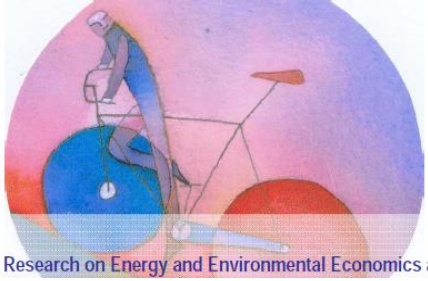

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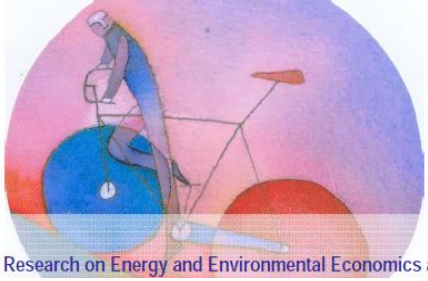
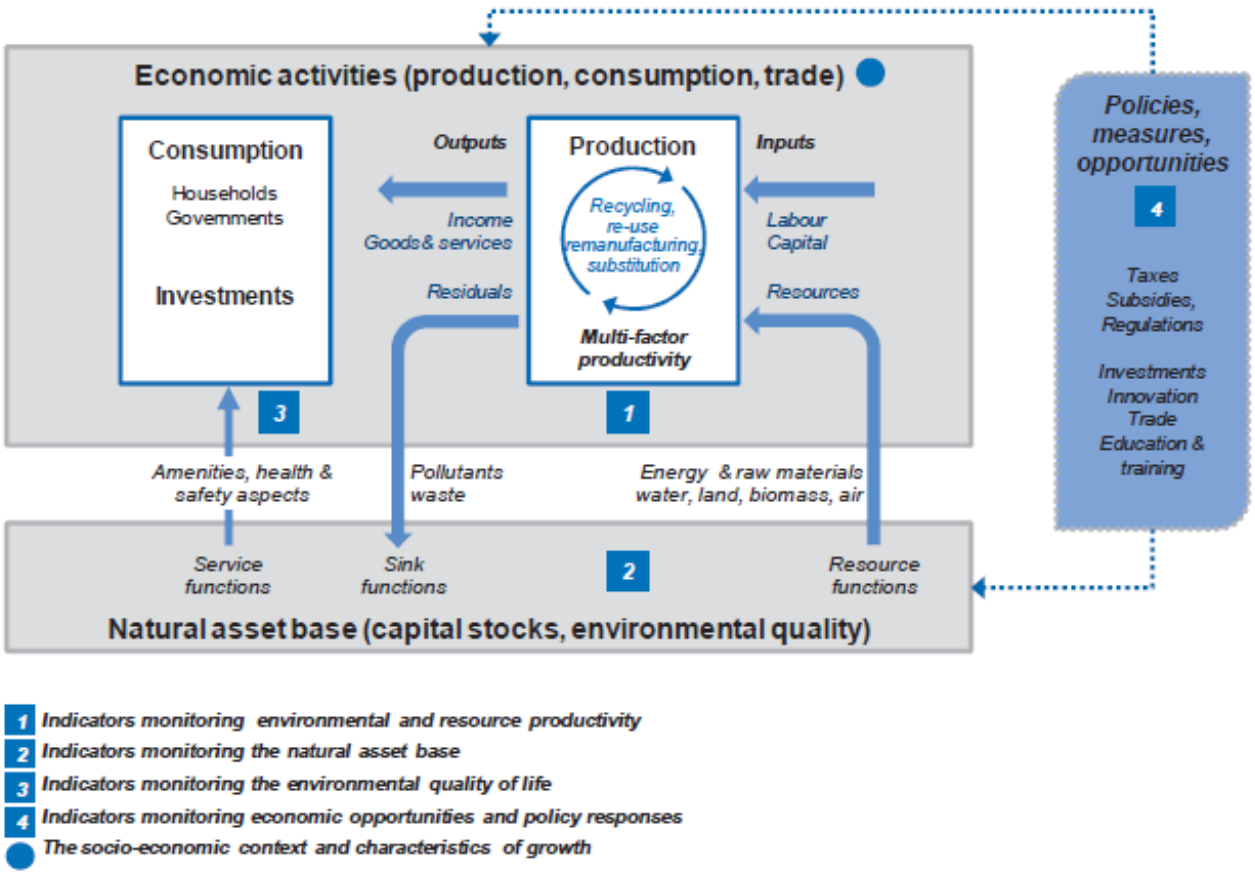
Green Budget Europe Annual Conference 2014
RECOVERY, JOBS AND SUSTAINABLE PROSPERITY
A new agenda for Green Fiscal Reform in Europe
Brussels, 5 November 2014

RATIONALE AND DESIGN OF A GREEN FISCAL REFORM IN EUROPE

Edoardo Croci
IEFE, Università Bocconi, Milan



Relation between the economy and the environment



Causes of unsustainable development:

- Extraction of non renewable reources
- Immission of non absorbable pollutants in the environment
- Reduction of the capacity of the environment to provide ecosystem services

Remedies pass through a correct economic valuation of the environment.

Source immagine: OECD (2011), Green Growth Strategy Synthesis Report

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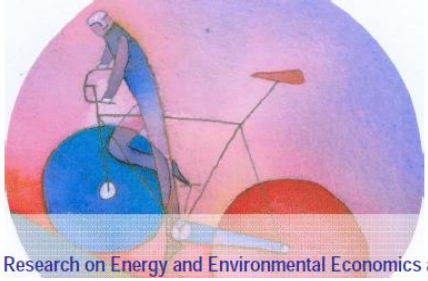
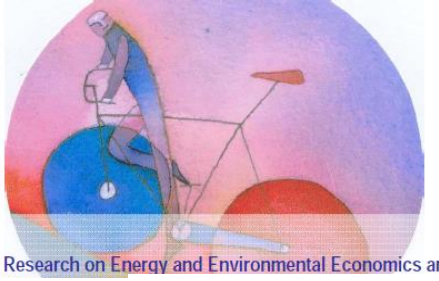


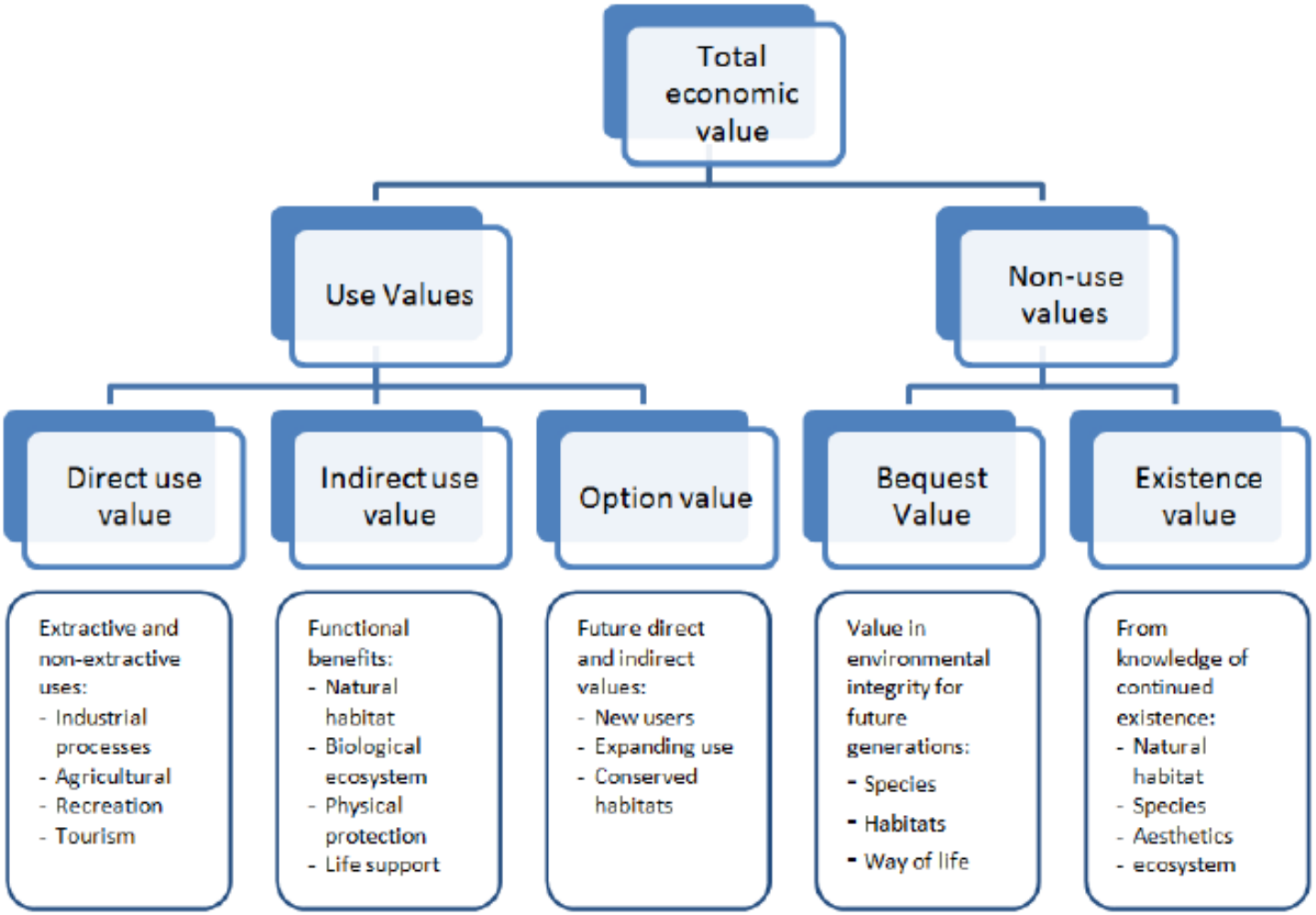
Elements of a strategy for a Green Economy after Rio +20

- **To measure damages to and services provided by the environment** through appropriate economic methodologies and indicators (beyond the GDP)
- **To decouple economic growth by environmental impacts (increase resource efficiency)**
- **To use market instruments** to internalize externalities, so that prices fully reflect scarcity of natural resources providing the right signals to producers and consumers

Need of a Green Fiscal Reform



Economic values provided by the ecosystem



Source: Draft report of Joint of UNECE, Eurostat, OECD task force on measuring sustainable development (2012)

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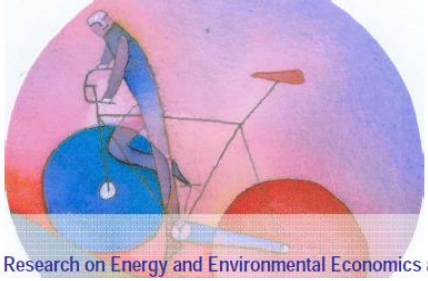


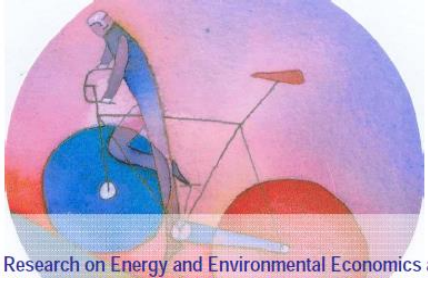
Resource Efficiency in European policies

2010→ 7 Flagship Initiative in the **2020 European Strategy**

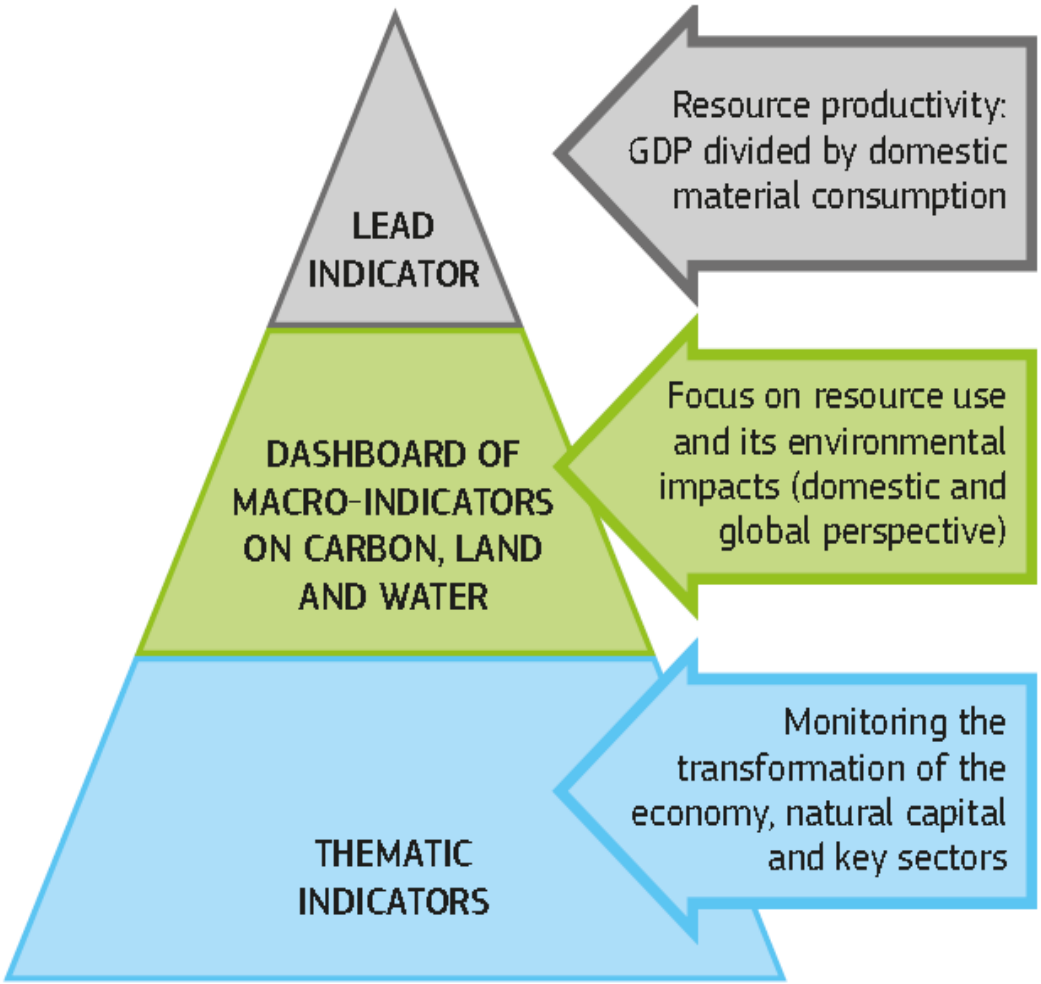
2011→ Launch of a **Flagship Initiative for a Resource-efficient Europe**. The strategy aims at decoupling between economic growth and impact on environment.

2 Roadmaps implement the Strategy:

- **Roadmap to a Resource Efficient Europe**
- **Roadmap for moving to a Competitive Low-Carbon Economy**



Indicators in the Roadmap to a Resource Efficient Europe



Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

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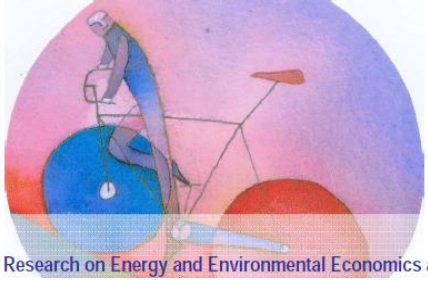
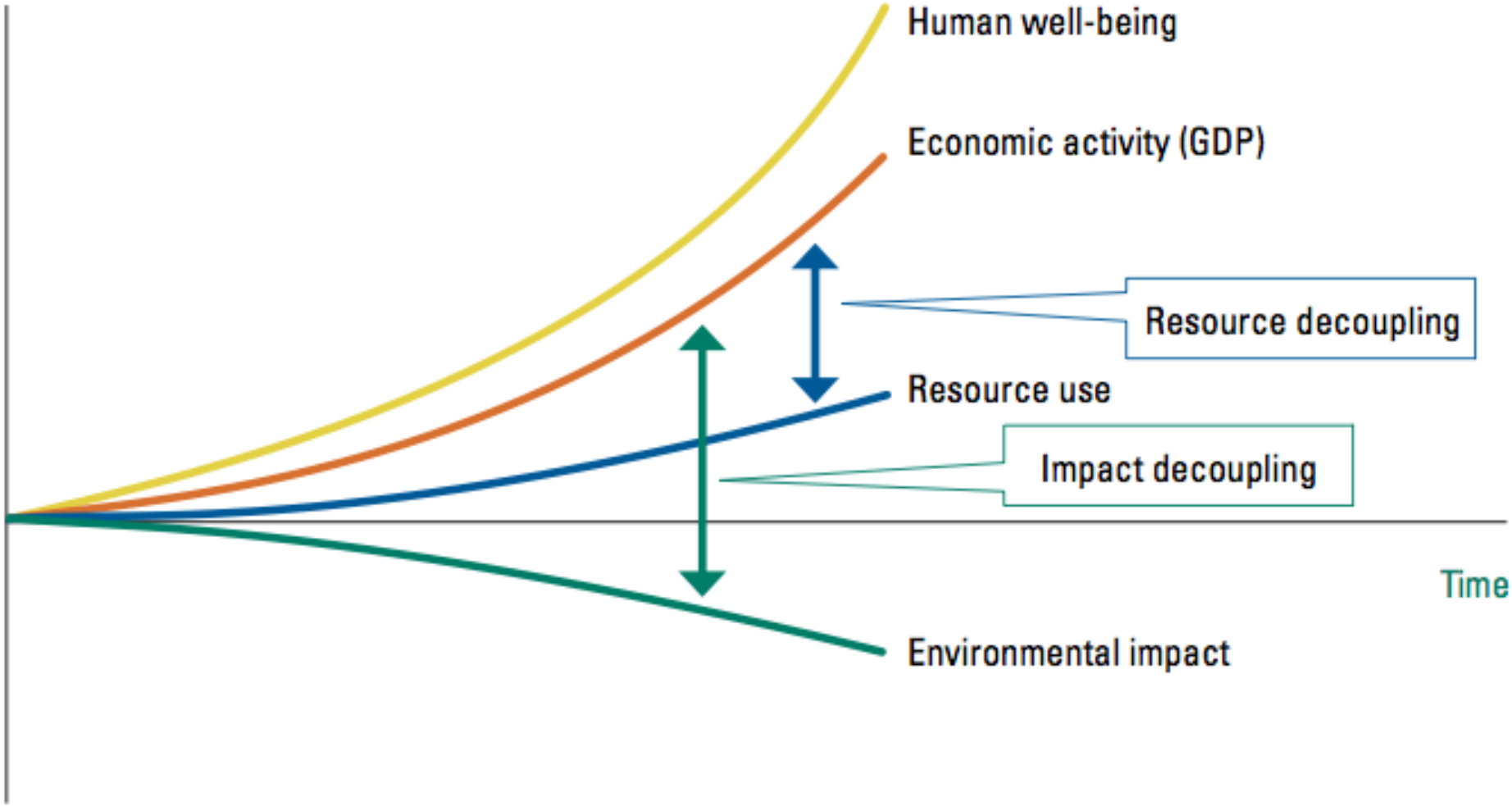
Indicators for Resource Efficiency

Theme	Sub theme	Indicator	Timeliness	Source
Lead indicator	Resources	Resource productivity	2011	Eurostat
		Domestic material consumption per capita	2011	Eurostat
Dashboard indicators	Carbon	Greenhouse gas emissions per capita	2011	EEA
		Energy productivity	2012	Eurostat
		Share of renewable energy in gross final energy consumption	2012	Eurostat
	Land	Built-up areas	2012	Eurostat
	Water	Water exploitation index	2007	Eurostat
		Water productivity	2007	EEA
Transforming the economy	Turning waste into a resource	Generation of waste excluding major mineral wastes	2010	Eurostat
		Recycling rate of municipal waste	2012	Eurostat
	Supporting research and innovation	Eco-innovation index	2012	Eco-innovation Observatory
	Getting the prices right	Environmental tax revenues - % of total revenues from taxes and social contributions	2012	Eurostat
Nature and ecosystems	Biodiversity	Index of common farmland bird species	2011	PECBMS
	Safeguarding clean air	EU urban population exposed to PM_{10} concentrations exceeding the daily limit value on more than 35 days in a year	2011	EEA
	Land and soils	Soil erosion by water - area eroded by more than 10 tonnes per hectare per year	2006	JRC
Key areas	Ensuring efficient mobility	Pollutant emissions from transport	2011	EEA
	Addressing food	Daily calorie supply per capita by source	2009	Eurostat/ FAO

Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights



Decoupling



Source: UNEP (2011), “Decoupling. Natural resource use and environmental impacts from economic growth”.

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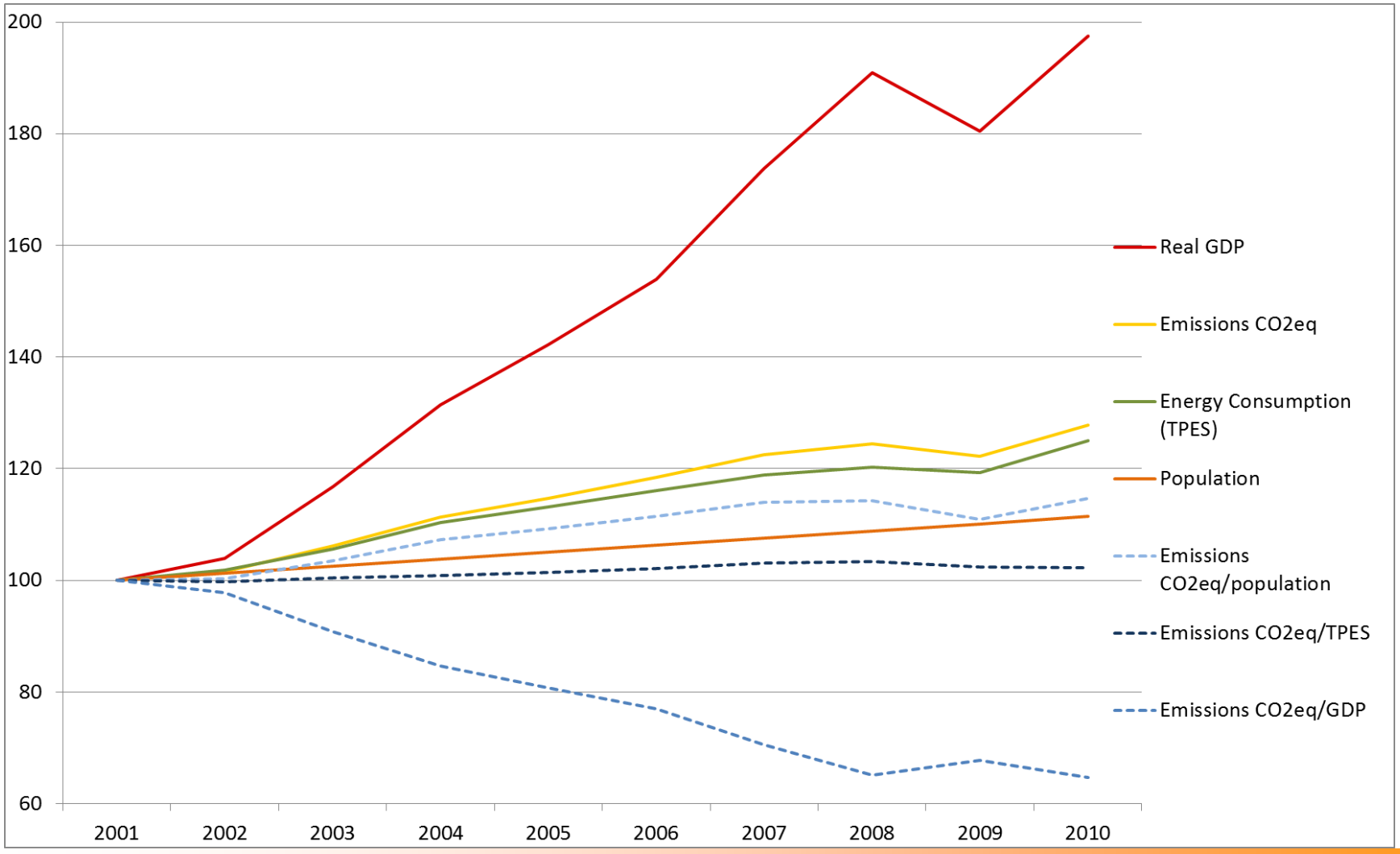
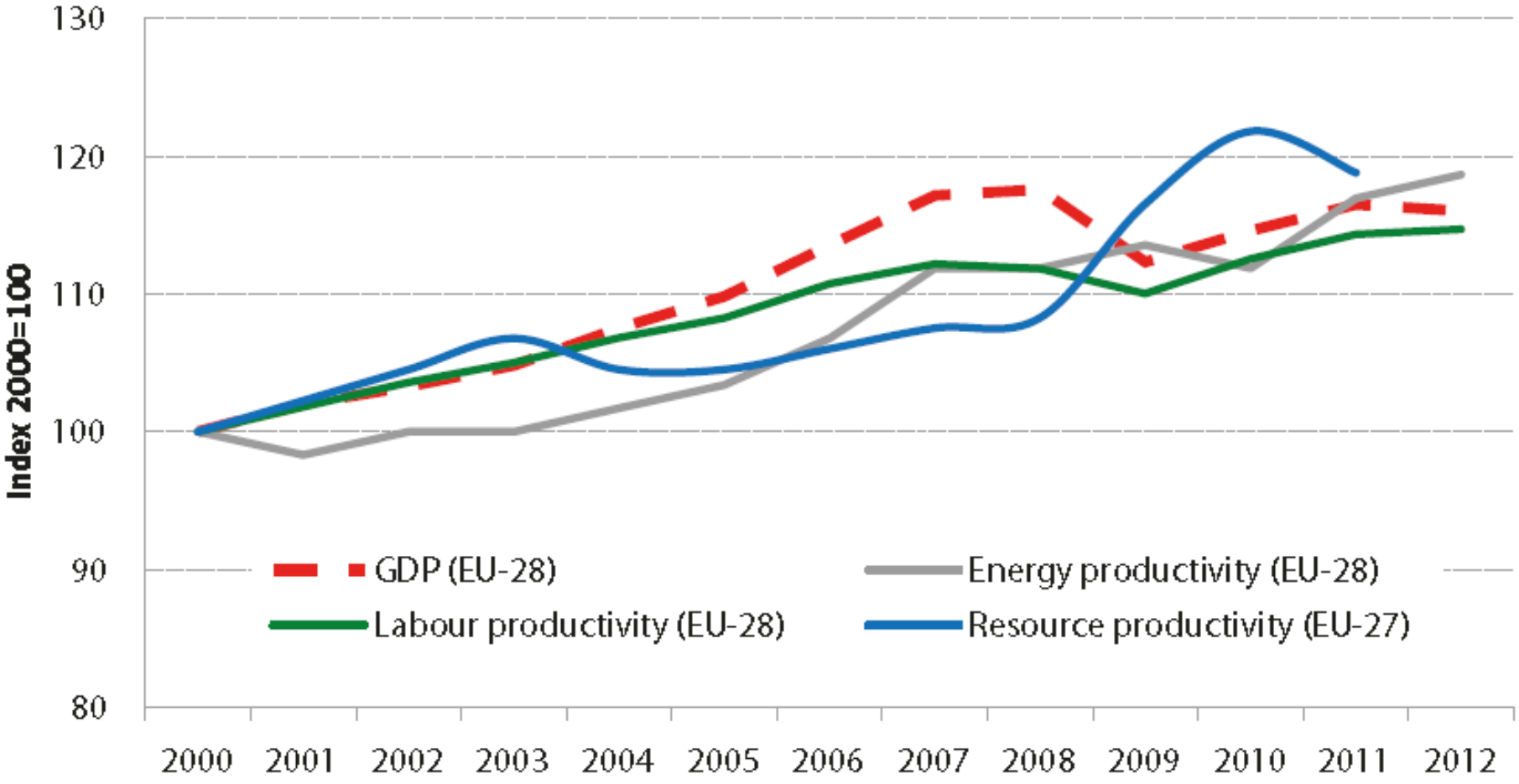
Global Decoupling (2001-2010)



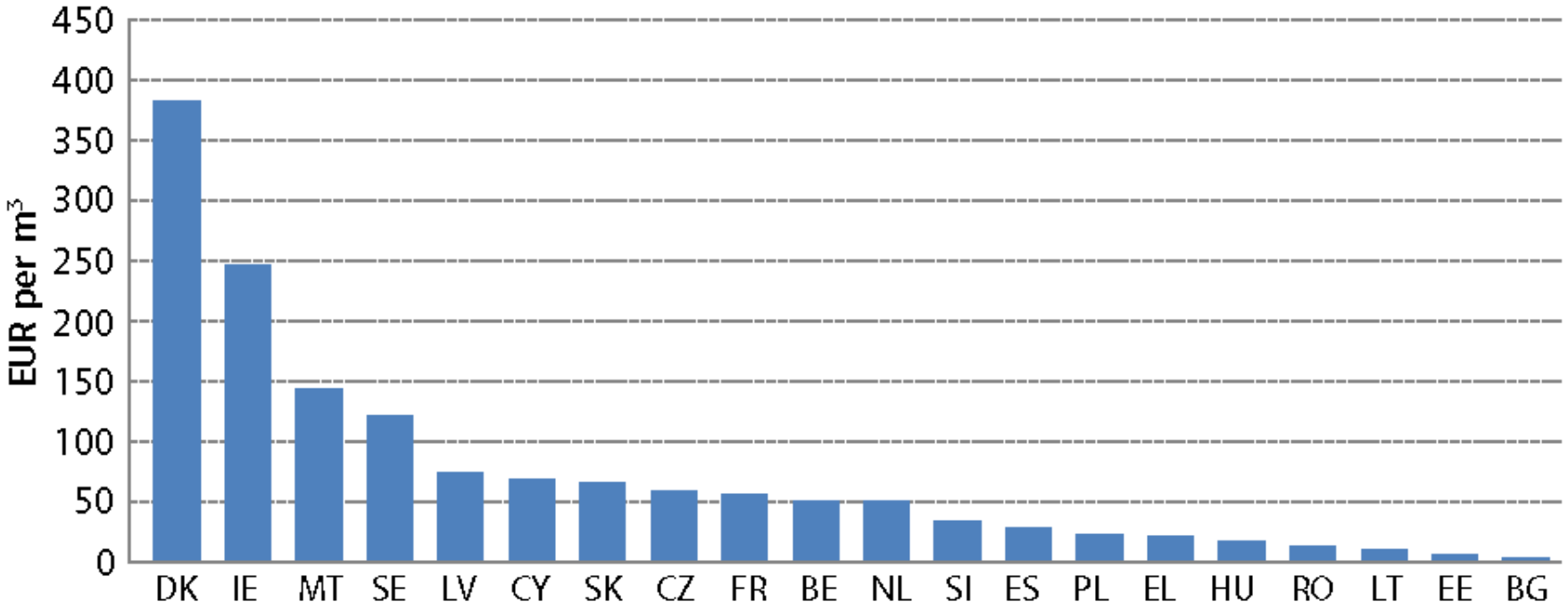
Source: IEFE-Bocconi elaboration on IEA, OECD, IMF and World Bank data (2014)

Main productivity indicators for Europe (2000-2012)



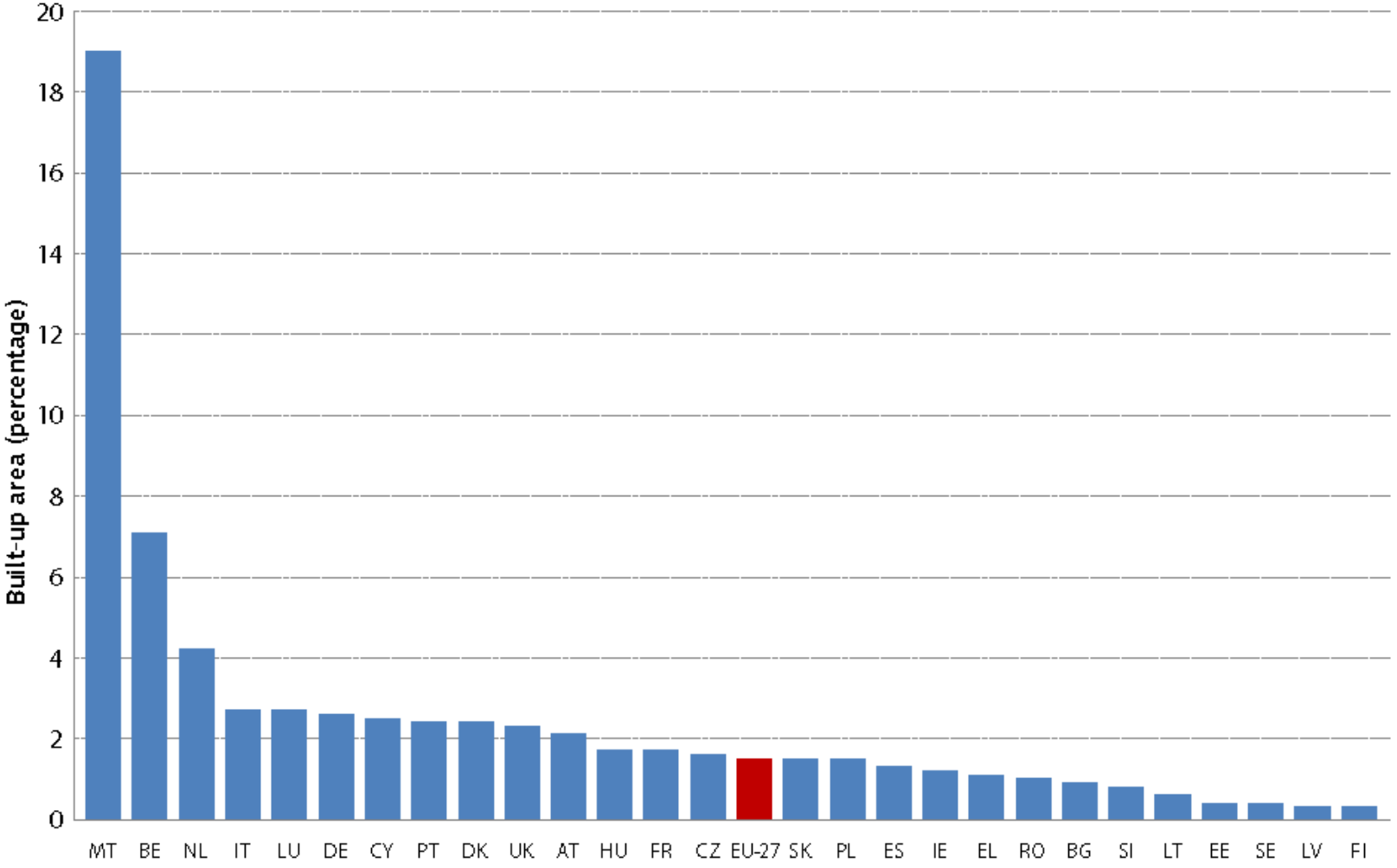
Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

Water productivity (GDP generated per m^3 of abstracted water) in Europe (2007)

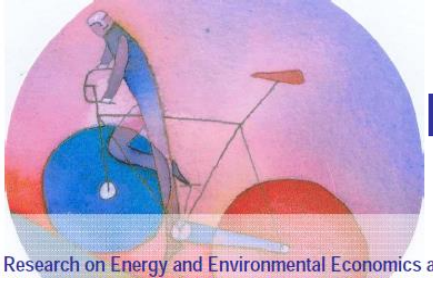


Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

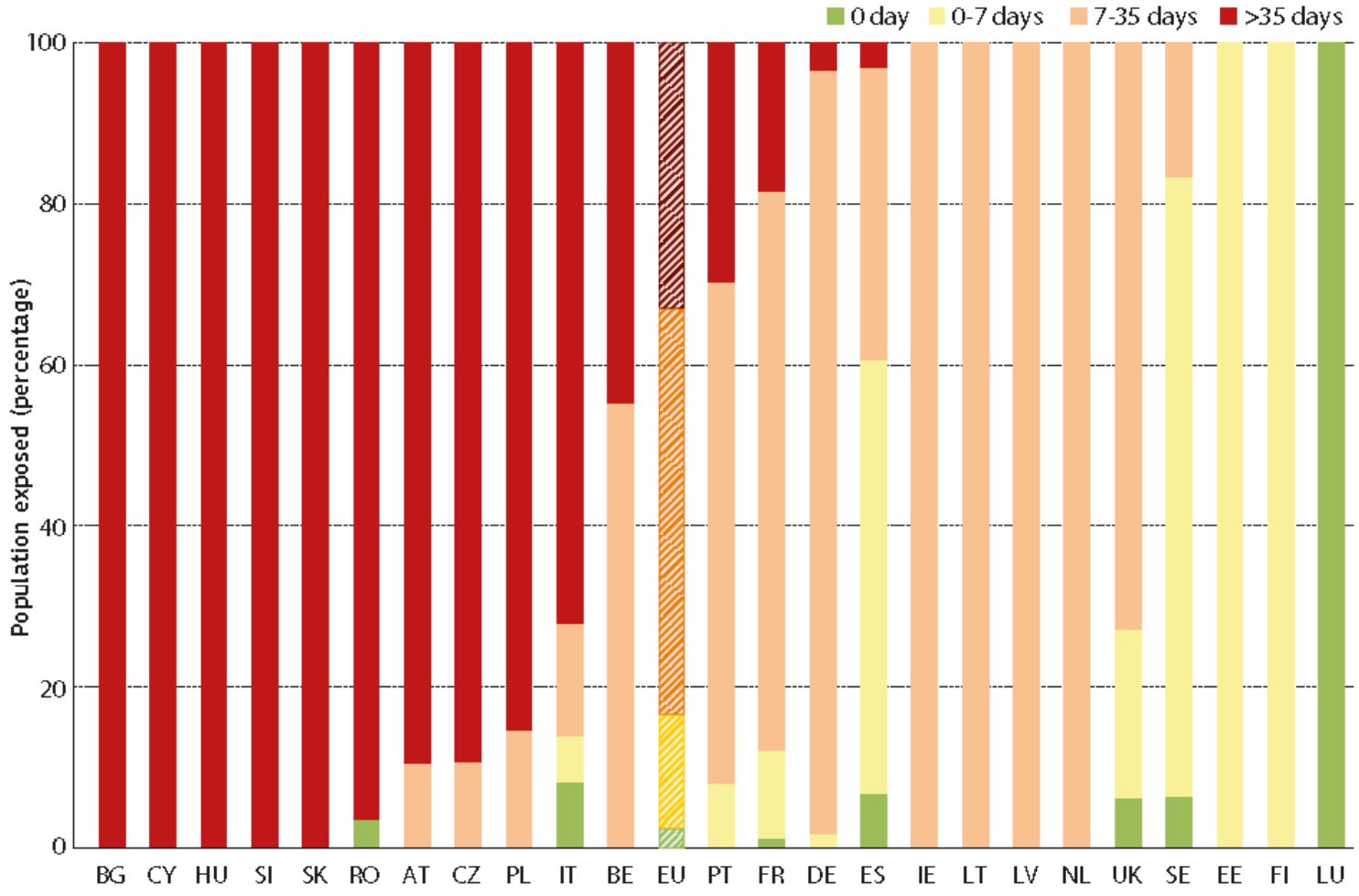
Share of built-up area in Europe (2012)



Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

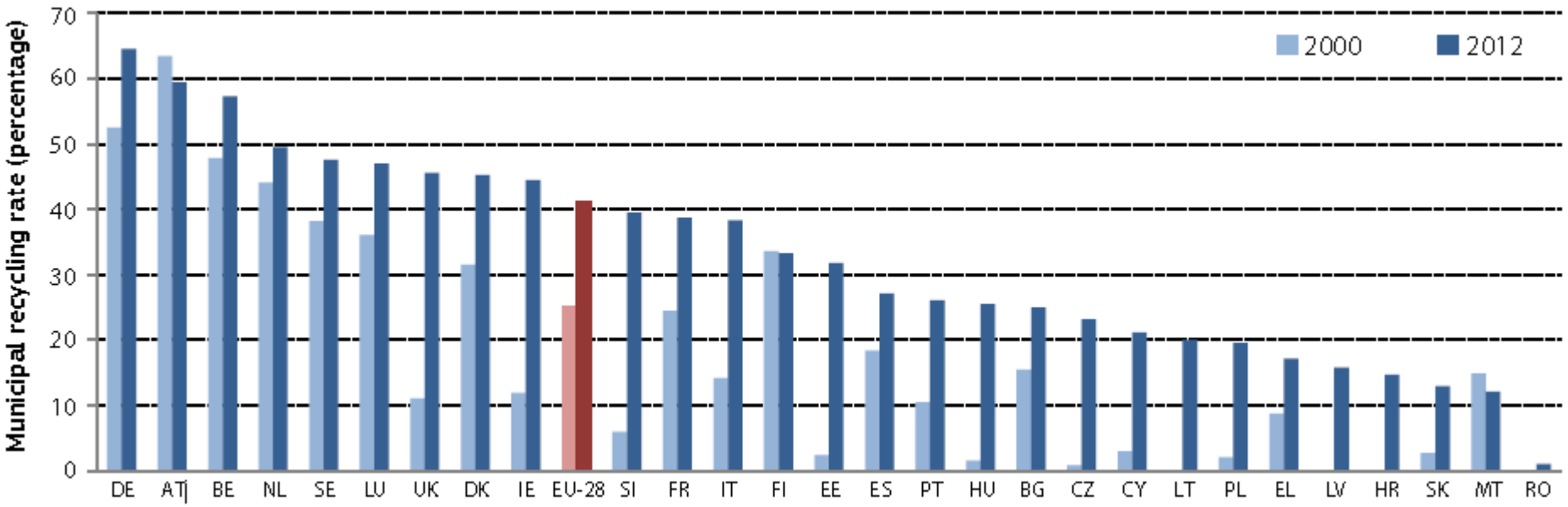


Exposition to PM10 in Europe (2011): % of urban population resident in areas where daily concentration limits are exceeded



Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

Recycle rate of urban waste



Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights

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Instruments for a transition to a resource efficient and low carbon economy

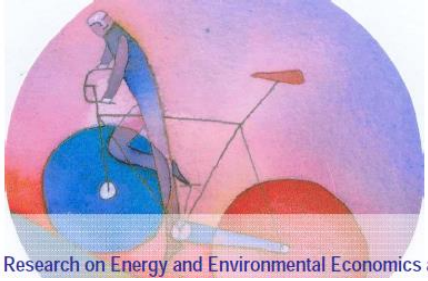
Economic instruments applied to the environment are necessary to speed up and efficiently run the **transition towords a resource efficient and low carbon European economy**.

A **Green Fiscal Reform** (GFR) refers to the use of a mix of the following economic instruments:

- **Taxes, Charges, Duties**
- **Tariffs of public services**
- **Emission Trading systems**
- **Removal of environmentally harmful subsidies**
- **Territorial compensations**

GFR is coherent with the main principles guiding European environmental policies:

- **Polluter Pays principle**
- **User Pays principle**



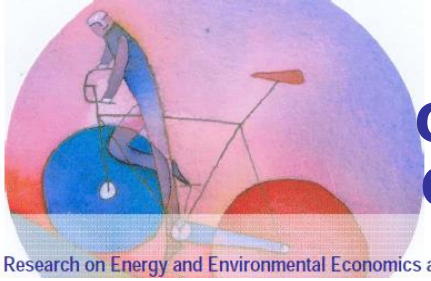
Use of revenues

Fiscal instruments - including Emission Trading systems envisioning auction of allowances and the removal of environmentally harmful subsidies - have the advantage of generating public revenues, which can be used to:

- **Reduce fiscal burden on labour and income**
- **Reduce budget deficit**
- **Stimulate innovation** (through incentivation schemes)
- **Specific «scopes»** (providing public goods)

Specific national conditions and goals should guide alternatives.

Environmental taxes can be neutralized, even sectorally or geografically with regard to the «categories» of payers of the tax.



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Opinion of the European Economic and Social Committee on the Market-based instruments towards a resource efficient and low carbon economy in the EU – 25/3/2014

"Environmental fiscal reform (EFR) aims to use market mechanisms to address negative externalities linked to the use of natural resources: this is done in a budgetary neutral way by lowering tax burdens on labour. At the same time, EFR implements the polluter-pays principle more systematically, through phasing out environmentally harmful subsidies and shifting taxation away from labour towards resource use. As a result, it can **correct market failures, improve economic efficiency, help develop new industries that provide sustainable and local jobs, create a clear, predictable environment for eco-innovative investments and contribute to restoring fiscal stability after the recession by raising additional revenues**. (..)

Despite the success of environmental taxes in some Member States, ETR does not live up to its full potential of bringing a broad change in fiscal policies. It should be stressed that ETR offers **enormous opportunities**, particularly as part of measures to recover employment. ETR should be a **cornerstone of the necessary general restructuring of government finances aiming at fiscal consolidation**. (..)

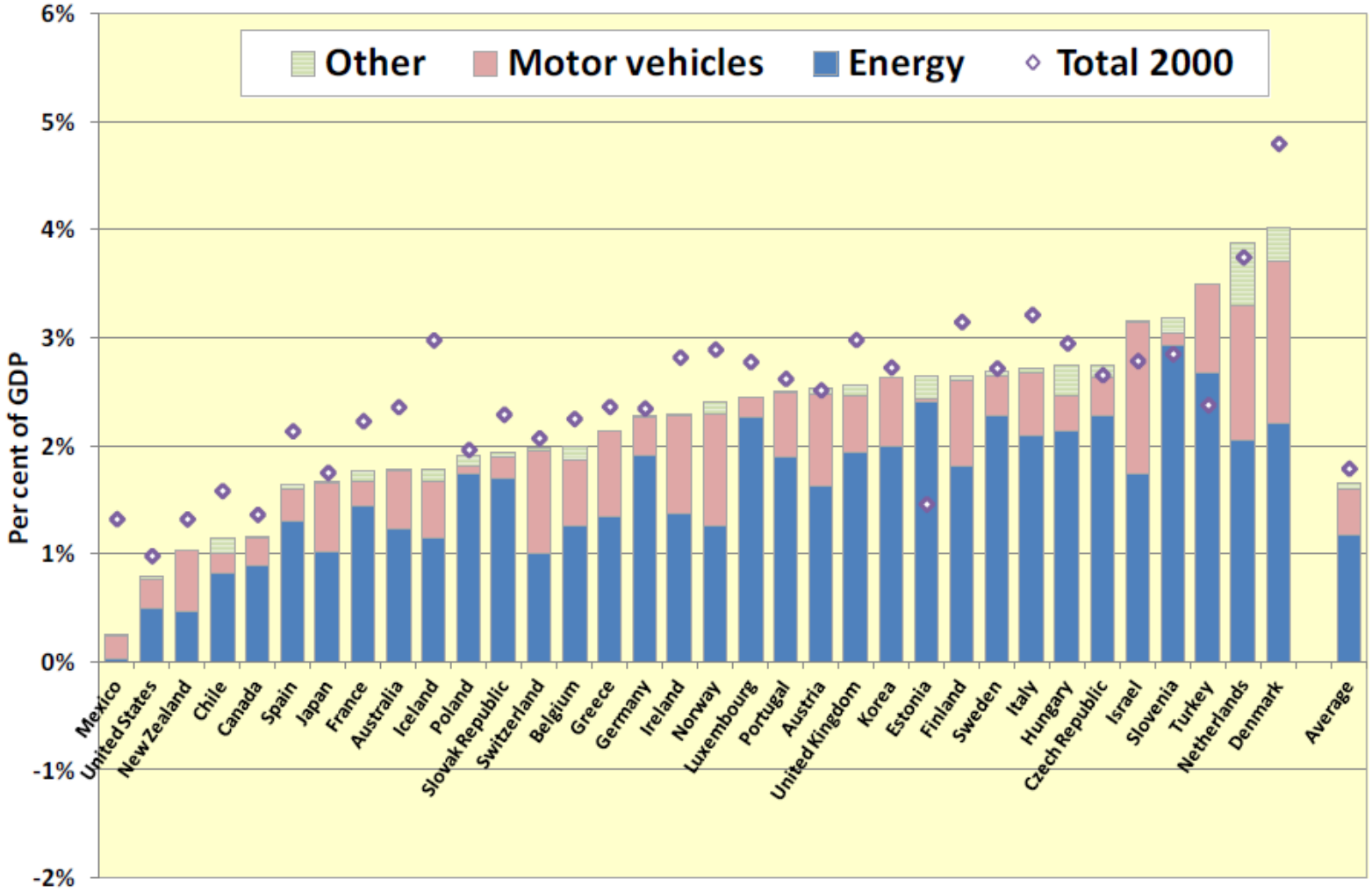
ETR can also **help in recovery from fiscal deficits**. Environmental taxes can contribute to fiscal consolidation while having a less negative impact on economic growth and employment than other direct or indirect taxes such as income tax or VAT."

Revenues from environmental taxation on GDP(OECD Countries in 2009)

High potential:

Revenues account for less than 2% of GDP.

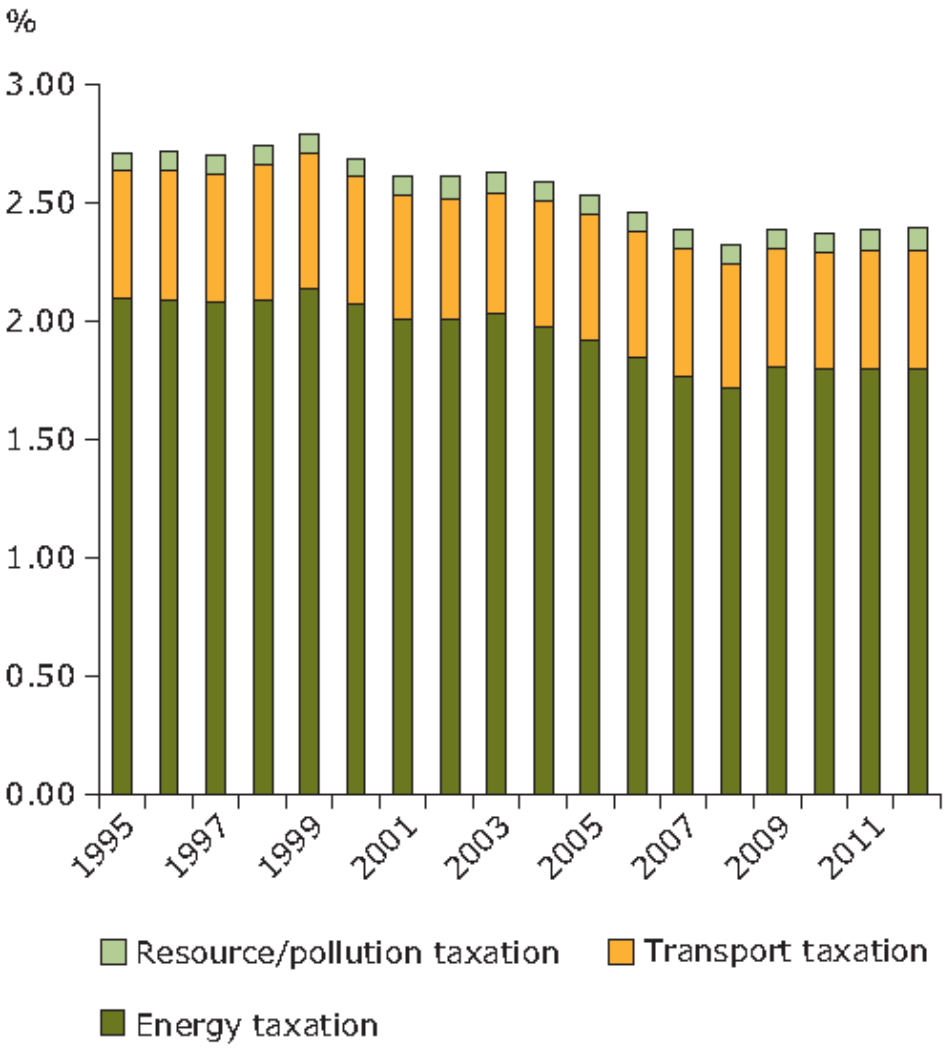
Revenues don't fully cover externalities.



Source: OECD (2011), Environmental taxation. A Guide for Policy Makers

Revenues from environmental taxation on GDP in EU-27

Revenues account for less than 3% of GDP.



Source: Eurostat, 2014

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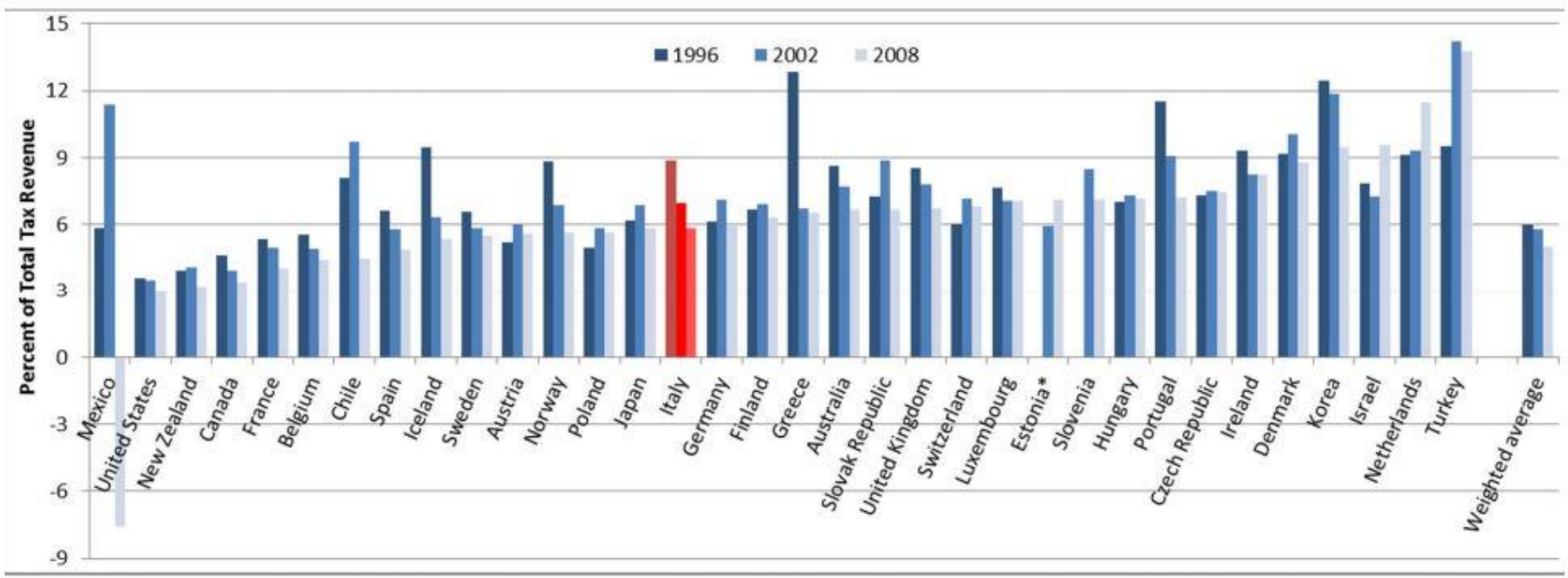
Share of revenues from environmental taxes on total tax revenues in OECD Countries

High Potential: revenues account for less than 6% of total tax revenues; in most Countries the share of environmental taxes is decreasing.



Source: OECD (2010), «Taxation, Innovation and the Environment»

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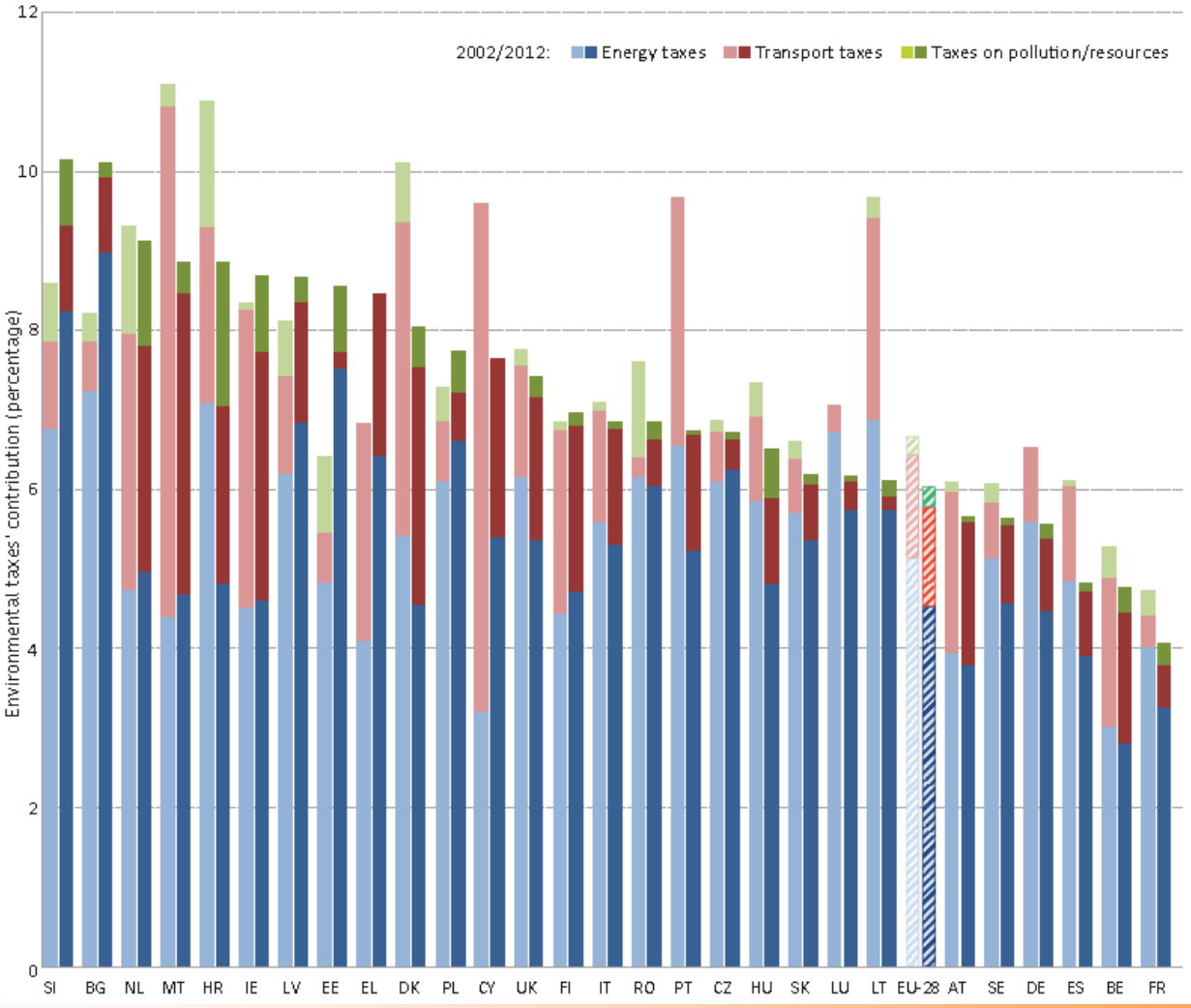
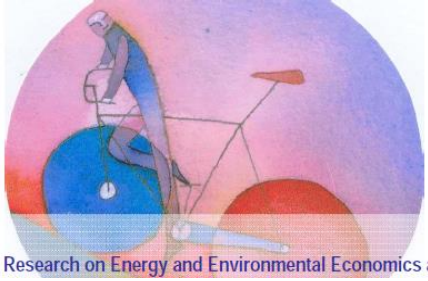
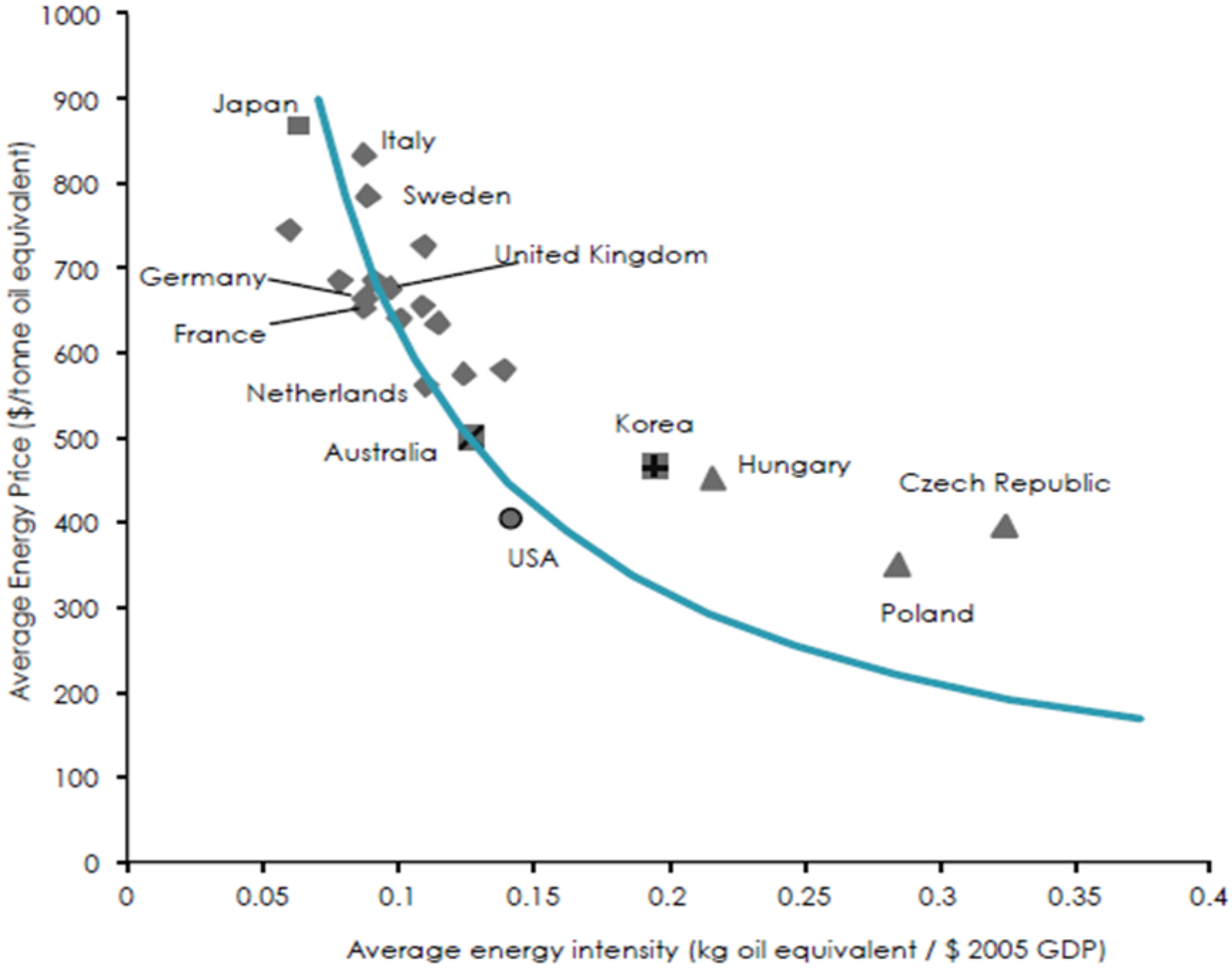
Share of revenues from environmental taxes on total tax revenues in European Countries



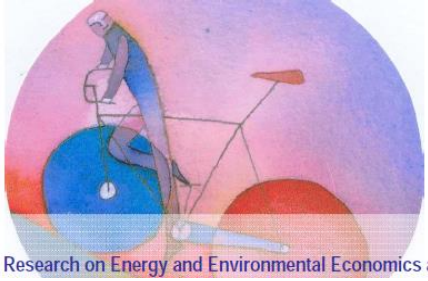
Source: European Commission (2014), Resource Efficiency Scoreboard 2014 Highlights



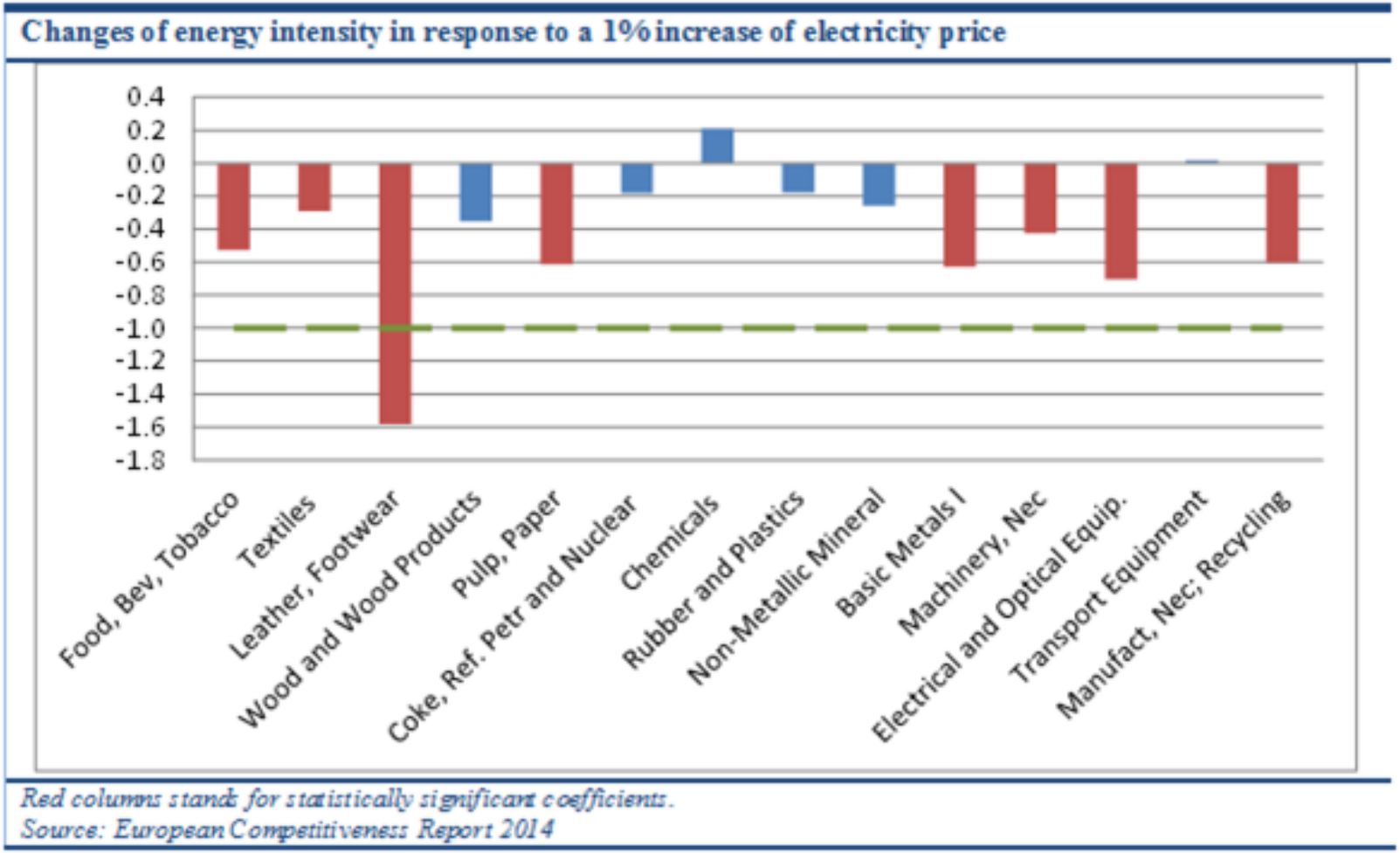
Energy intensity and average price of energy (1990 – 2005)



Source: Climate Strategies (2014)



Change in energy intensity in response to a 1% increase of the price of electricity



Source: European Commission (2014), European Competitiveness Report 2014. Helping Firms Grow, Commission Staff Working Document SWD(2014)6319 final

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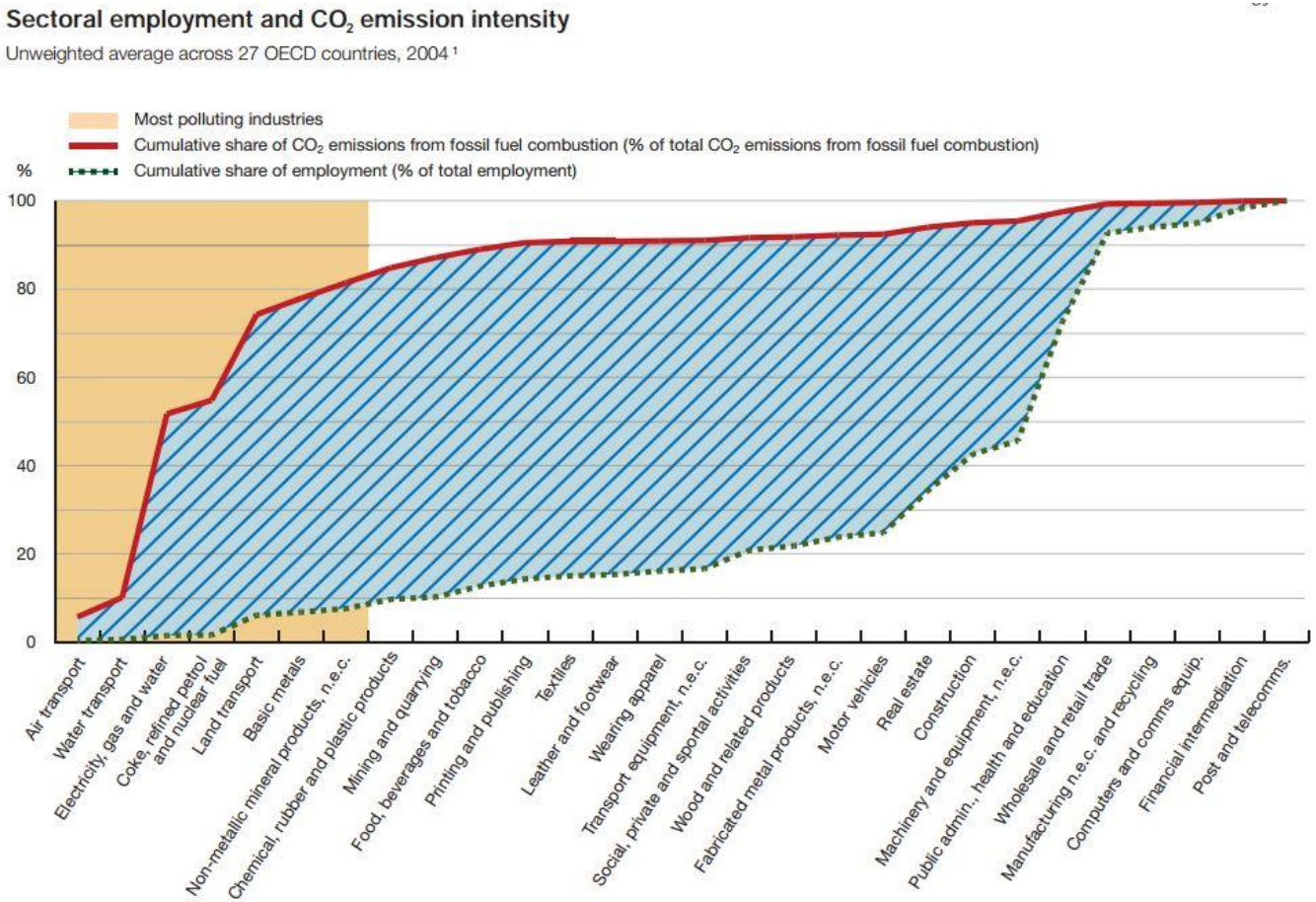
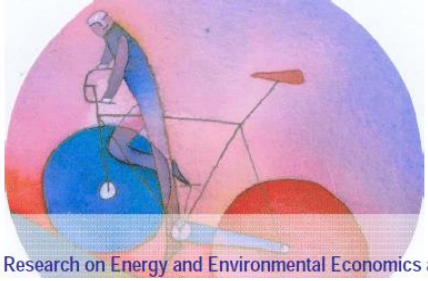
CO2 emission intensity and employement by sector (27 OECD Countries in 2004)

Research assesses job creation impact of GFR. Moreover affected sectors are mostly capital intensive.



Source: OECD (2011), Towards green growth. A summary for policy makers



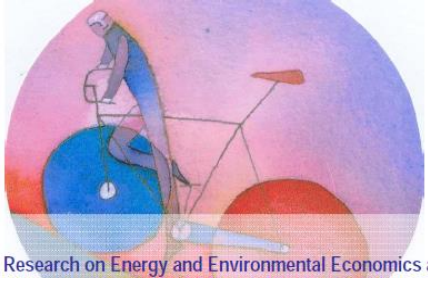
Levels of government involved

A transition of the European economy towords a green economy requires action at multiple levels of government. A Green Fiscal reform should also be implemented at different levels (European, national, subnational/ local).

The level of action should be chosen in order to follow principles of **efficiency, subsidiarity, proportionality** and to safeguard **market competition:**

•correspondance between the responsability of environmental policy implementation and tax imposition in the territories and sectors involved,
•decisions taken as close as possible to citizens
•coherence between instruments and goals
•avoidance of distortions of competition

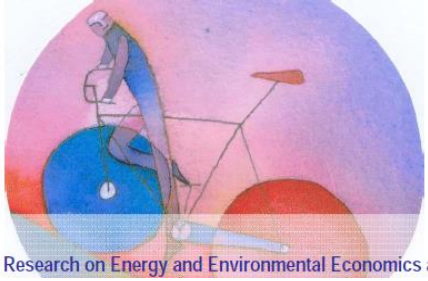
In some cases the level at which the framework is set and rules are designed can be different from the level of implementation and management of action.



Criteria for environmental fiscal instruments better managed at the EU level

In general European action is required when **externalities have global or sovranational features**.

Examples:
•European Emission Trading System: progressively managed at the EU level (approval of NAPs, allocation of allowances)
•Eurovignette: framework and rules set at the European level, voluntary implementation at the national level
•(proposed) Carbon tax: to avoid distortion to competition



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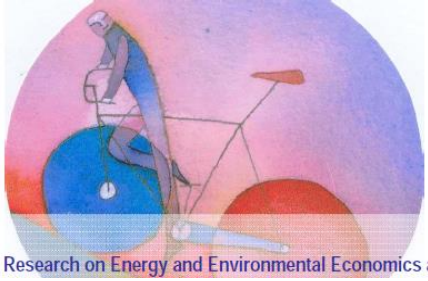
Criteria for for environmental fiscal instruments better managed at the national level

- Regulation and policy-making on natural resources conservation and on quality of the environment (air, water, land), as well as on energy and transport is in most cases a **national competence**
- The powers of national government has been eroded by: a) the growing relevance of European regulation, b) the increase of power of regional and local governments
- It is questionable which is the most appriopriate level to manage fiscal instruments in these areas, even if national governments mantain a prevalent role in tax imposition

Examples

- Emission, discharge and waste (including landfill) taxes
- Noise taxes (airports)
- Packaging taxes
- Toxic substances taxes
- Energy taxes (Fuel taxes, Electricity taxes)
- Vehicles Plate registration taxes
- Motorway tariffs



Criteria for for environmental fiscal instruments better managed at the local level

- Many externalities are characterized by **local impact**
- **Local authorities** are **responsible** for many aspects in the **planning and managing of territory, mobility, public services**
- In some cases local authorities can provide a better monitoring of local activities generating externalities

Examples

- Taxes on the use of public space
- Taxes on street advertising
- Parking fees
- Urban road pricing – Congestion charges – Low emission zones
- Taxes on land use and development – Taxes new and existing buildings – Markets for construction rights
- Taxes on emissions from space heating – Local emission trading systems
- Tariffs for water abstraction
- Contributions to new infrastructures of local interest (example: new metros, new parks) - Payment for Ecosystem Services

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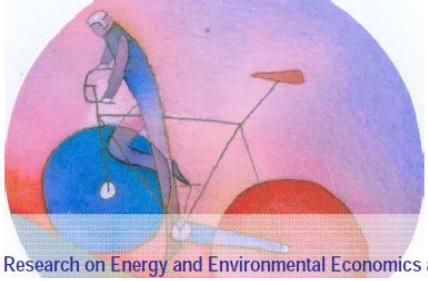

The case of Italy: some of OECD reccomendations (2013)

- Implement a comprehensive **environmental fiscal reform** that: i) **removes** special **tax provisions** that are environmentally harmful and economically inefficient; ii) **restructures energy and vehicle taxes;** iii) considers reforming existing, or introducing new **environmental taxes on resource use and pollution**.
- Introduce a mechanism to systematically screen existing and **proposed direct and indirect subsidies** against their potential environmental impact.
- More systematically apply **economic instruments** (abstraction and pollution charges, and user fees) to support the **effective management and sustainable financing of water** resources at the level of river basins.
- **Restructure taxation of energy products** to explicitly include a **carbon tax component.**
- Rationalise the governance and management of the **incentive systems for energy efficiency and renewables.**
- Extend the use of **price-based mechanisms**, such as **pollution and congestion charges**, to reduce emissions from vehicle use in urban areas; **restructure vehicle taxation**, for both cars and heavy goods vehicles, to include components reflecting CO2 emissions and other environmental externalities.

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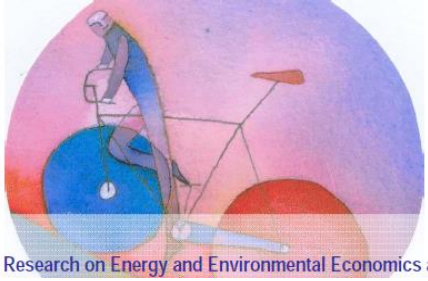

Conclusions

- Green Growth implies an economic transition towords a resource efficient and low carbon economy
- Decoupling of economic growth and environmental impact needs a correct valuation of the environment by markets
- A Green Fiscal Reform (GFR) is needed to efficiently internalize externalities
- Revenues generated by GFR can be used for different purposes. At parity of fiscal pressure, a GFR can foster employment and growth
- There is a high potential for GFR in OECD and European Countries
- All levels of government should be involved under clear criteria

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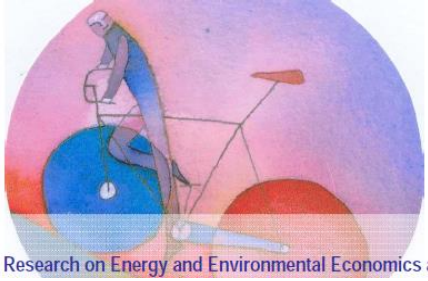

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edoardo.croci@unibocconi.it