Dominique Méda
Université Paris Dauphine-PSL / Institut Veblen



Growth has accompanied rising "competitiveness" and well-being since the 14th century



Angus Maddison
The World Economy: A Millennial Perspective

- Angus Maddison reconstructed the stages of growth since AD 1, highlighting Europe's remarkable development
- *"Our macroeconomic statistics highlight Western Europe's exceptional long-term economic performance in the context of world development:*
  - *in AD 1000, its income level had fallen below those of Asia and North Africa,*
  - *by the 14th century, after a long recovery, it had caught up with China (the world's leading country),*
  - *by 1820, its income and productivity levels were more than twice those of the rest of the world,*
  - *by 1913, the income level of Western Europe and countries of European settlement was more than six times that of the rest of the world."*

- Explanations: *"The most important foundation was the recognition of the human capacity to transform the forces of nature through rational scientific methods and experimentation. It was from the 17th century onwards that Western elites abandoned superstition, magic and submission to religious authority."*
- This echoes Weber's argument that the dominance of magic was one of the strongest obstacles to the rationalisation of economic life, since it entails a "stereotyped attitude towards technology and the economy".
- Weber cites a dispute in China over the construction of railways and factories, strongly criticised because, in certain places, they might disturb the resting spirits.

5 phases:

The initial phase of capitalist development (1820–70): slow growth, confined to Europe and countries of European settlement. Europe establishes its supremacy.

The acceleration (1870–1913): growth rates rise with the Second Industrial Revolution.

The shock of the two wars (1913–50): growth falls below its potential because of the two world wars and the resulting collapse of international trade, capital markets and migration flows.

The "golden age" (1950–73) is by far the most prosperous period in terms of economic growth.

The slowdown (1973–present): growth rates decline, except in the BRIC countries.

Measuring Growth

In 1932, Simon Kuznets begins estimating US national income. The Senate has asked him to measure its decline between 1929 and 1932, following the financial crash and the Great Depression.

Clark Warburton first uses the term **gross national product** for the sum of consumption and capital formation.

The first national accounts emerge during the Second World War, through the work of James Meade and Richard Stone, two officials in the British War Cabinet who work with Keynes.

Growth = growth in Gross Domestic Product (GDP)

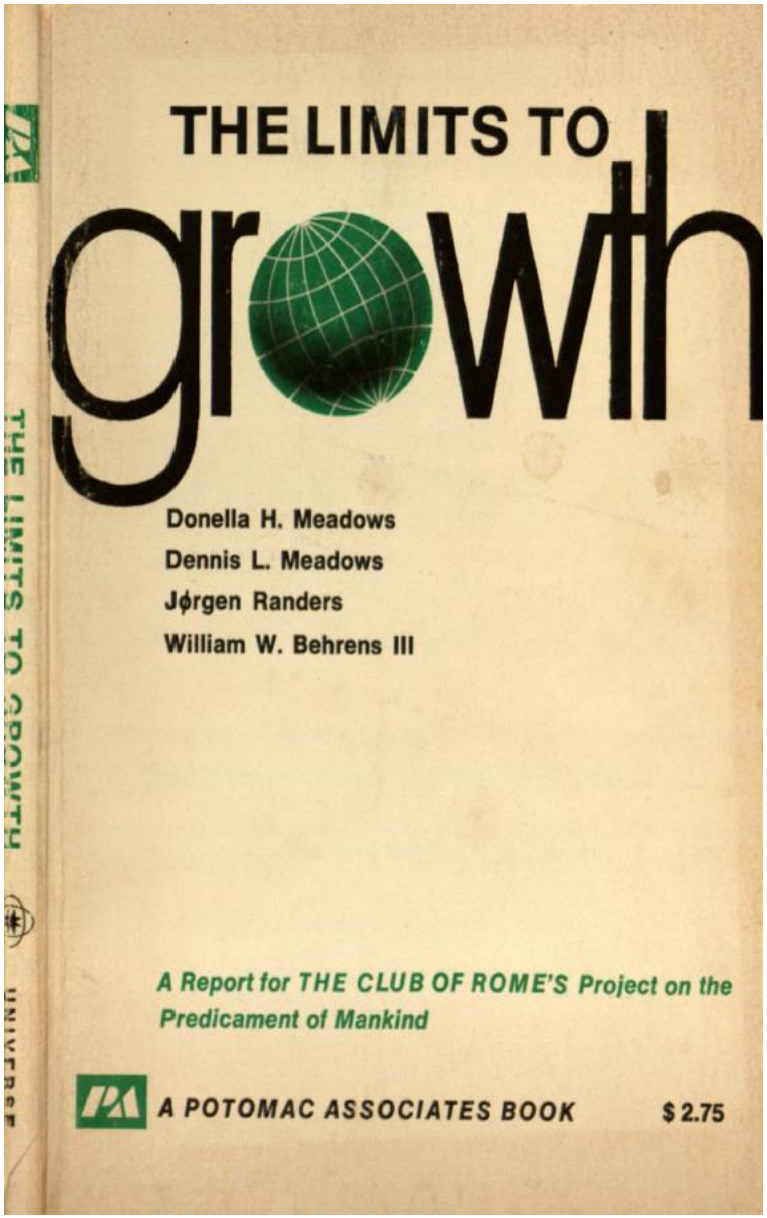
- GDP = the *monetary* value of everything produced in a given year (output minus intermediate consumption) = the sum of "value added"
- GDP = a flow of monetary wealth
- Growth = an increase in GDP *in real terms*

- During the post-war boom (the Trente Glorieuses), Western countries achieve average annual growth of **5%**
- This fuels demand: consumption and investment
- The Keynesian multiplier: public spending supports growth
- Greater comfort, output and well-being
- The growth rate serves as a proxy for well-being

- Kuznets rejects equating growth with well-being. He considers the ultimate purpose of economic activity to be meeting individual consumers' needs, whereas his measure of national income includes too many goods and services that do not directly meet those needs.
- In the 1970s, attempts to adjust GDP to account for positive and negative externalities
- Green GDP… Tobin and Nordhaus

The Limits to Growth, 1972

Perpetual material growth will sooner or later lead to a "collapse" of the world around us. Even with very optimistic assumptions about future technology, our ability to recycle or conserve raw materials, pollution control and natural resource availability, collapse occurs before 2100.



The reception of the Meadows report

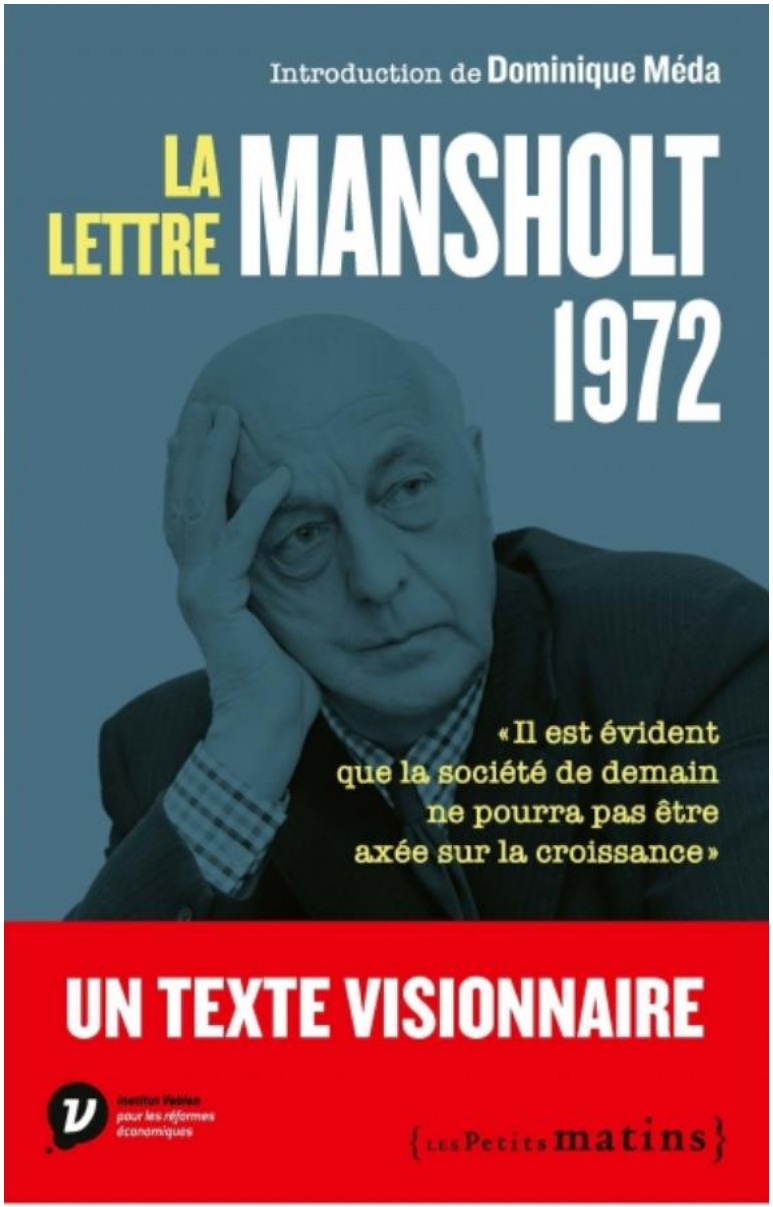
- The publication of *The Limits to Growth* is a major event.
- Time magazine offers its readers a summary.
- Newspapers and television explain its methodology and conclusions and give its authors a platform.

- Sicco Mansholt, a Dutch socialist and Vice-President of the Commission of the European Communities responsible for agriculture since 1958, is deeply shaken by the report's findings, which he reads in advance proofs in late 1971.
- In February 1972, one month before the official publication of the Meadows report, he writes a short letter to the President of the EEC, seeking to persuade him that Europe must radically change course.

The Mansholt Letter 1972

Introduction by Dominique Méda

A visionary text



"It is clear that tomorrow's society cannot be centred on growth."

- Mansholt wants Europe to commit to an ecological change of course
- He openly discusses a closed economy, protectionism, bans, changes to quality criteria, replacing gross domestic product with gross national utility, an economy of scarcity and, of course… zero growth.
- He seriously doubts that technological progress can save us.

- Questioning economic growth stirs up strong emotions and reactions
- The entire political establishment and the press criticise him for calling into question economic growth, prosperity and the standard of living of Westerners.
- Marchais denounces the policy which, in his view, the European Community is preparing – a policy directed against workers, the improvement of their standard of living and their well-being.
- He uses the Letter to call for a 'no' vote in the referendum on the accession of four new countries to the European Community

- But the fiercest attacks come from economists, particularly William Nordhaus, the future recipient of the so-called Nobel Prize in Economics in 2018, who thoroughly discredits the report.
- He objects to its failure to account for economic mechanisms. In his view, this reflects a static understanding of relations between humans and nature and makes the depletion of natural resources seem inevitable.
- He develops an alternative model, DICE (Dynamic Integrated Model of Climate and Economy), which completely eclipses the Meadows model.
- Using DICE, he argues that the optimal level of warming is 3°C.

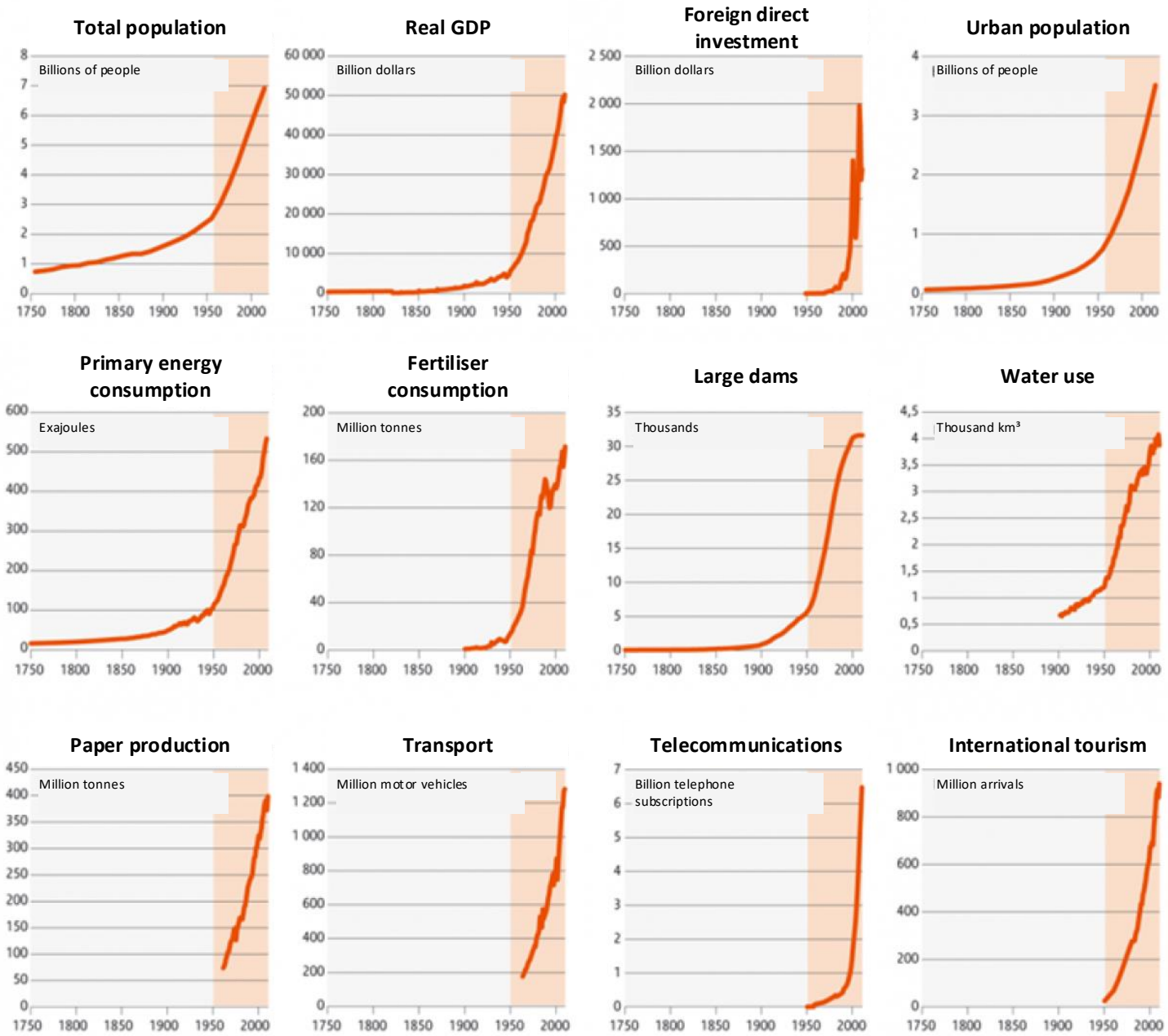
Fourastié: **The Trente Glorieuses**

- The overall efficiency gain arising from these factors is called technical progress (…) **its fundamental cause is progress in the experimental sciences, which continually increases humanity's power over nature**."

- Paul Crutzen coins the term *Anthropocene*, the "Age of Humans", in the late 20th century to describe a new geological epoch that may have begun in the late 18th century with the Industrial Revolution. Crutzen dates its start to 1784, the year of the invention of the steam engine, succeeding the Holocene.

- The most recent period of the Anthropocene, since 1945, is known as the "Great Acceleration". It is characterised by the accelerating rise in CO_2 concentrations and exponential trends in several indicators.

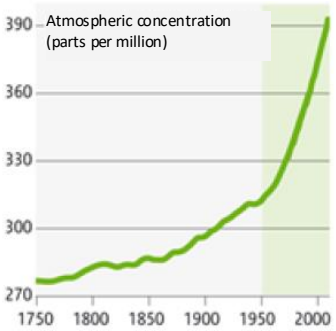
Socio-economic development



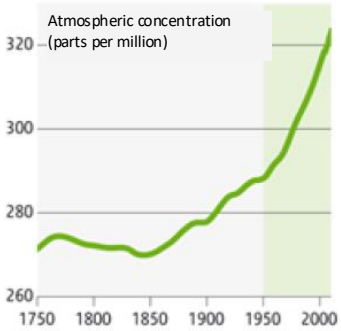
Source: Will Steffen, Wendy Broadgate, Lisa Deutsch, Owen Gaffney and Cornelia Ludwig, "The trajectory of the Anthropocene: The Great Acceleration", The Anthropocene Review, 2015 (data: International Geosphere-Biosphere Programme and Stockholm Resilience Centre).

Earth system trends

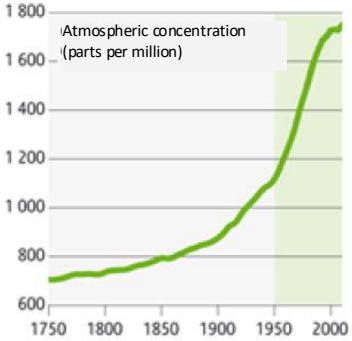
Carbon dioxide



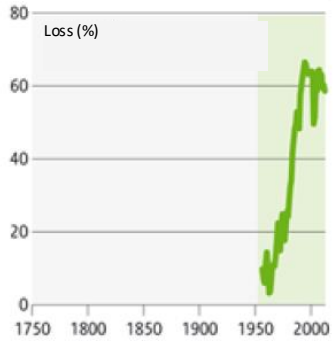
Nitrous oxide



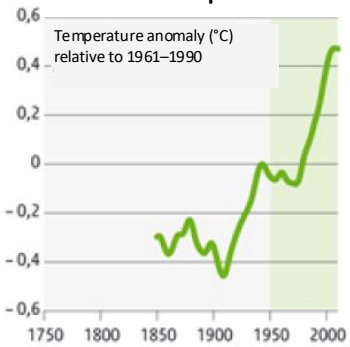
Methane



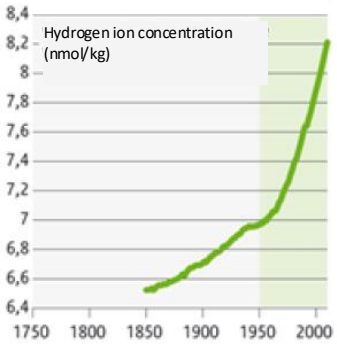
Stratospheric ozone



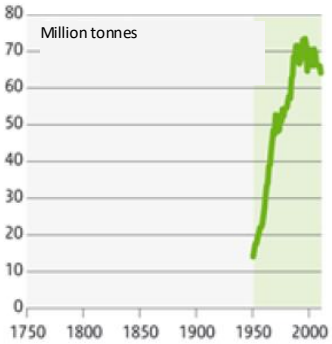
Surface temperature



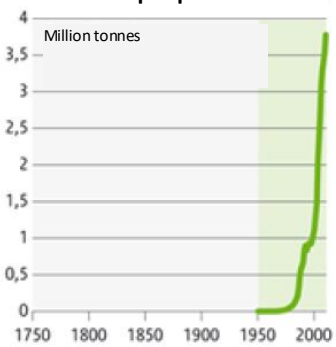
Ocean acidification



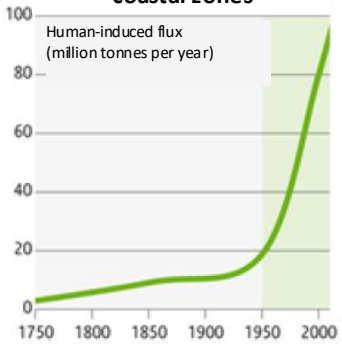
Marine fish catch



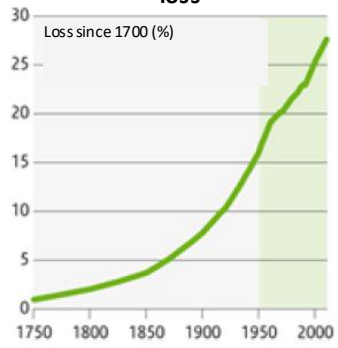
Shrimp aquaculture



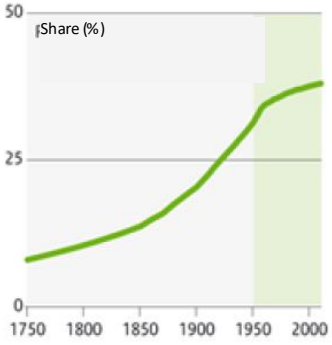
Nitrogen in coastal zones



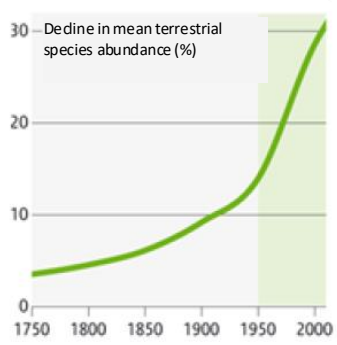
Tropical forest loss



Domesticated land



Biodiversity loss



- A different history of the Trente Glorieuses is beginning to emerge, showing that the benefits of modernisation also came with environmental degradation.
- The Industrial Revolution and the post-war boom brought enormous industrial output, a build-up of greenhouse gases in the atmosphere, vast extraction of fossil fuels and minerals, and ever-increasing quantities of waste.

- Anthropocene, Capitalocene, Plantationocene…
- These terms all suggest that this new era is shaped by human activity and its harmful consequences
- Unlimited growth is being called into question
- The very project of Modernity appears Promethean and reckless

Francis Bacon, *New Atlantis*, 1627

- "The purpose of our Foundation is to know the causes and secret motions of things, and to **extend the bounds of human dominion** so as to accomplish all things possible."
- Nature appears as a realm of boundless manipulation. No limits. Technology can satisfy every desire. Nature is our slave.

- Up until then, Western countries had been **'competitive'** thanks to growth, economies of scale, colonisation and an abundance of energy sources (coal, oil, etc.)
- However, following the IPCC's reports, there has been a growing realisation that fossil fuels lead to CO_2 emissions and are destroying our environment
- => **the need for a new definition of competitiveness**: producing without destroying the environment, without generating excessive waste, without producing CO_2, and without depleting natural resources = **staying within planetary boundaries**
- **= real, sustainable competitiveness**

- A new definition of competitiveness: producing without increasing the carbon footprint, or even reducing it => a regenerative economy
- **Decoupling**: GDP, greenhouse gas emissions and the material footprint
- Is decoupling possible? Is it realistic? A debate
- We are seeing both relative and absolute decoupling in Europe
- But not enough to meet the Paris Agreement targets

- This new definition of competitiveness that we need has not yet been adopted
- Today, competitiveness is equated with price-based competitiveness (producing at the lowest cost) or non-price-based competitiveness (product quality), regardless of the material consequences
- These consequences are not measured or taken into account: we continue to focus solely on turnover, value added and GDP, the key indicator
- Even though this indicator has numerous limitations, which are, moreover, well known

GDP defines wealth as the monetary value of the flow of new goods and services produced each year:

- it counts all flows positively, provided they are monetary
- It assigns zero value to activities essential to sustaining society: volunteering, domestic and family work, political and civic activities, and leisure.
- It is unaffected by inequalities in participation in production or access to consumption
- As a "flow account", it ignores damage to natural or social assets caused by production. It says nothing about the commons: air and water quality, climate, civility…

- In 1998, the Human Development Index (HDI)
- From 1999, Gadrey, Jany-Catrice and Méda propose new indicators of wealth to complement or replace GDP, to better count what counts, particularly natural assets and social health
- In 2007, we establish FAIR, the Forum for Alternative Indicators of Wealth
- In 2007, at his first press conference as President of France, Nicolas Sarkozy proposes an international commission to examine GDP's limitations

Report by the Commission on the Measurement of Economic Performance and Social Progress

Professor Joseph E. STIGLITZ
Chair of the Commission, Columbia University

Professor Amartya SEN
Adviser to the Commission, Harvard University

Professor Jean-Paul FITOUSSI
Coordinator of the Commission, IEP

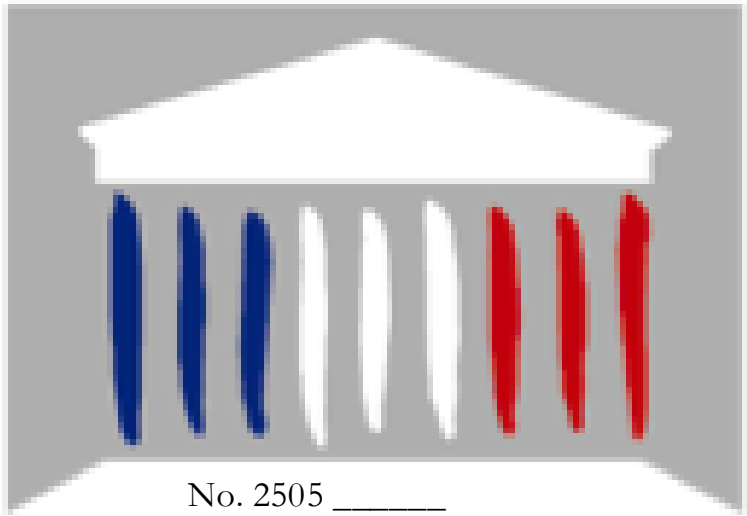
A degree of political recognition in 2015

Bill introduced in the National Assembly in 2014

Presented by MP Eva Sas

Rejected

Reintroduced in 2015: the law on new indicators of wealth is adopted unanimously by both houses.



No. 2505 _____

NATIONAL ASSEMBLY

CONSTITUTION OF 4 OCTOBER 1958

FOURTEENTH LEGISLATURE

Registered with the Presidency of the National Assembly on 21 January 2015.

REPORT

SUBMITTED

ON BEHALF OF THE FINANCE, GENERAL ECONOMY AND BUDGETARY CONTROL COMMITTEE ON THE BILL to take new indicators of wealth into account in the formulation of public policy (No. 2285)

BY Ms Eva SAS

Member of Parliament

- But there is considerable resistance
- Similarly, resistance to the implementation of the ecological transition
- As with Marchais or Nordhaus, a mixture of climate scepticism and fear of change
- Fear of losing income, livelihoods, comforts and jobs
- Punitive environmentalism
- Heritage Foundation, Project 2025, hatred of environmentalism, non-negotiable standard of living
- Belief in technology

- Environmental protection is challenged, particularly in the name of competitiveness
- Europe is said to force domestic producers to raise product costs through environmental standards
- Examples include farmers and car manufacturers
- French, Italian and German business organisations have done everything possible to delay the ban on sales of new combustion-engine vehicles
- On the grounds that it would increase their costs

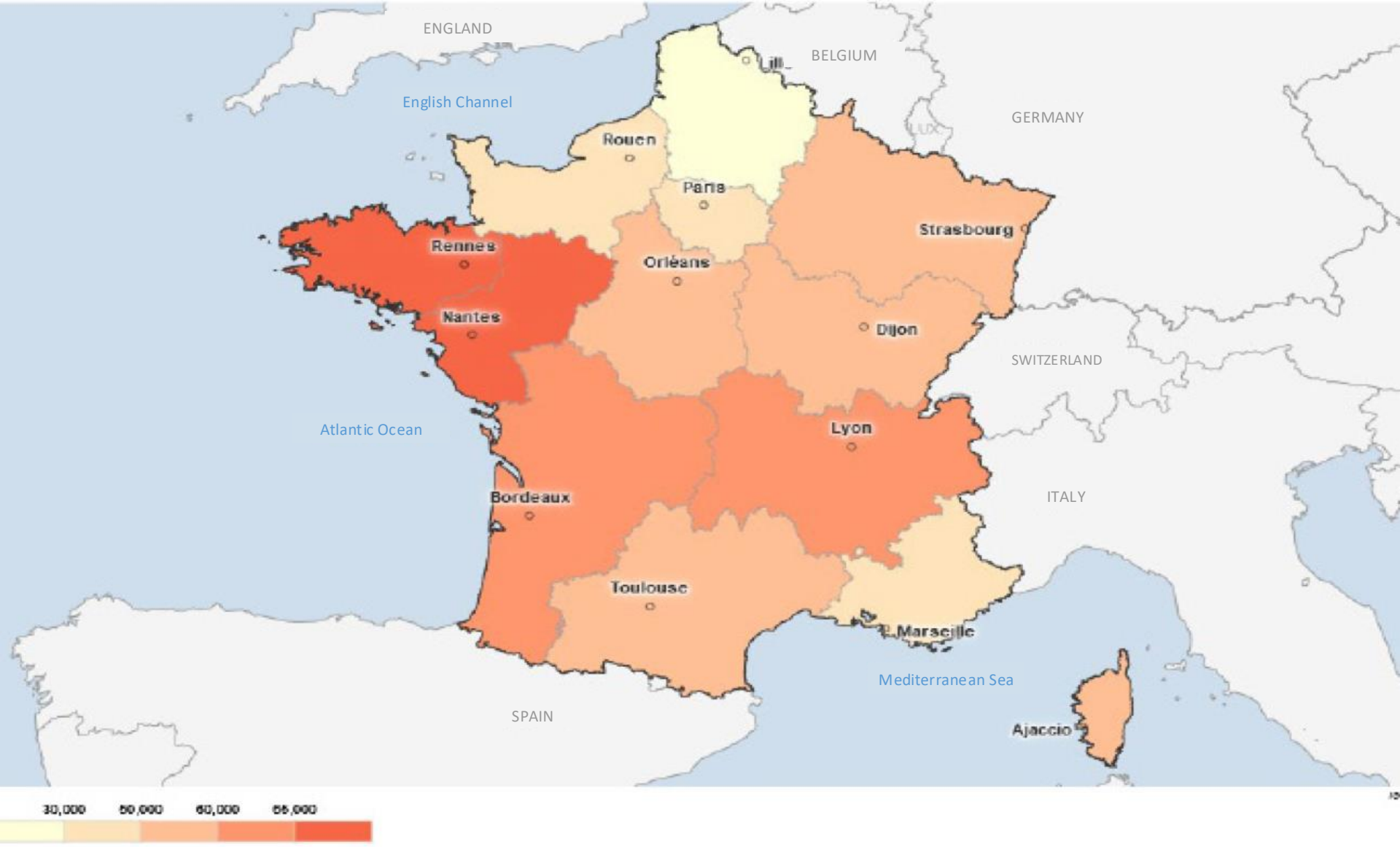
- This reasoning is now backfiring
- They failed to anticipate the change
- They failed to build small, lightweight, affordable cars in Europe
- Meanwhile, Chinese manufacturers were mass-producing cheap, small electric cars and flooding the market with them
- They are now the competitive ones
- Competitiveness now means producing affordable goods and services with a low carbon footprint

- We must succeed in **making the transition appealing**
- Highlight the benefits: health, safety, sovereignty, food security, jobs…
- Admittedly, it is expensive, but the cost of inaction is even higher

- Changing our indicators

- **Carbon footprint**
- Can be calculated for the world, countries, regions, businesses and individuals
- Can serve as a target, with regular monitoring of progress

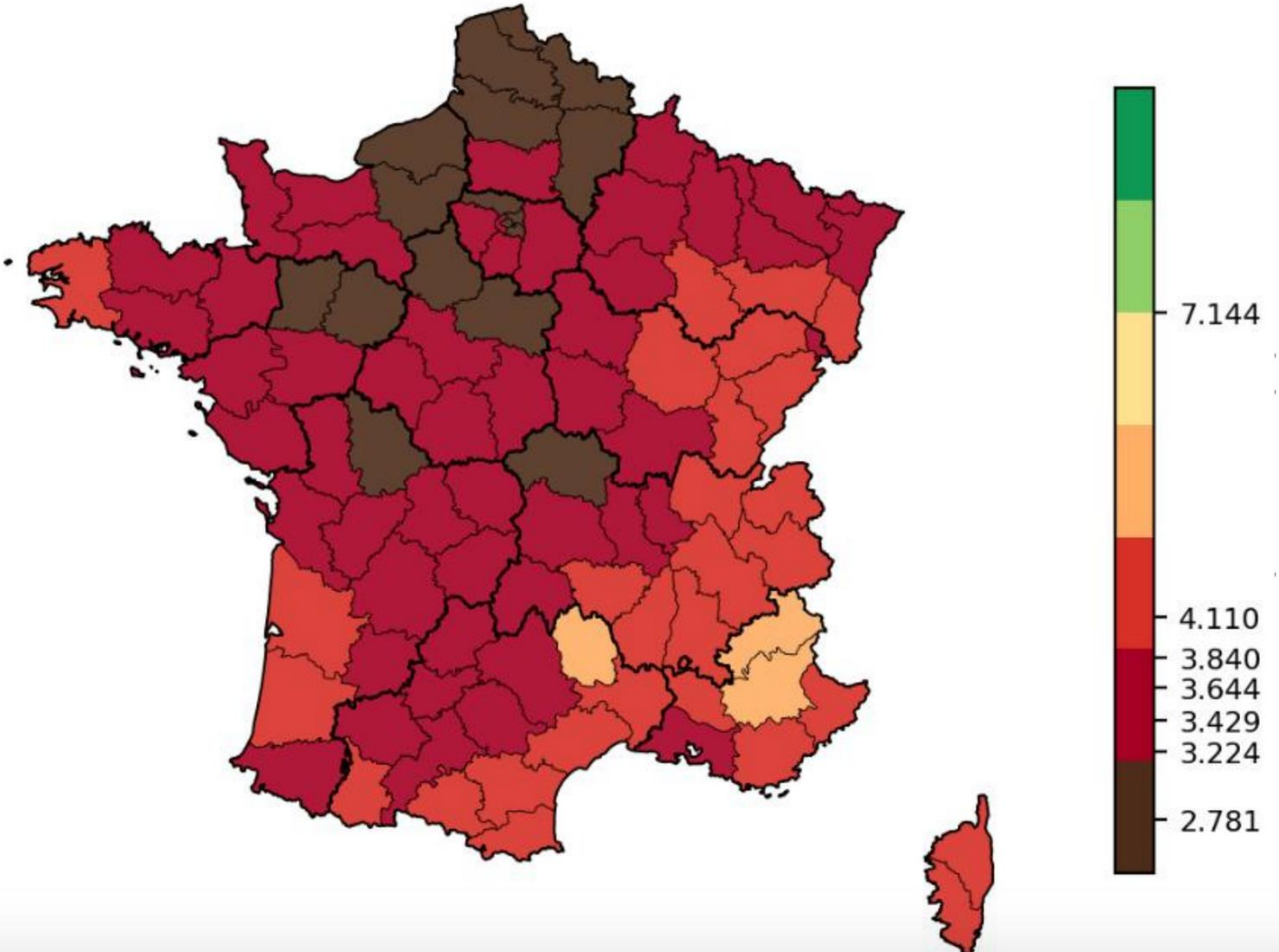
- **Social Health Index**



Map 6 – Social health in France (ISS): 2016
Source: the authors

4.1 Ecologically degraded territories

Figure 5 – Ecological Quality Index of French territories, 2024



- In every case, GDP and production must sit within a broader framework of physical and social indicators of wealth
- Set targets for all stakeholders
- Production should meet everyone's essential needs while staying within planetary boundaries and promoting social health
- Growth is therefore no longer the goal

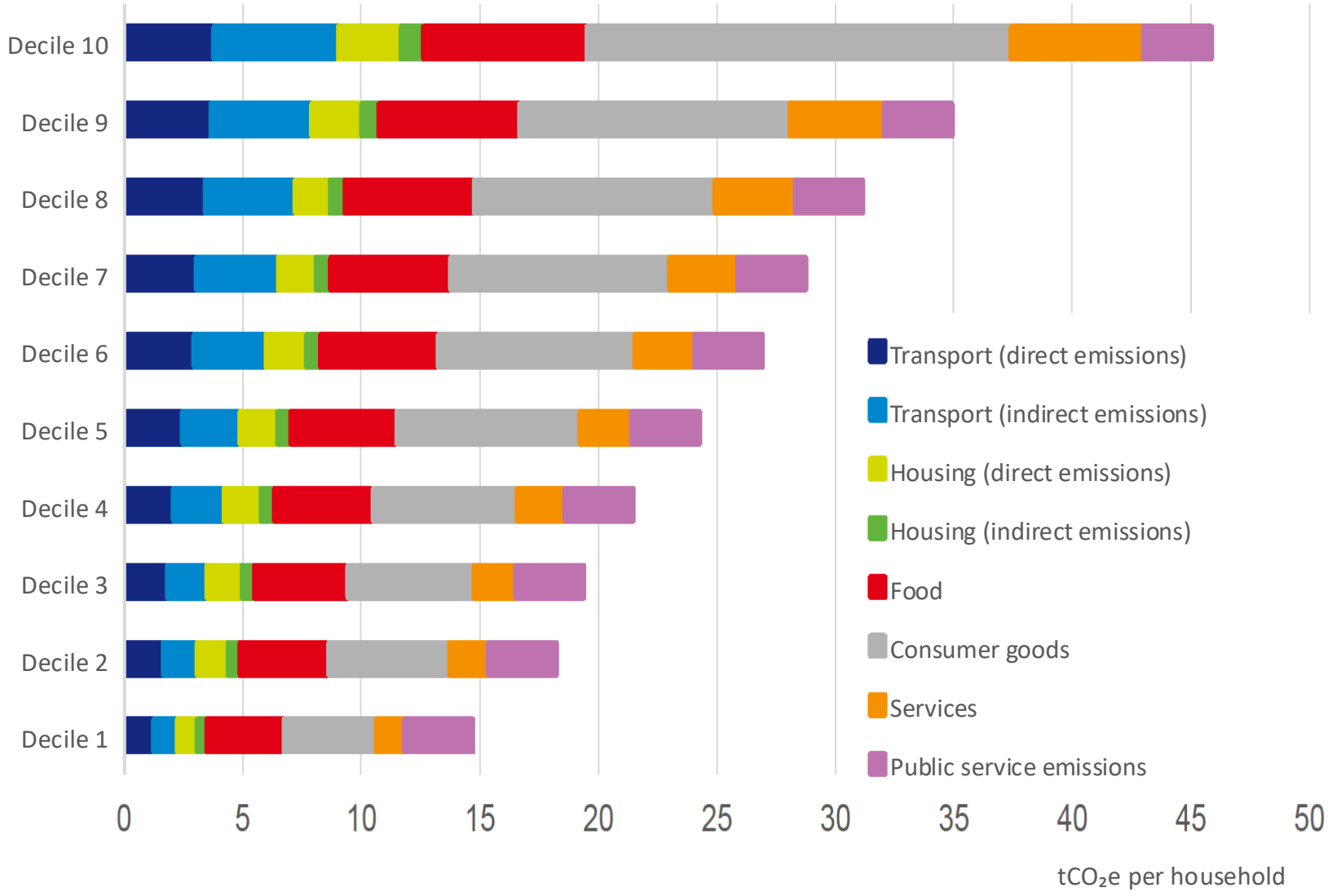
A post-growth society?

- A post-growth society's main goal is to meet human needs while respecting planetary boundaries and ensuring fair distribution, rather than to increase GDP.
- This requires radical changes in how policies are designed, implemented and evaluated, together with a restructuring of many national, regional and international institutions.

- •**Re-conversion (**economic, industrial, professional) = rebuilding our economy; revolutionising our public policies

- •Committing our societies to ecological transition
- •A highly complex undertaking
- •Adapting and mitigating simultaneously
- •The importance of discourse and narrative
- •Moderation/sufficiency
- •As Mansholt suggested, we must aim to meet everyone's essential needs
- •Who will pay?

Figure 19 – Carbon footprint by income decile and main consumption category (tCO_2e)



Reading: food accounts for a carbon footprint of 4 tCO_2e among households in the third income decile.

- We need a major European project for ecological transition
- One that puts the working classes at its heart
- Which must be planned
- Massive investment
- Infrastructure (travelling across Europe by train without breaking the bank, freight, canals, electricity, etc.)
- European champions
- Highlighting the hidden costs
- Channelling support towards responsible businesses