twentyfold in 150 years, - and so did wages!



Example from the USA from 1910 – 1960 showing how wages followed labour productivity

**The new „resource ping-pong“ could cause a steady increase, perhaps five-fold, of average resource productivity, in 40 years. Perhaps tenfold in a hundred years.**

**That would essentially terminate the conflicts between economy and ecology.**

## **Two corrections:**

- 1. Life-line tariffs for the poor;**
- 2. Revenue neutrality for endangered branches:  
like with the Swedish NO<sub>x</sub> tax of 1992.**

**All in all, Come On is an optimistic book. Club of Rome members are invited to comment on the draft.**

**By October 2017, the book will be published. I hope for a Spanish edition next year**



**Thank you !**