

# Some Common Causes, Consequences and Solutions to the 3 Crises: Financial, Energy/Climate, Ecosystems.

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We live in interesting times....

***“A door like this has cracked open 5 or 6 times since we got up on our hind legs. Its the best possible time to be alive, when almost everything you thought you knew is wrong”***

***“Arcadia”, Tom Stoppard***

# Nature of scientific revolutions..

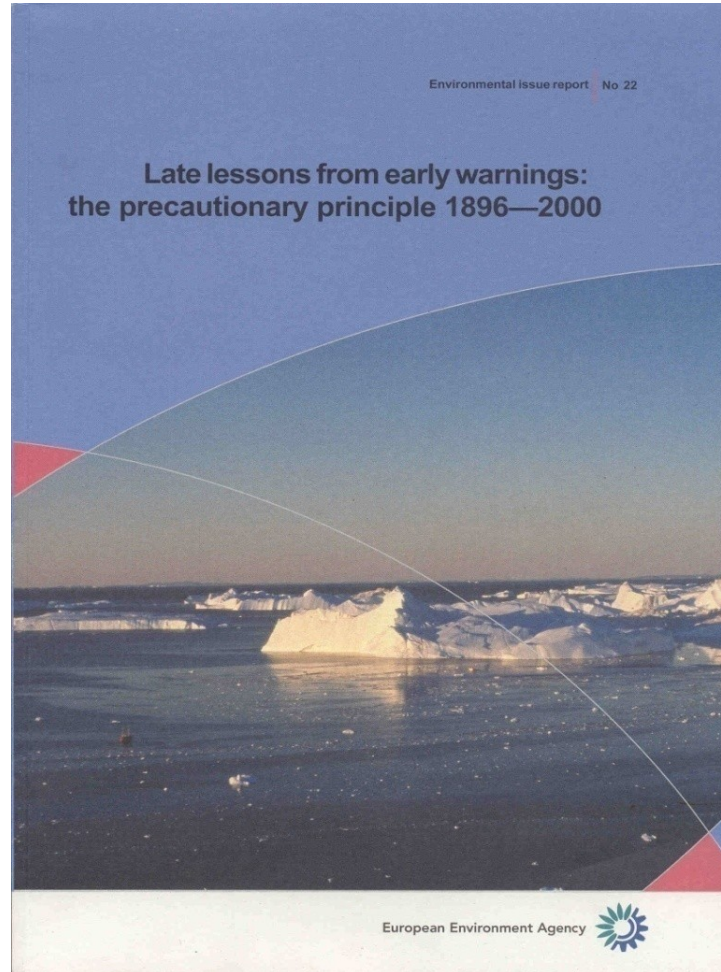
“Science moves forward through “a series of peaceful interludes punctuated by intellectually violent revolutions..in each of which one conceptual world view is replaced by another”.

*Wade on Kuhn, Science, July 8, 77,p143-145,cited in The Origin of Wealth:Evolution,Complexity, and the radical remaking of Economics”, Beinhocker, E., 06, Harvard Bus. Sch. P.*

# Summary of Presentation

- Learning from History
- Some Common underlying Causes of the 3 Crises...
- Some similar Consequences
- Key Differences.....
- Some Common Solutions to the 3 Crises
- The Need, Opportunity and Argumentation for “radical” Ecological Fiscal Reform
- Accounting for What Matters?

# Homo Stupidus as Slow Learners, 1896-2000? EEA, 2001



**Vol 2 2011**

# Financial Crisis-A Surprise or Created?

***“But even now, there are many who seem to believe they did little wrong: it was a once-in-100-years flood that could not have been anticipated, rather than something they caused and which has occurred repeatedly”.***

*Source: Joseph Stiglitz , Professor of Economics, Columbia University.  
THE TIMES, Business section, Tuesday January 27 2009*

# Learning From Financial History, 1934?

*“Boom and slump..has gone on decade after decade.. as every fresh crop of small accumulators saved sufficient to invest.. there appeared **plausible leaders of finance with a get rich quick scheme**, casting it before his victims as an angler casts his flies for trout”.*

*(Thomas Johnstone ,Lord Privy Seal; BBC Governor; Minister for Scotland, in “The Financiers and the Nation” 1934: cited in “Boom & Bust: House Prices, Banking and the Depression of 2010”, F. Harrison, 2005.)*

# Schumpeter on Credit Creation, 1939

*“Credit creation is the monetary equivalent  
of **innovation**.*

*This relation is at the bottom of all the  
problems of money and credit”*

Schumpeter, “Business Cycles: a Theoretical,  
Historical, & Statistical Analysis”, 1939



# The Financial Meltdown, 2007-10: one respected analysis....

A “web of interconnected financial, political, and regulatory **malfeasance**.. culminated in financial meltdown.. a system designed for **hucksters**”

*(L.J. Kotlikoff, former Senior Economist, President's Council Economic Advisors; Boston Uni., in “Jimmy Stewart is Dead: ending the world's ongoing financial meltdown with Limited Purpose Banking”, 2010, preface: recommended by Sachs, Bank of England, Cato, American Enterprise Council etc ),*

# Financial Meltdown, 2007-10: Kotlikof's, mainly *personal*, causes.....

- *implicit **bribing** of rating agencies;*
- ***incompetence** of regulators;*
- ***complicity** of corporate directors,*
- ***collusion** of bankers & politicians*
- ***naivete** of investors..”*
- *“**complexity** of securities;*
- *sales based **compensation** of management.....*

.....“*have exposed our financial system as fundamentally corrupt, fragile, never to be trusted*”.

(“Jimmy Stewart is dead”, p4)

# Learning from History 2007-10: ***“look beneath the surface...”***

*“there is evidence from past credit/asset price boom-bust periods that **rapid credit expansion and sharp asset price increases** is often a harbinger of a painful bust to come....*

*...the mistake of most of the economics profession was a failure to see what was really going on **beneath the surface**”*

C Bean, Dep Gov Bank of England, “The Great Moderation, Panic, and Contraction”, **Schumpeter Lecture**, Euro Econ Ass., **Barcelona**, Aug 09

# Beneath the Surface?

Some Common Underlying Causes of the  
3 Crises:

Financial, Energy/Climate, Ecosystems

# Twelve Common Causes of the Crises

- 1. Free market ideology and deregulation**
- 2 Early Warnings & late lessons ignored**
- 3 Over consumption in US/Europe, excess savings in Asia.**
- 4 Other imbalances between stocks & flows**
- 5 Socially malign private incentives**
- 6 Misleading market prices that exclude many costs & risks**
- 7 Misplaced faith in models**
- 8 Intransparent products & impacts**
- 9 Poorly understood complex systems**
- 10 Lack of knowledge of tipping points& systemic risk**
- 11 Debts/Risks created but passed on to “distant others”**
- 12 Not accounting for what really matters**

**Source: EEA 2008-10, unpublished.**

# 1. The Free Market ideology that failed

- “Changing Course “ quote of limitations of markets 92
- ***(Greenberg quote from senate hearing)***
- Financial deregulation from 1980, especially of US Regs created in 1930s to deal with the excessive banking activities that helped cause the “great depression” 29-33.

## 2. Early Warnings Ignored

“This **“misplaced certainty,”** in the safety of the **status quo** (Preface, Late Lessons, EEA, 2001), which **“played a key role in delaying preventive actions”** to reduce physical risks is now seen to have played a similar role in those who had regulatory oversight of financial and economic risks.

They too failed to heed early warnings about impending financial instabilities, resulting in much damage to both human and financial capital, as well contributing to the pervasive meltdown of trust in all elites”.

*(Late Lessons from Early Warnings ,2011, EEA, JMG, draft preface)*

# Financial Meltdown? An Early Warning from 1997...

"By 2007 Britain and most of the other industrially advanced economies will be in the throes of *frenzied activity in the land market...*

**Land prices will be near their 18-year peak... on the verge of the collapse that *will presage the global depression of 2010.***

The two events will not be coincidental: the peak in land prices not merely signalling the looming recession, but being the primary cause of it."

(Fred Harrison in "The Chaos Makers", 1997)



# Early Warnings: 2003-6

« This **credit bubble** based on nothing more than expectations, cannot be maintained forever,

**There will be a crash.** People will no longer be able to pay their debts, **particularly if the values of the assets they hold against those debts start to fall.** »

*(Real World Economic Outlook, NEF, 2003,p29)*

See also “early warnings” from Borio & White 03; White 06, of **Bank of International Settlements; Stiglitz; Nourbino etc.**

# Climate Change: an early warning from 1896(7 ?)

“Double the CO<sub>2</sub> in the atmosphere and you will raise the average global temp to about 5 degrees C....”

Arrhenius

# Collapses of Fish Ecosystems: Early Warnings Ignored

- The 1890s Scottish Herring industry collapse: “overfishing could easily be possible” (Bertram, 1865)
- The 1940s Californian Sardine industry collapse: “unnecessary drain upon the supply should be avoided until research has shown that it is possible to detect overfishing in time” (1920s)
- The 1992 Newfoundland Cod stock collapse: “the cod is being overfished” (1986) –dismissed by Dept of Fisheries & Oceans as “biased pseudoscience written to support a political agenda” .

*MacGarvin, “Fisheries: Taking Stock”, in Late Lessons from Early Warnings”, EEA, 2001)*

# Why Does Homo Stupidus Routinely Ignore Early Warnings ?

- Powerful economic/political stakes in status quo
- “Group think”
- “Things are different now”
- “Don’t spoil the Party”
- Minority Voices sidelined/silenced
- Compromised Ethics/Morals
- Lack of Imagination/Scenarios

See also “Collapse”, J. Diamond, 2005 ; “The March of Folly”, B Tuchman, 1984; “Fishing for Truth”, Finlayson, 1994; “Sustainability or Collapse?”, Costanza et al 07; ***MacGarvin/Gee/Marc, Late Lessons, 2011***

### 3. Excess Consumption USA, excess savings, Asia

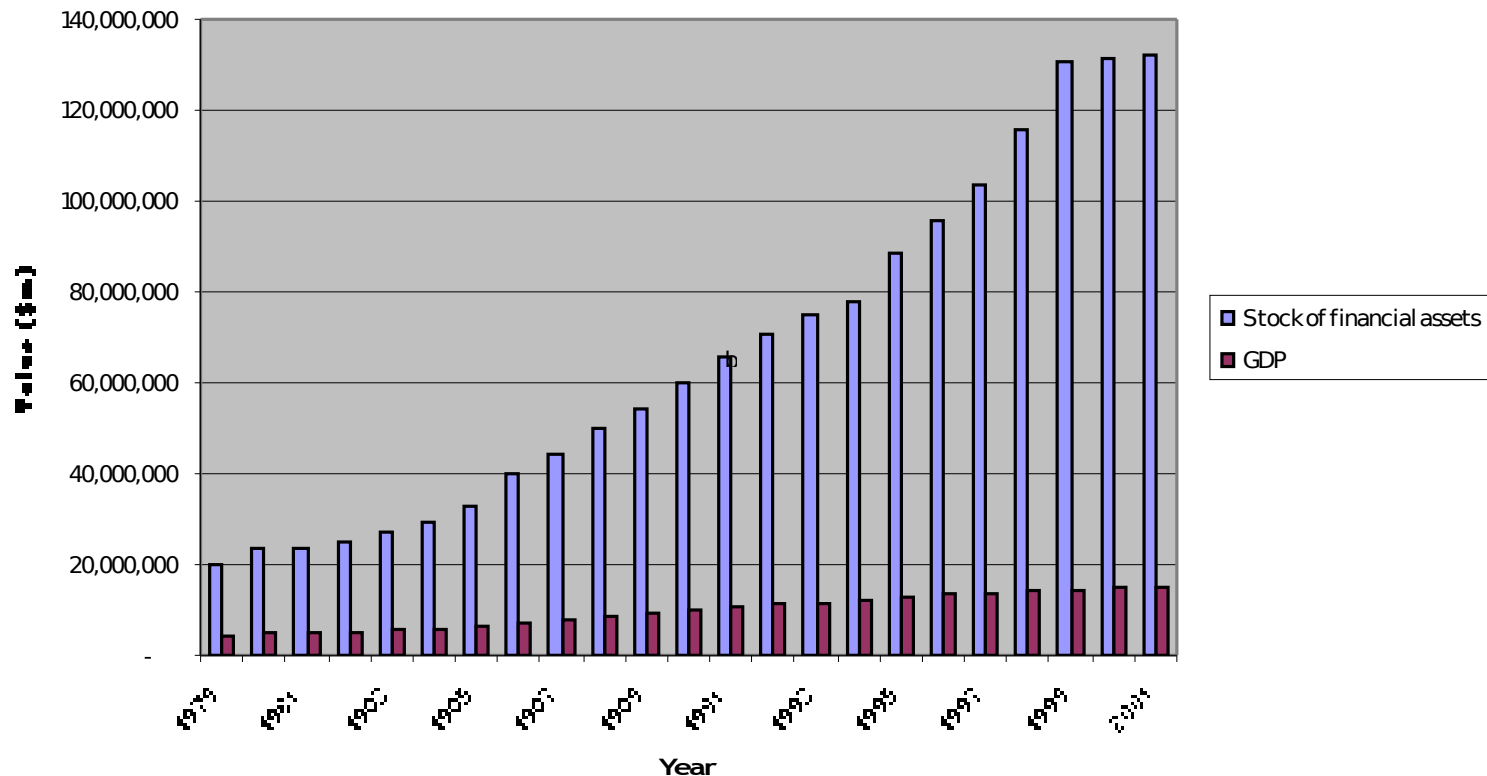
- *See recent Editorial FT about excess saving in Germany being as bad excess expenditure in Greece, with Keynes quote.*
- *See role of excess saving in Japan in its cont'd depression?*
- *See effect of low savings ratio in US ,UK etc.*
- *See role of ETR in helping to correct this imbalance eg Hank Paulson “need to shift of tax code from income to consumption” on the brink, p440”*
- *(this C/S imbalance is one of his 4 causes of the meltdown, others being outmoded financial regs.; poor capital & liquidity ratios; too big to fail mantra; and under-appreciated/rewarded financial risk assessment /management.*
- *See FT ed on Brazil’s “wise Tax” on inward portfolio investment (“Fatal attraction”*

## 4. Financial Assets and the Real Economy: off balance?

- ***The stock of financial assets in Japan rose from less than six times GDP to roughly 9 times in just one decade, 1980 to 1990, a rise which helps explain the country's economic collapse.***
- ***In the UK, the total stock of financial assets stood at almost 15 times GDP in 2000.  
(Update to 07?)***

(NEF 03)

## GDP and the stock of financial assets in G7 minus Japan and UK



© nef (new economics foundation), *Real World Economic Outlook*, 2003

Chart extracted from *Real World Economic Outlook, the legacy of globalization: debt and deflation*, edited by Ann Pettifor for nef (the new economics foundation), published by Palgrave Macmillan, England, 2003.

© nef (the new economics foundation)

Source: US Federal Reserve: Flow of Funds Accounts; Statistics Canada: National Balance Sheet Accounts by Sector; Banque de France: National Financial Accounts; OECD: National Financial Accounts; Banca d'Italia: Supplements to the Statistical Bulletin, Financial Accounts; Deutsche Bundesbank: Financial Accounts for Germany 1991-2001; IMF: International Financial Statistics.

# 5. Socially Malign Incentives

- Eg bankers pay/bonus systems;
- Credit rating agencies paid by those they rate
- “cheap” debt;
- “cheap” energy, food ,fibre..
- Savings penalised by income taxes
- Consumption encouraged by advertising etc.
- Short termism in stock markets, media, democracies...

*(Need to disentangle this from misleading prices ..?)*



## 6. Misleading market prices of debt, energy, food & fibre

- “low interest rates and low apparent risk created strong incentives for financial institutions to become highly geared..with much being off balance sheet in order to avoid on balance sheet capital charges “ (*& to avoid regulation?*) Bean, Bank of England, Barcelona 09.
- AIG quote about not knowing the prices for their financial products.(“Fortune” mar 10); and financial products prices not capturing full risks/ “toxic debts
- Energy externalities, other subsidies, & energy prices
- Food & fibre prices and ag., & ecosystems externalities

# 7. Misplaced faith in models:

## Financial

- “Beware of geeks bearing formulas” Warren Buffet 2008.
- Keynes: “Too large a proportion of mathematical economics are a mere concoction, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependences of the real world in a maze of pretention and unhelpful symbols” 1936.

# Better, or impossible, modelling of Financial sector?

“macroeconomists have to learn how to put credit markets into their models which enable us to model shocks ***originating*** in the financial sector rather than just as an ***amplification*** mechanism” (Bean, Barcelona, 09)

***But see impossibility of modelling financial sector and market behaviour ( Taleb, “Black Swan” ; Triana, “Lecturing birds on Flying: Can mathematical theories destroy the financial markets”, 09***

“All this math-enabled deceit could end up very badly” Triana.

- See Triana on Swedish Bank (*nobel?*) prize for economics to Black, Merton & Scholes in 97 which provided “high profile legitimacy to the use of abstract quantitative techniques in finance that awards, aids and abets the development among market practitioners, observers and regulators of a dangerous false sense of security grounded on less than entirely reliable “certainties”. P 317.

# Triana on Fearing the “Quants”

- “By stubbornly focusing on measuring the unmeasurable technicians endow the financial community with a misplaced and unjustified sense of confidence that uncertainty has been tamed. The amount of unsound risks taken may drastically increase as a result...we should fear platonic quantitative preciseness more than we fear earthly vagueness” Triana, p XL.
- “decades of folk wisdom, passed down through generations of market warriors, may be irredeemably lost ,all in the name of the scientification of that which may not be subject to being scientificized”. p27

# Energy Models...

- (Evidence on limitations...from article in royal society j. by Jacques's climate C mates...)

# Limits of Models:Ecosystems-Fisheries

- “Harris likened Fisheries science to the Ptolemaic model of the solar system where when observations did not fit the theory, an additional layer of complexity was added, rather than questioning the basic theory”
- “Increasingly complex maths and computational power created optimism that past mistakes of the 70s could be avoided-but..
- “we continued for too long to wear rose tinted glasses and to interpret all data in the manner best calculated to support and confirm the model of growth upon which our hearts had been set” p21, Fisheries: taking stock”, Macgarvin ,EEA late lessons, 2001)

# Limits of Modelling complex reality

“its not in principle difficult to combine everything into a grand model, but its algebraic complexity obscures all economic understanding”

*Dixit & Norman, “Theory of International Trade” , 1980, P176 cited in “North-South Trade and the Global Agreement”, Chichilnisky, 94. See also Orwell on limits of modelling in econimcs, cliamte, health...*



# 8. Intransparent Products & Impacts

- *(Evidence for Fin prods?*
- *Energy prods?*
- *Ecosystem prods?)*

# 9. Complexity

# 10 Tipping points & systemic risks

# 11. Debts/Risks passed on to “distant others”

- (Fin., energy, ecosystems exs needed)
- Eg toxic fin debts passed on, & on, within CDS products etc
- Eg CC & ecosystems debt risks passed onto to future generations: health and ecosystems damage passed on to other groups (asthma in children; forest loss in Brazil...)

# 12. Not Accounting for what really Matters

- Finance “JP Morgan used repo accounting gimmick” FT Mar 19, 10;etc
- Energy: Fossil fuels stock depreciation not replaced (except in Norway?)
- Ecosystems: assets deprediation not replaced.
- Well being:Beyond GDP etc.

# Some Common Consequences of the 3 Crises

- Capitals (Financial, Economic, Social, Natural)  
Destroyed whilst “Making Money from Money”
- Meltdown in Trust in Financial and Political Elites
- Inequities and Injustices exacerbated
- Economic & Social Insecurities increased.
- Economic & Political Ideological vacuums created
- Opportunities now for Radical Economics/Politics?

# Meltdown of Trust in Elites

*“There has been a massive breakdown of trust: trust in the financial system, trust in bankers, trust in business and business leaders, trust in politicians, trust in the media, trust in the whole process of globalisation-all have been severely damaged, in rich countries and poor countries alike.”*

“Reflections on Money, Morality, and an Uncertain world” (Green, HSBC, 2009, p x1).

Scientists are clearly now not alone in being distrusted by the publics of much of the world.....



# Some key differences between the 3 Crises.

- The financial system is manmade..(yet we still didn't understand much of it..)
- Financial crisis is visible, short term, largely reversible
- Financial systems are reflexive: perceptions, expectations, & behaviour change the system dynamics

# Some Common Solutions to the 3 Crises

# “Can Western Democracies deliver strategic responses to these interconnected challenges?” JMG ,FT 20 Oct 06

- “Oct 13 FT stories about inter-connected challenges eg threats to Europe’s energy, materials and manufacturing supplies coming from expanding Asia and from China’s flood prone exporting zones; debt funded rise in consumption (and accompanying fall in savings) which is also fed by banks that have expunged much risk from their balance sheets via hedge funds: and the declining corporate income tax revenues at a time of record profits that arise from the increasing use of tax havens and transfer pricing”.
- We note your editorial recommending “recasting of the (corporate) tax system away from incomes and on to consumption” and recommend ETR...for ageing pop. etc.

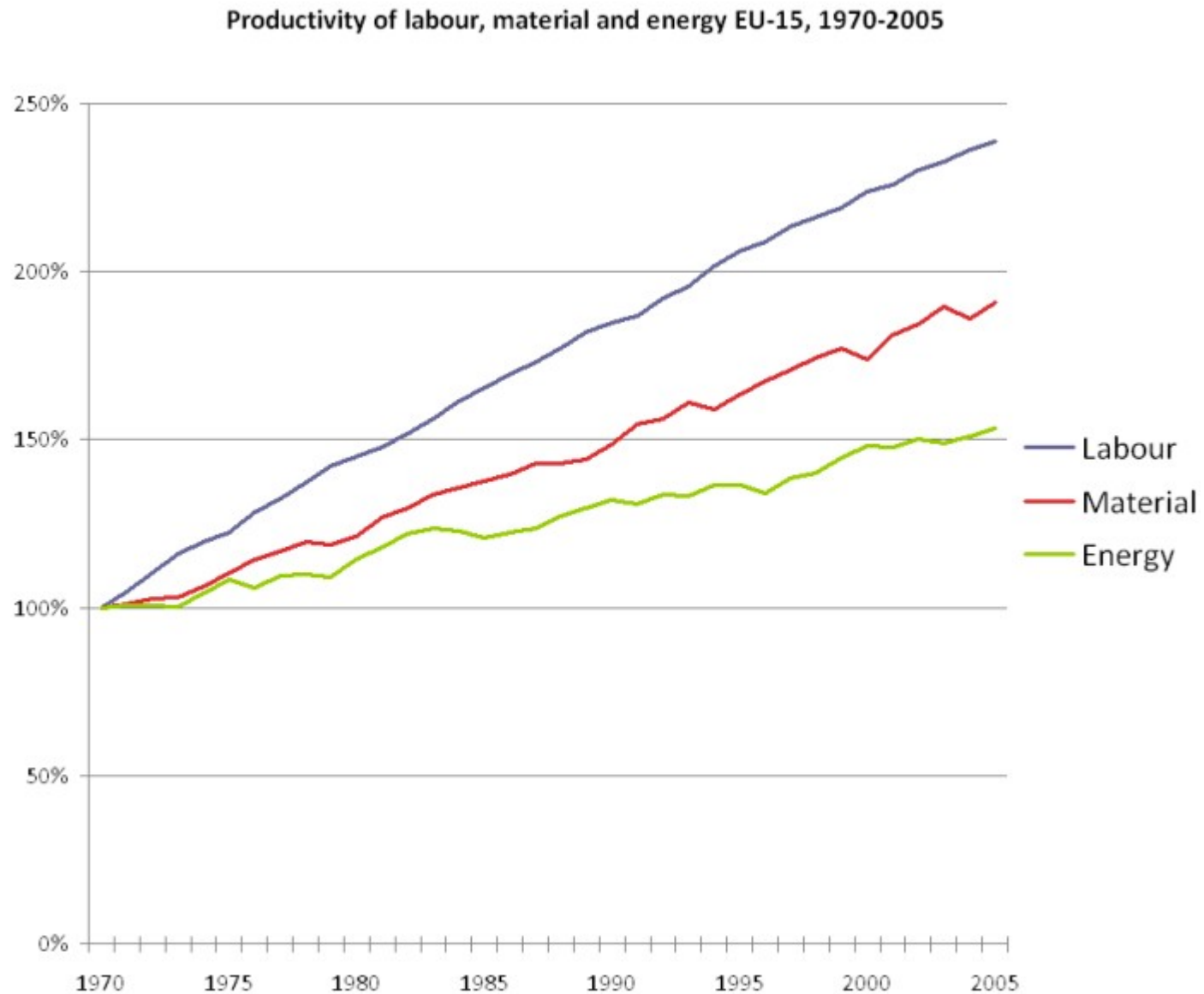
<u>GOOD GOVERNANCE</u>	<u>FINANCIAL SYSTEMS</u>	<u>ENERGY SYSTEMS</u>	<u>ECO-SYSTEMS</u>
<b>CONSUME FLOWS WHILST MAINTAINING QUALITY AND QUANTITY OF STOCKS</b>	CONSERVATIVE ASSET/ DEBT/LIQUIDITY RATIOS	FROM STOCKS OF FOSSIL FUELS TO <i>FLOWS</i> OF RENEWABLES	MAINTAINING NATURAL CAPITAL <i>STOCKS</i> WHILE SECURING <i>FLOWS</i> OF ECO-SYSTEM SERVICES
<b>ALL RISKS AND DEBTS INTERNALISED INTO MARKET PRICES.</b>	REALISTIC ASSET/ DEBT PRICING	EXTERNALITIES INTERNALISED INTO PRICES	EXTERNALITIES INTERNALISED INTO PRICES
<b><i>ECO-NOMIC TAX &amp; SUBSIDY REFORM TO FINANCE “GREEN NEW DEAL”, &amp; MEET AGEING POPULATION PROBLEMS</i></b>	<p>•“FINANCIAL TRANSACTIONS TAX” ON CURRENCY&amp; COMMODITIES SPECULATION?</p> <p>•ABOLISH TAX HAVENS •FAIR &amp; TRANSPARENT CORPORATION TAXING</p>	<b><i>FROM TAXING PEOPLE TO TAXING ENERGY</i></b>	<b><i>FROM TAXING PEOPLE TO TAXING RESOURCES&amp; USE OF SERVICES</i></b>
<b>TRANSPARENT TRANSACTIONS</b>	UNDERSTANDABLE TRANSPARENT FINANCIAL PRODUCTS	REALISTIC TRANSPARENT MARKET PRICES	REALISTIC TRANSPAERENT MARKET PRICES

<u>GOOD GOVERNANCE</u>	<u>FINANCIAL SYSTEMS</u>	<u>ENERGY SYSTEMS</u>	<u>ECO-SYSTEMS</u>
ACCOUNTING FOR WHAT MATTERS	REALISTIC DEBT / ASSET RATIOS	ALL COSTS/ SUBSIDIES & ASSET MAINTENANCE	ECOSYSTEM SERVICES & ASSET MAINTENANCE
	“B E Y O N D   G D P”		
LATE LESSONS FROM EARLY WARNINGS?	“INCONVENIENT TRUTHS” ACTED ON		
COMMUNITY LEVEL INITIATIVES	MICRO-FINANCE; COMMUNITY BANKS; “FAB”ACCOUNTS?	DISTRIBUTED NETWORKS	CO-MANAGEMENT OF ECO-SYSTEMS
DIVERSE DISTRIBUTED,PARTICIPATORY, RESILIENT AND SECURE SYSTEMS?	YES	YES	YES

# From focus on Labour productivity 1850-2010: to Energy/Resources productivity 2010-50

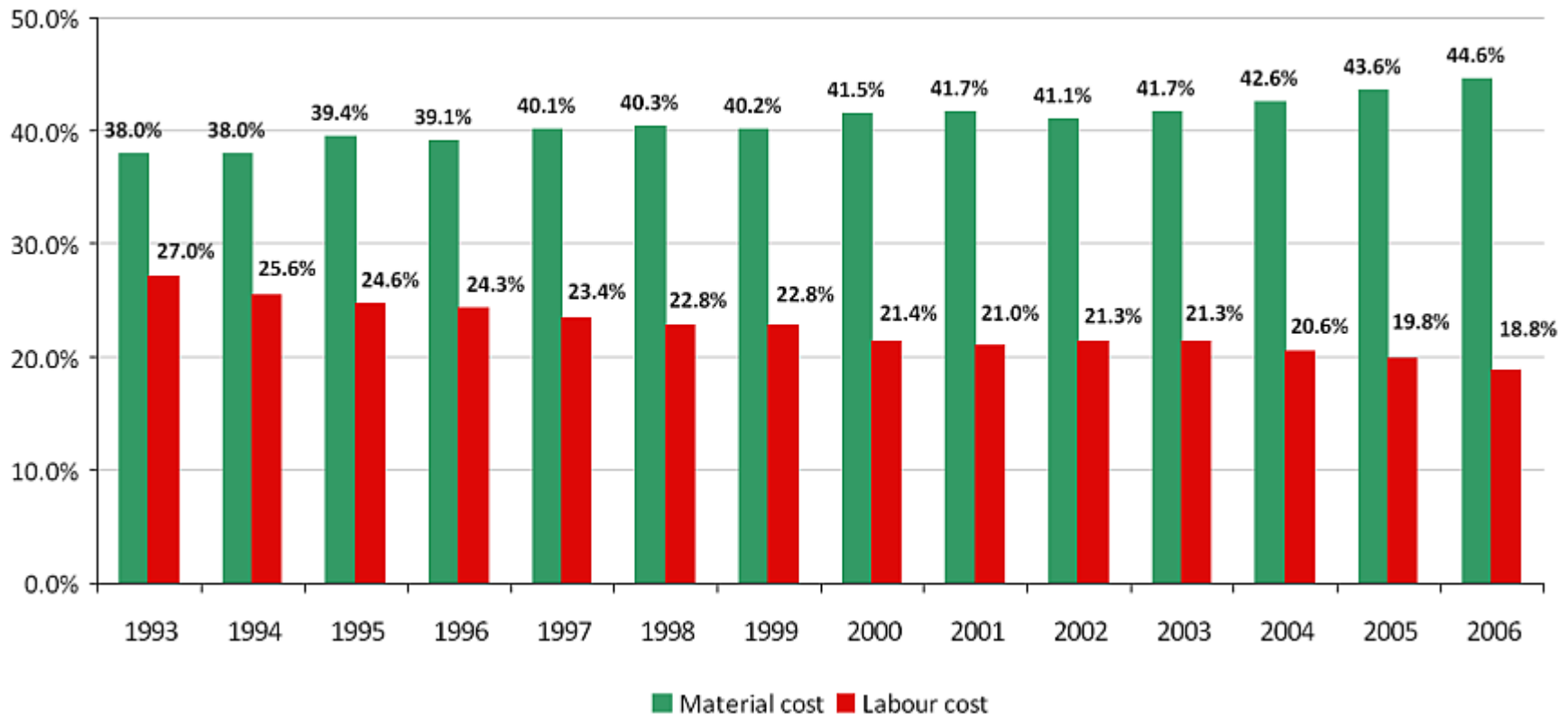
- Energy/resources (and sinks for “wastes”), not labour, are current & future limiting factors of production, as populations age, and 8-9 billion seek “western” standards of living.
- Need different price incentives to switch focus of innovation from labour to nature eg ETR
- Employment needs to be better shared between workers and pensioners (***21 hour week? New Economics Foundation, 2010***)

# Productivity of labour, materials and energy, EU15, 1970-2005



Source: 2010 State of Environment and Outlook Report, EEA (upcoming)

# Development of material and labour cost in the German manufacturing industry

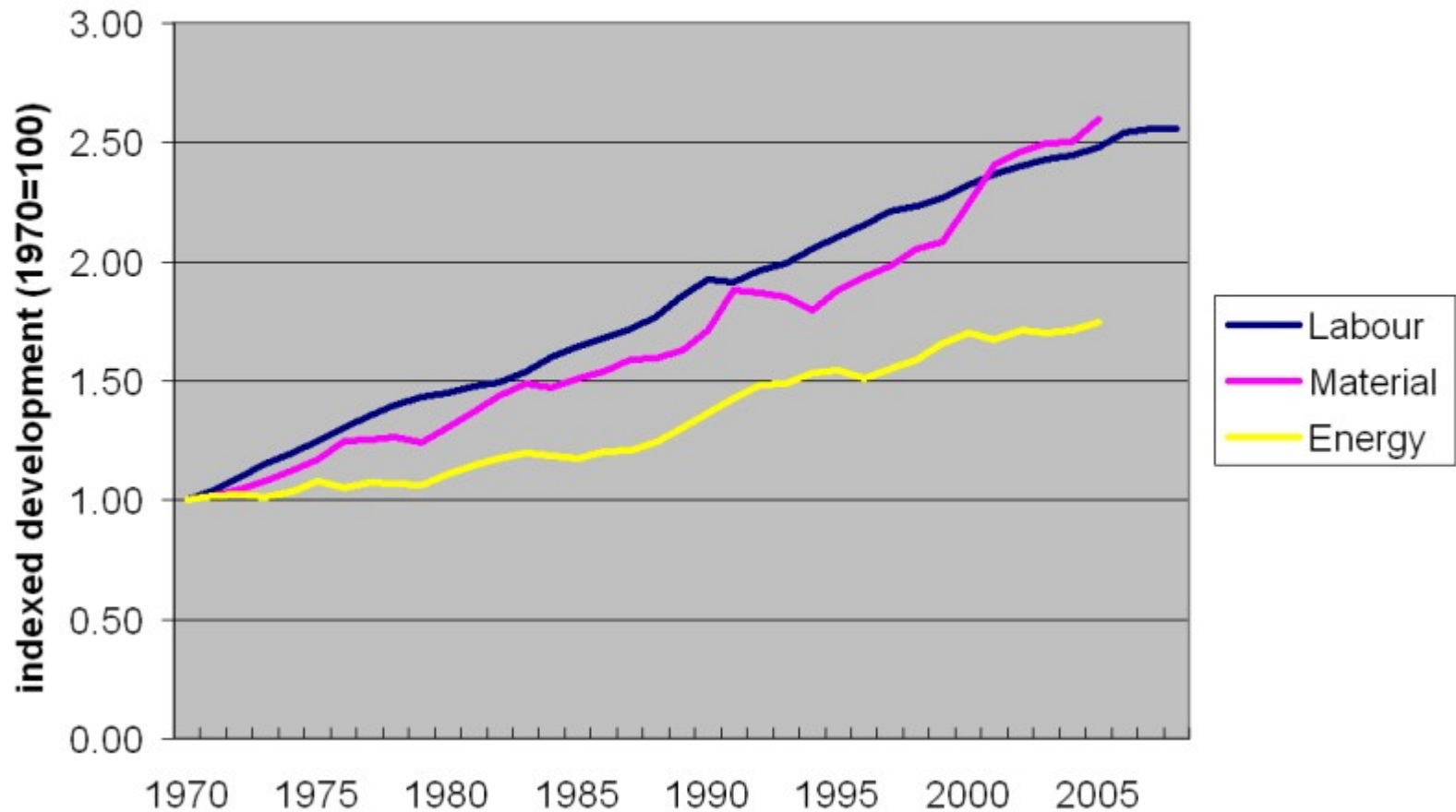


Source: Statistische Bundesamt 2008



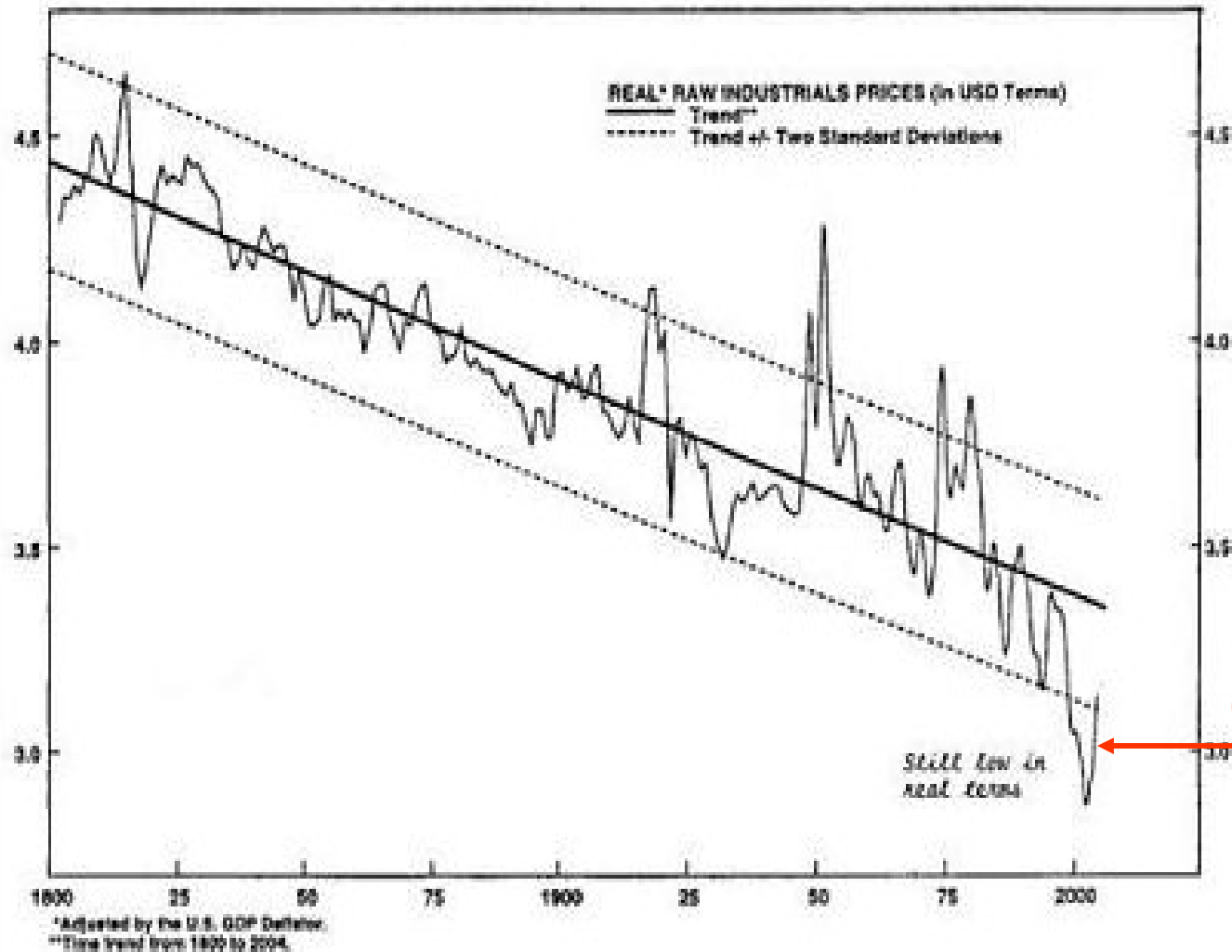
# Productivity of labour, materials and energy, Germany 1970-2005

## Efficiency development DE



# Meanwhile market prices of resources have declined

(Industrial commodity & energy prices, in constant dollars)



Source: *The Bank Credit Analyst*

# Fair & Transparent Taxing of Multinational Corporations

- **“Transfer mispricing”** between MNC subsidiaries and **“false invoicing”** between MNCs account for c US\$ 180bn a year (See OECD efforts)
- See Guardian’s “Tax Gap “ articles re **tax avoidance schemes** eg the “Irish Branch”, “Dutch Partnership”, “Double Luxembourg”, 4<sup>th</sup> Feb 09).
- **Tax havens** (“sunny places for shady people” Somerset Maugham) need regulating (see OECD efforts, “Countering Tax Evasion”, 09: 40 havens now comply with information exchange standards cf none in 2000: but see Kay, J., “tax havens exist because of hypocrisy of large states, like UK, and because the customers are the rich and powerful”. FT 21<sup>st</sup> Mar 09; & “The long and the short of it”, Kay 09)
- **Financial Transactions tax** needed (see

# Opportunities Now for radical\* ETR?

- Public debt crisis
- Unemployment crisis & stagnant or falling wages
- Financial; Energy/Climate; and Ecosystems crises
- Decline of “free market ideology”
- Demand for better public goods for the majority, less private gain for minorities
- Better research knowledge now available on ETR: Petre,Cometr, Petras, Green Fiscal Commission(UK), MS research/practice eg Sweden, UK, Germany, Denmark
- EEA 09 research on Equity, Eco-innovation,and political feasibility of radical ETR
- Support for ETR from China; Canadian Liberals “the Green tax shift”; New America Foundation (eg progressive consumption tax based on difference between income and savings, designed to “promote savings” Halstead, FT oct 27 05); Irish Tax Commission (land ,CO2,); french CO2 tax; etc.

\*radical= “Environmental” Taxes yielding 15-30% of revenues by

# 1996 EEA Report on Green Taxes: the 4 dividends from ETR.

*"In its recent report the EEA concluded that  
"environmental taxes..could deliver  
improvements in four areas of public policy*

- ***environment;***
- ***innovation & competitiveness;***
- ***employment ;***
- ***and the tax system"***

(Sustainability Panel, Annual Report to UK  
Government, '97)

# The 5th dividend: ETR helps with the Ageing Population problem....

- Increasing public expenditure on pensions & health care for the elderly
- **Declining income tax base**- both workers (population change) and) companies (*capital mobility, transfer pricing, and tax havens*)
- But **expanding lifetime consumption base** (ageing population, longer lives)
- So **more equitable burden sharing** between the generations is needed: to be helped by
- **ETR**-shift some labour taxes to consumption/eco taxes

# **AN AGEING EU POPULATION AND A PUBLIC EXPENDITURE/FUNDING CRUNCH.**

**The old- age dependency ratio (people aged 65 or above relative to the working-age population aged 15-64) is projected to increase from 25.4% to 53% in the EU over the projection period 2008-2060.**

**The largest increase will occur during the period 2015-35.**

**The EU would move from having 4 working-age people for every person aged over 65 to a ratio of 2 to 1.**

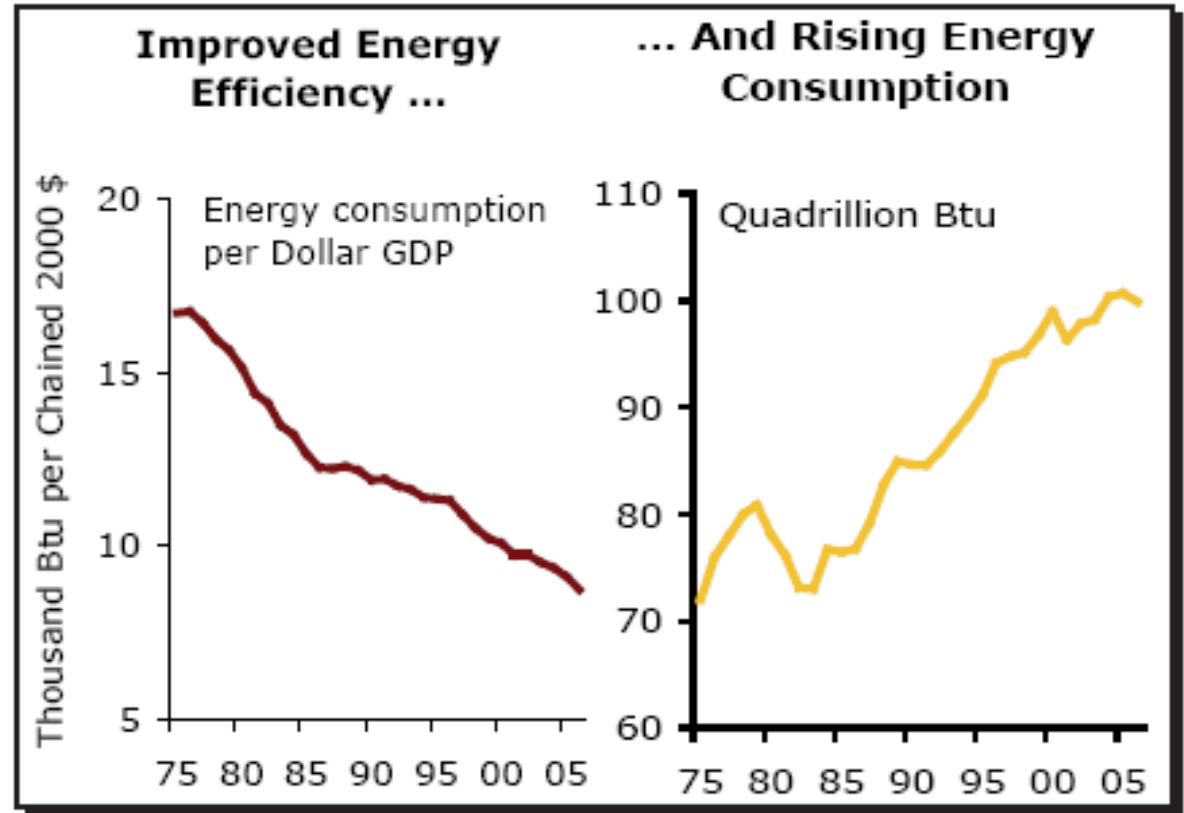
Source: The 2009 Ageing report: Underlying Assumptions and Projection Methodologies.  
European Economy 7/ 2008 (provisional version)

## Americans Efficiently Consume Ever-Increasing Amounts of Energy

Rebound effect in  
the USA:

Energy intensity  
down, total  
energy consum-  
ption up.

(SUV's,  
urban sprawl,  
electronics boom  
etc).



Source: EIA



# Limit rebound effect with rising ecotaxes?

**„why not raise energy taxes in parallel with energy productivity increases which will both stimulate further productivity increases and help limit the rebound effect? „**

**(Ernst Von Weizsecker, „Factor Five: Transforming the Global Economy through 80% improvements in Resource Productivity“, 2009.)**

# 3 Main Arguments against ETR- and some Responses

1. *Damages competition?*-no evidence for this (COMETR/OECD etc.)

except specific short term losers-who can get time limited exemptions, recycled revenues for eco-efficiency, and possibly border tax adjustments?

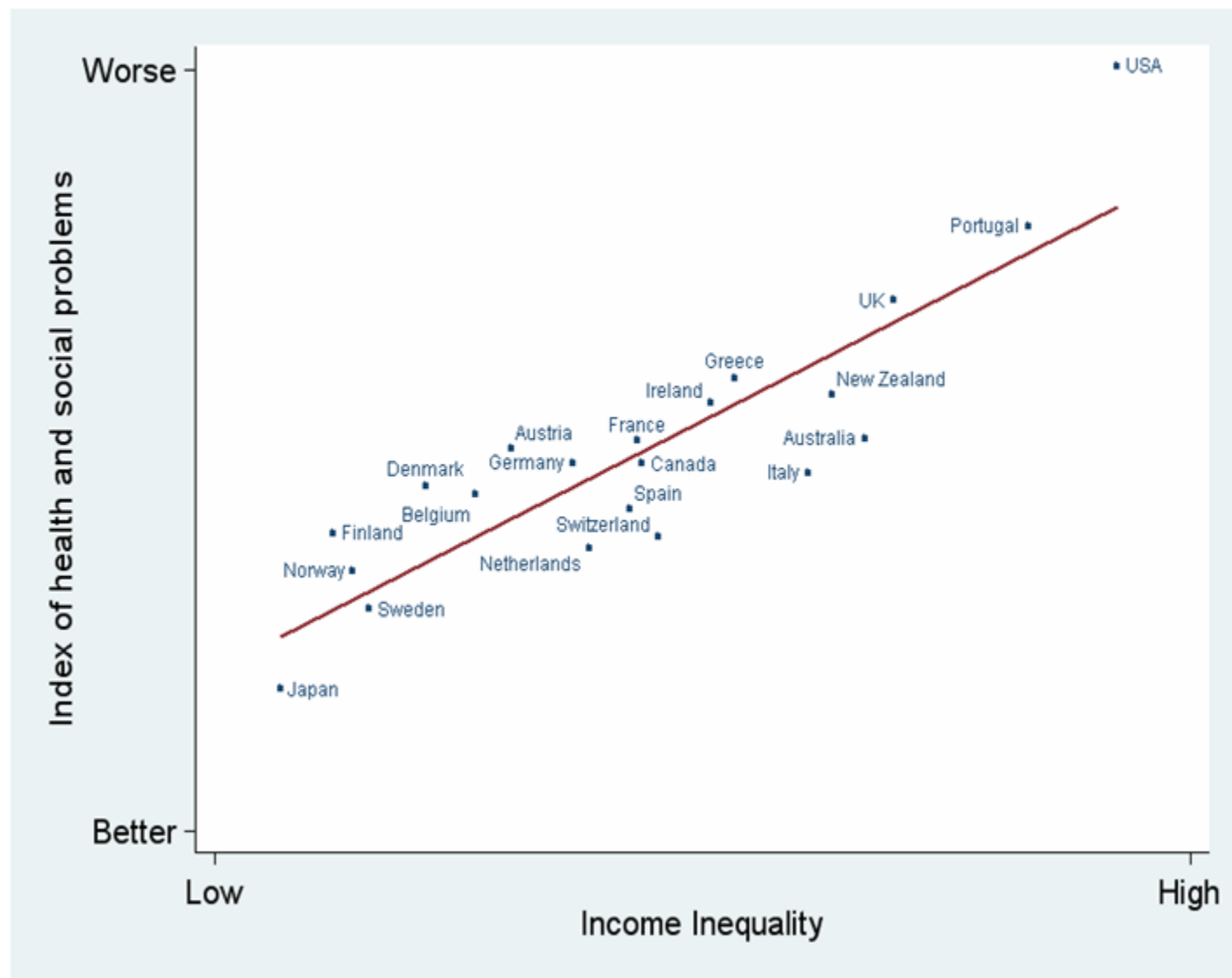
# Equity?

- 2. *Ecotaxes hit the poor/elderly/unemployed/rurals ?- design ETR so it doesn't (FOE/IFS 90;EEA 09)***
- **in context of current unequal societies...(See « The Spirit Level » Wilkinson,2009) and**
  - **Unjust distribution of eco-damage :which ETR will help rectify.**

# Health and Social Problems are Worse in More Unequal Countries

## Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility



# Global Income Inequalities

- See UNEP “champagne” glass 92 (EEA SOER 99) updated
- See two routes to equality: Sweden via tax/benefits; Japan via pre tax earnings
- See German/UK contrasts between pre-post tax incomes 80s-00s (AGF report 09)

### 3. Eco-taxes provide unstable tax bases?

- Raise tax /unit of pollution/resource/energy in step with eco-efficiency/productivity gains and increasing knowledge of damaging impacts of energy/resources use-slowly, but predictably over decades.(See Tobacco tax history;UK fuel price escalator).
- « Big » tax bases are stable: **Energy, Land Values, Water, Waste, Materials, Hazardous Chemicals,**
- Plus rising tax revenues from new eco-innovation/renewables industries.
- And other taxes eg **Financial Transactions; a « Fat » tax on fatty/crappy foods & drinks; etc**

# Winners and Losers from ETSR

- **Losers:** large/inefficient » users of energy and resources; big polluters, and waste creators
- **Winners: Labour intensive businesses:** construction; energy efficiency: caring; health; teaching; cleaning; other services; knowledge industries; entertainment; eco-efficient industries; recycling/repair, etc
- Plus Majority of current/future Peoples/Planet

# The Politics of ETR

- **Losers mobilise political opposition to ETR**
- **Winners are passive: therefore**
- **Mobilise Winners & Raise Public Awareness/Support for ETR**  
*(See German example within their ETR campaign, 99-03)*



# Some ETR Success Factors?

- Courageous & **Visionary Politicians** (Lloyd George, Churchill, FDR, Livingstone, Obama? And .....?)
- **Coherent Policy Packages**
- Broad **stakeholder/public involvement**
- **Transparency and Fairness**
- Real **Opportunities for Behaviour change**
- Slow, assured, gradual tax changes within broad ETR that responds to the current and evolving crises & needs of a Sustainable Society.

# EEA ETR Activities, 2009/10

- **ETR research project 2009**, supplementary to Petre, focused on ***eco-innovation, distributional impacts of radical ETR; political feasibility***
- **ETR Public/Polycymakers Awareness campaign 2010/11** disseminating Petre, COMETR, EEA research: & MS ETR analyses/activities; argumentation; tailored to needs & numbers of each MS.
- **SOER 2010: synthesis** section (Nov)

# **Public Awareness & ETR: results from PETRAS 04, UK Green Fiscal Commission,09**

- Almost complete **lack of understanding** on meaning of ETR, double dividend, recycling of revenues, real purpose of taxes..etc
- Profound **lack of trust** in governments (“ETR? New name, old game?”) especially to recycle revenues
- Strong sense of **fairness: and of its absence**
- Therefore a “widely focused public **awareness campaign is needed**”.

# ETR: Need for Public awareness Campaign

- **Radical ETR needs an informed public** that can overcome media opposition & distortion (“stealth taxes”, UK)
- See “Public Opinion on Green Tax shift” 09: UK GT Comm. experience with polls (“contradictory”, Q dependent, findings) and 2x 2 day **deliberative workshops** with 100 sampled citizens (08).
- Key conclusion about **lack of direct relevance of CC** to them will now be even worse, post UEA etc “climategate”: this erodes support for energy taxes & “highlights need to tackle deeper levels of awareness & understanding”.
- **Fairness** was the key factor in attitudes to ETR, linked to **transparency** and **clear communication** of links between the tax changes and **trust** that they would happen. (See also “Social Justice in Env Pol”, DEFRA/NERA Econ consulting,07)
- **“Progressive” green taxes** were supported eg taxing “excessive” energy use via cars or flying was OK-but tax incentives to help respond to price signal with energy efficiency measures are also necessary

# Now is the time for EEA & Partners Public Awareness Campaign on radical ETR

- Even in 08 **tax rises were seen as inevitable to pay for public exp. debt:** so potential now for arguing that ETR is least worst option is greater. (hence importance of reliable “**deadweight costs of different taxes ie raising revenue is cheaper via ETR**”).)
- **Government leadership** was seen as crucial determinant of the right context for green individual choices eg provision of public transport
- UK GTC Workshops showed ETR can be supported more than opposed –
- but radical **ETR will not happen without public awareness campaign; with focus on tax shift (not neutral now) , equity, transparency, and positive impacts of ETR on quality of life, innovation ,employment etc**
- **5<sup>th</sup> dividend ie link to ageing population was not raised in UK discussions–now provides powerful extra incentive for ETR, especially given current public expenditure debate.**
- **EEA to launch public awareness campaign 2010/11 with partners: EEB; Green budget Europe: Commission(?) ; Tax Justice network; Danish Technology Board: trust funds; etc.**

# Taxes and Civilised Societies....

- « *Taxes are the price we pay for a civilised society* » (F.D. Roosevelt)
- ETR can help deal with « ***the mean streets and withered lives*** » of economic recession (Pigou 1926 -father of Welfare Economics)

# Accept & manage uncertainties, ignorance, and human frailties

“There are few certain and enduring truths in the ecological and biological sciences, nor in the economics, psychologies, sociologies and politics that we use to govern them. And homo stupidus is inherently flawed: scientists, bankers and politicians are as prone to passions, prejudices and weaknesses as other citizens. The challenge is to try and make a better job of accepting and managing these uncertainties, unpredictabilities, and human frailties whilst maximising the pros and minimising the cons of our economic activities”

(Late Lessons vol 2, 2011, draft preface).

# Environmentally Perverse Subsidy Reform: its Politics

*“...the failure to reform subsidies fully lies in the failure to appreciate the political economy of subsidy policies”.*

Victor D., 2009, The Politics of Fossil-Fuel Subsidies, Global Subsidies Initiative, p\_7  
[www.globalsubsidies.org](http://www.globalsubsidies.org))



# Accounting for what really matters

- **Finance:** Adequate capital/debt and liquidity ratios; real long term performance pay; green credit finance & liability insurance (See China “Econ instruments” CCICED paper,09)
- **Energy/CC:** all costs & subsidies; energy stocks & flows asset maintenance
- **Ecosystems:** carbon, water, land asset maintenance
- **Well being:** beyond GDP; social & human capital maintenance; inequality  
And associated indicators.

# Ecosystem Capital Accounting: *towards a fast track implementation in Europe*

Jean-Louis Weber

Senior adviser economic-environmental accounting

12 November 2009

*“The same rule of self-destructive financial calculation governs every walk of life. We destroy the beauty of the countryside because the unappropriated splendours of nature have no economic value. We are capable of shutting off the sun and the stars because they do not pay a dividend.”*

**John Maynard Keynes 1933**

*“ Because National Accounts are based on financial transactions, they account for nothing, Nature, to which we don't owe anything in terms of payments but to which we owe everything in terms of livelihood.”* **Bertrand de Jouvenel 1968**

# Ecosystem capital account: asset “quantity\*quality”

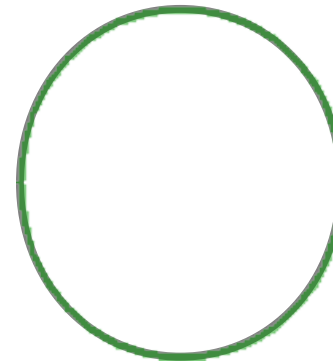
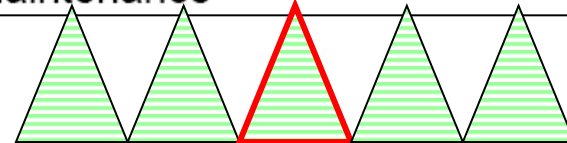


# Ecosystem Accounting: Green National Accounts and Costs-Benefits Analysis



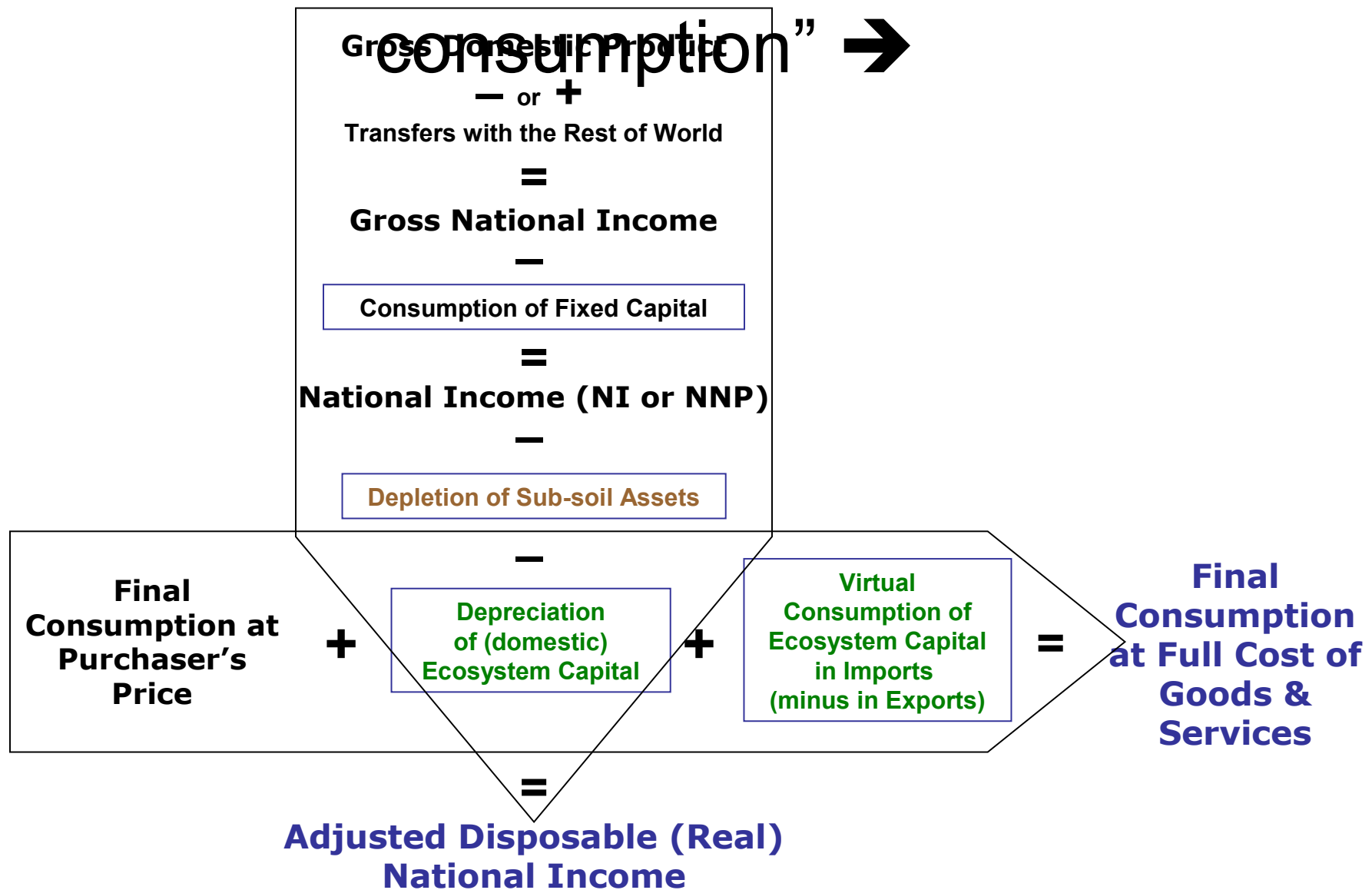
National Accounts =  
the macro-economic picture  
adjusted for natural capital depreciation  
Value of Ecosystem Services Depreciation

Benefits & Costs Assessments =  
extended accounts for projects,  
Ecosystem Maintenance sectors...



Operation costs E.S n  
Operation costs E.S 5  
Operation costs E.S 4  
**Operation costs E.S 3**  
Operation costs E.S 2  
Operation costs E.S 1

# Adjustment of National Accounts for “under-investment” and “over- consumption” →



## **Ecosystem Asset Account**

### **Bio-C balance**

#### **Opening stocks by ecosystems**

- **Formation of bio-C (Net Ecosystem Production)**

- **Withdrawals by activities**
- **Net transfers between ecosystems**
- **Returns from activities**
- **Imports/Exports**
- **Storage in the user system**
- **Consumption/combustion of bio-C**

- **Changes due to natural & multiple causes**

- **In situ bio-C storage**

#### **Final stocks by ecosystems**

### **Ecosystem C-Productivity Counts**

- **NPP trends**
- **NPP perturbation**
- **Change in NPP profiles**

### **Linkage table**

- **Landscape ecological potential**
- **Water availability (quantity\*quality)**

## **Accounts & Indexes : Carbon/Biomass Ecosystem Accounts**

### **Sector Accounts**

*(Supply & Use, MFA, NAMEA, Expenditures)*

- **Withdrawal of bio-C**
- **Input-Output between sectors**
- **Returns of bio-C**
- **Imports/Exports**
- **Storage in the user system**
- **Consumption/combustion of bio-C**

### **Consumption of C / Emissions of CO<sub>2</sub> CH<sub>4</sub>**

- **Consumption/combustion of bio-C**
- **Combustion of fossil fuel**
- **CO<sub>2</sub>/CH<sub>4</sub> emissions**

### **Net Carbon Offset Expenditures**

- **C taxes and subsidies**
- **Net purchase of C permits**

### **Virtual C embodied in Import-Export**

- **Virtual C by products**