



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

L'evoluzione della Fiscalità in coerenza con lo Sviluppo Sostenibile

Auditorium Ministero dell'Ambiente

Workshop 1 marzo 2019

Fiscalità e Cooperazione Internazionale

Aldo Ravazzi Douvan, capo economista

Ministero dell'Ambiente, DG Sviluppo Sostenibile / Sogesid AT

Presidente Comitato OCSE Esami Ambientali dei Paesi

Già Presidente Comitato OCSE Tassazione & Ambiente

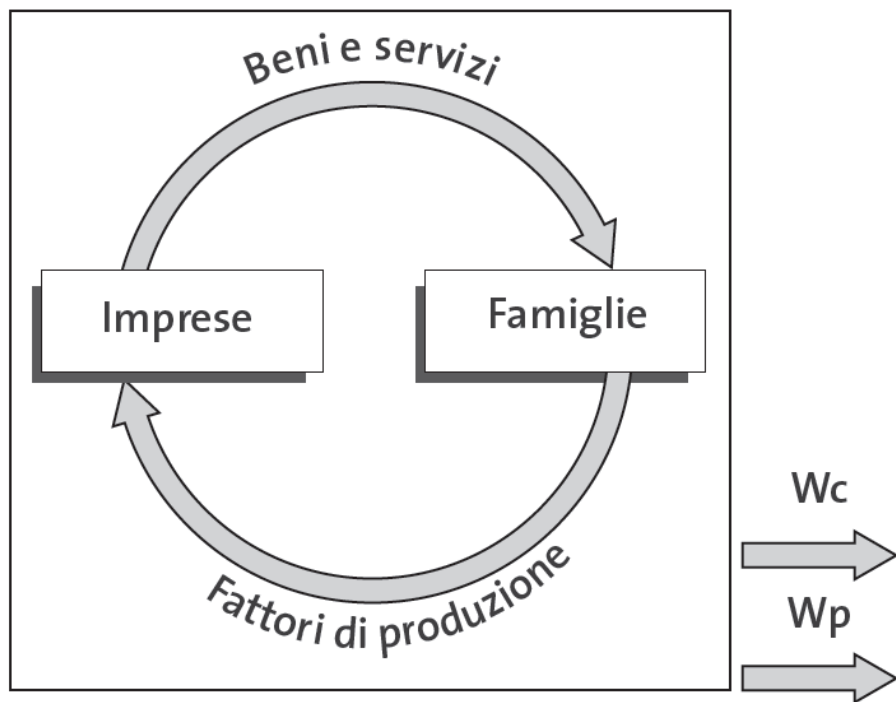
Presidente GBE Green Budget Europe

Rappresentante italiano all'IRP – International Resource Panel

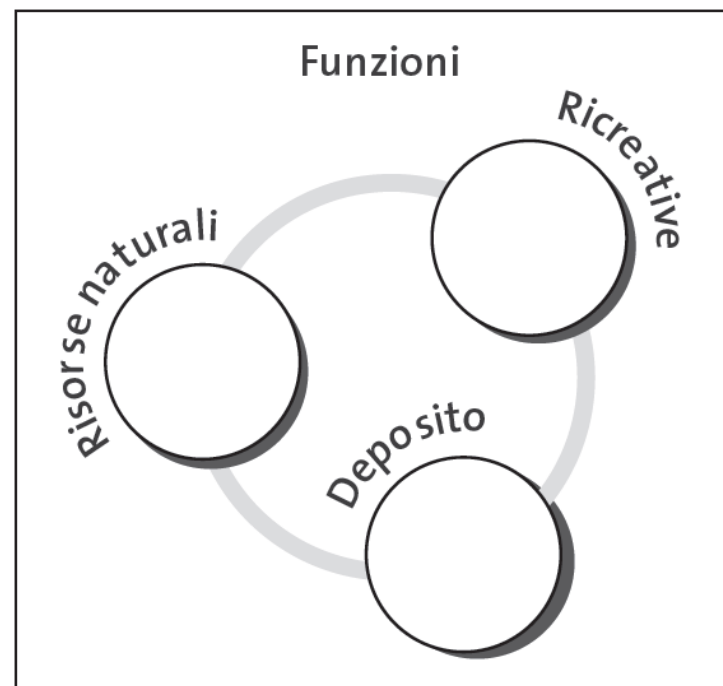
ravazzi.aldo@minambiente.it

SISTEMA ECONOMICO ED AMBIENTALE: PARADIGMA TRADIZIONALE

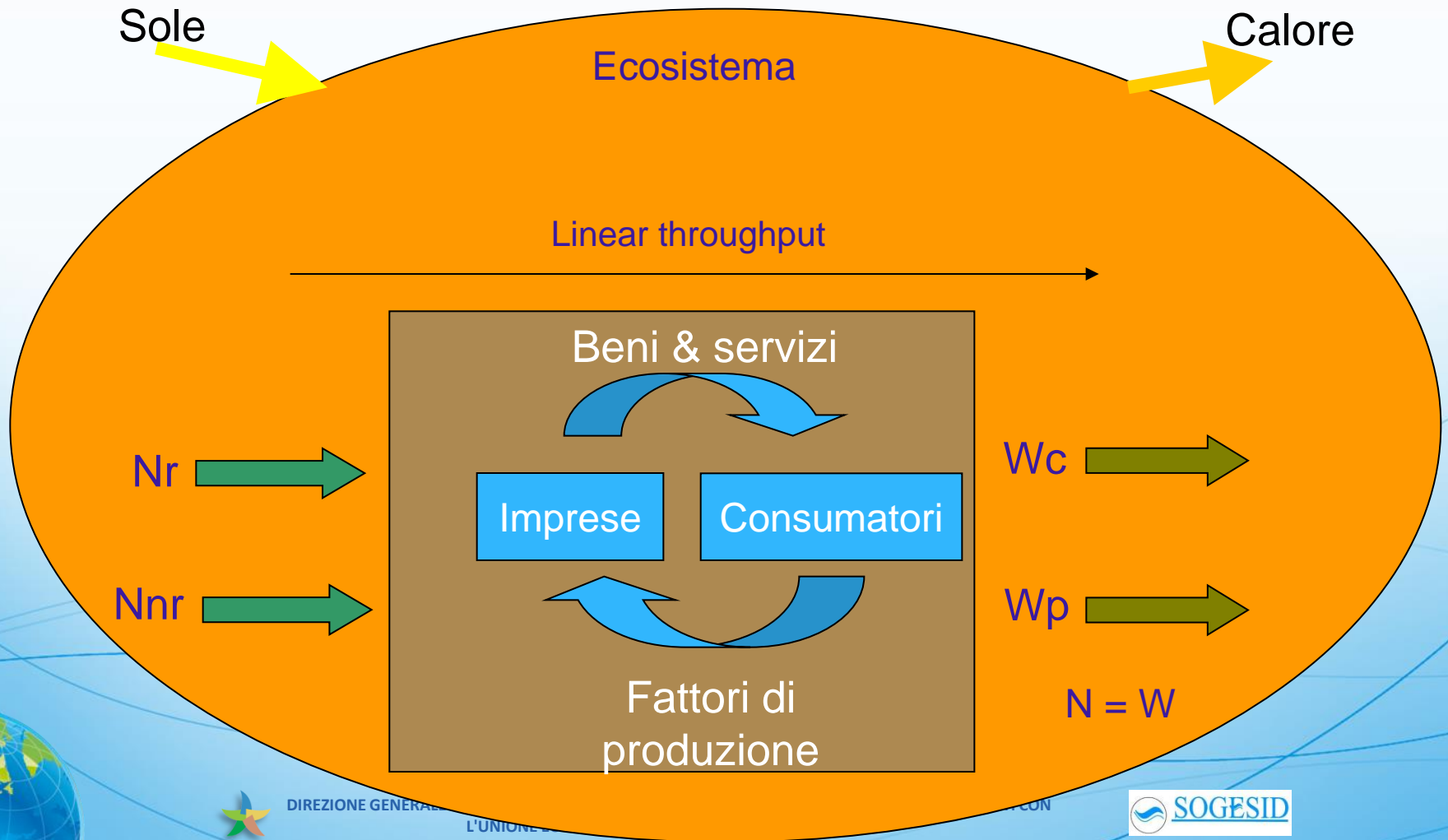
SISTEMA ECONOMICO



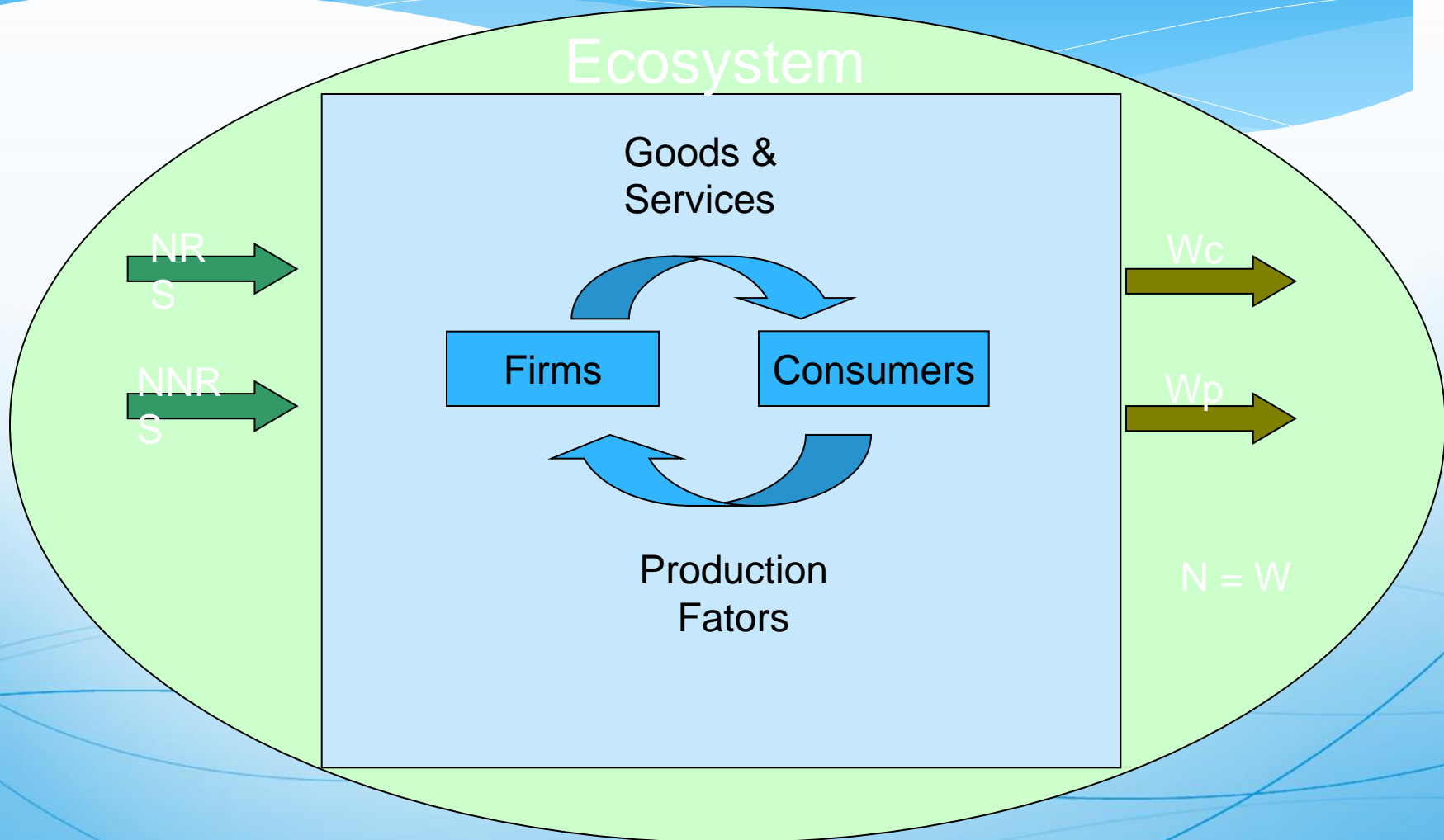
ECOSISTEMA



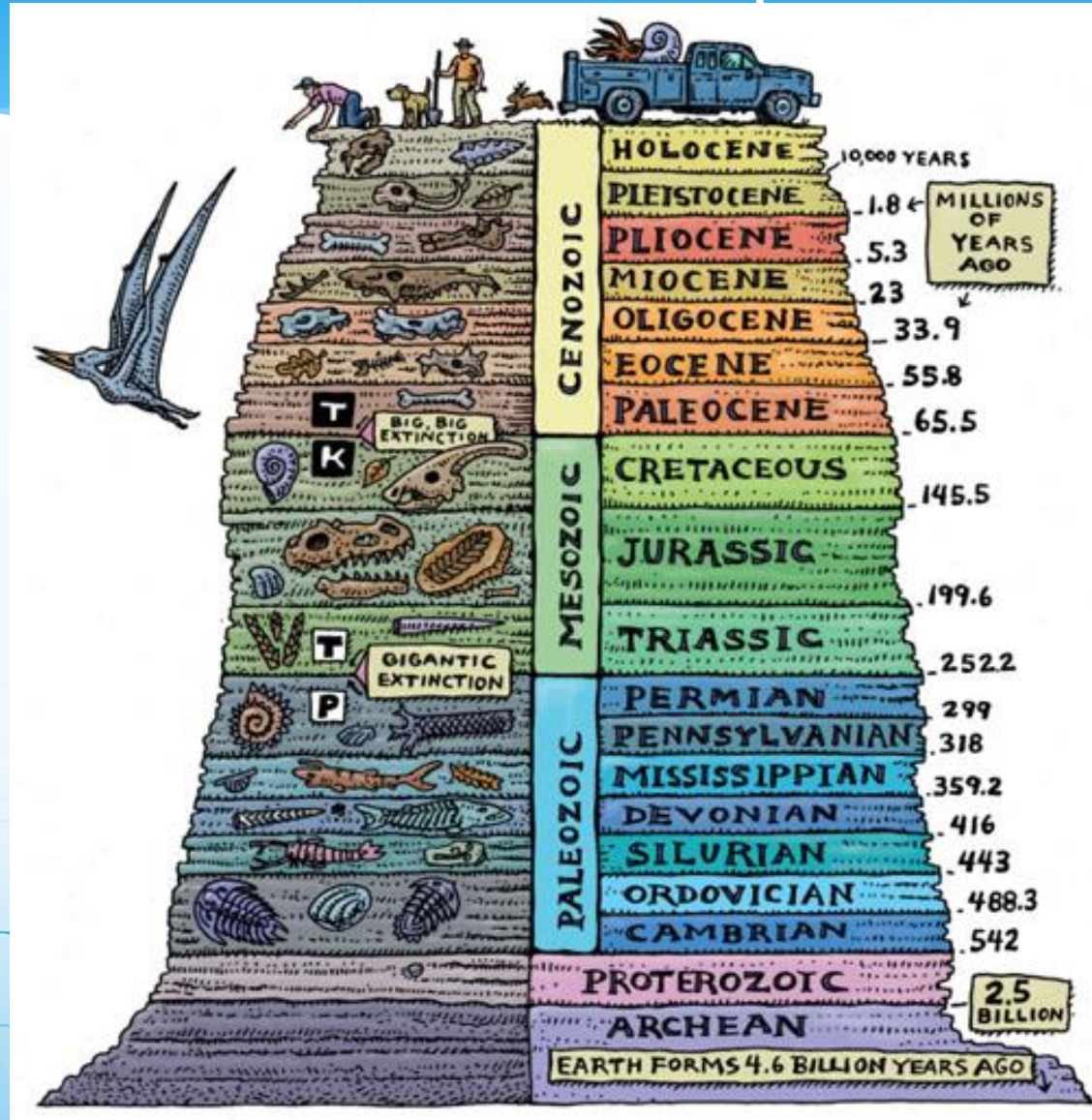
SISTEMA ECONOMICO ED AMBIENTALE: PARADIGMA «SOSTENIBILE» (DALY - LA CAMERA)



SOSTENIBILITA': DA MONDO VUOTO A MONDO PIENO

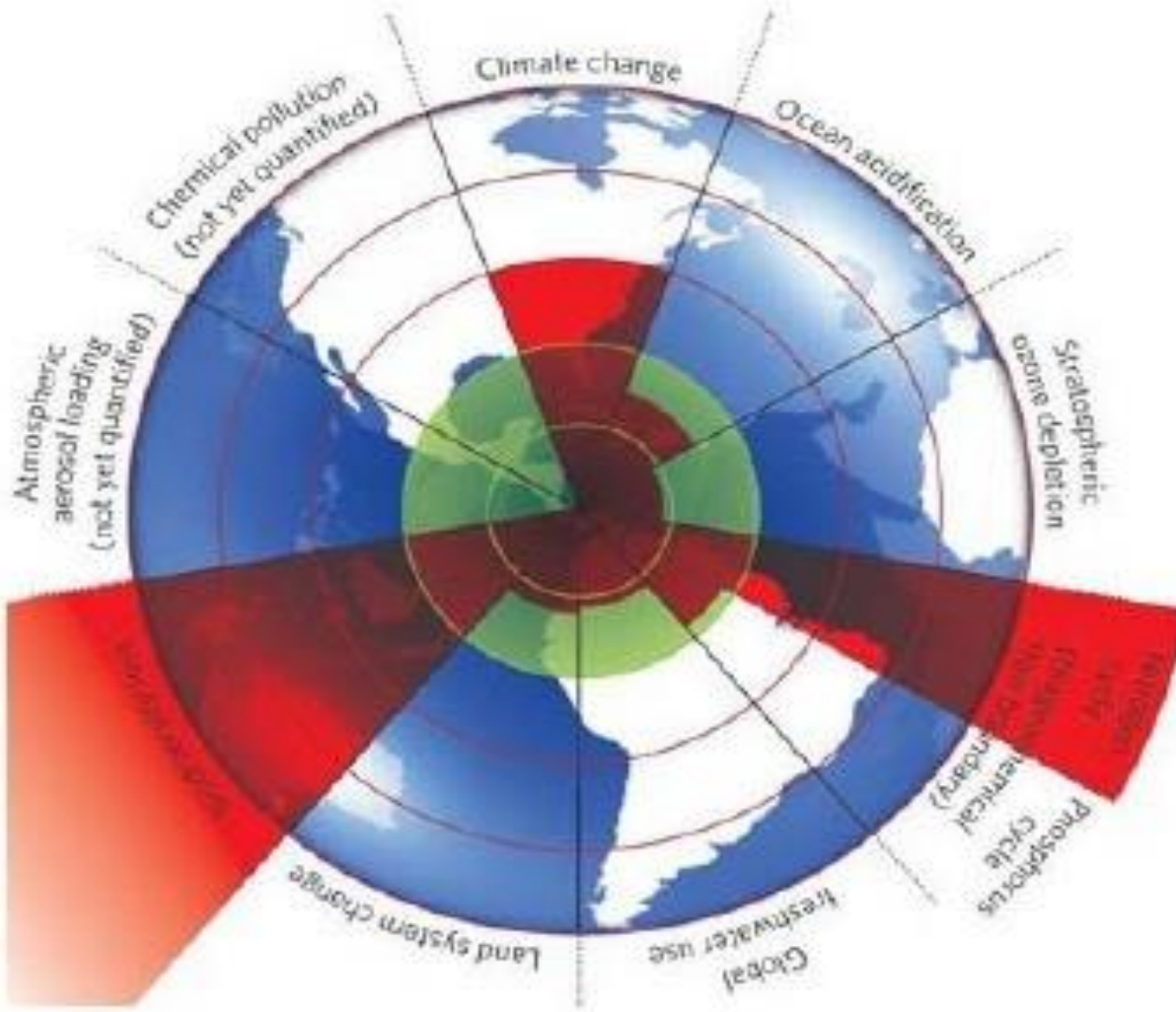


From Olocene to Anthropocene?



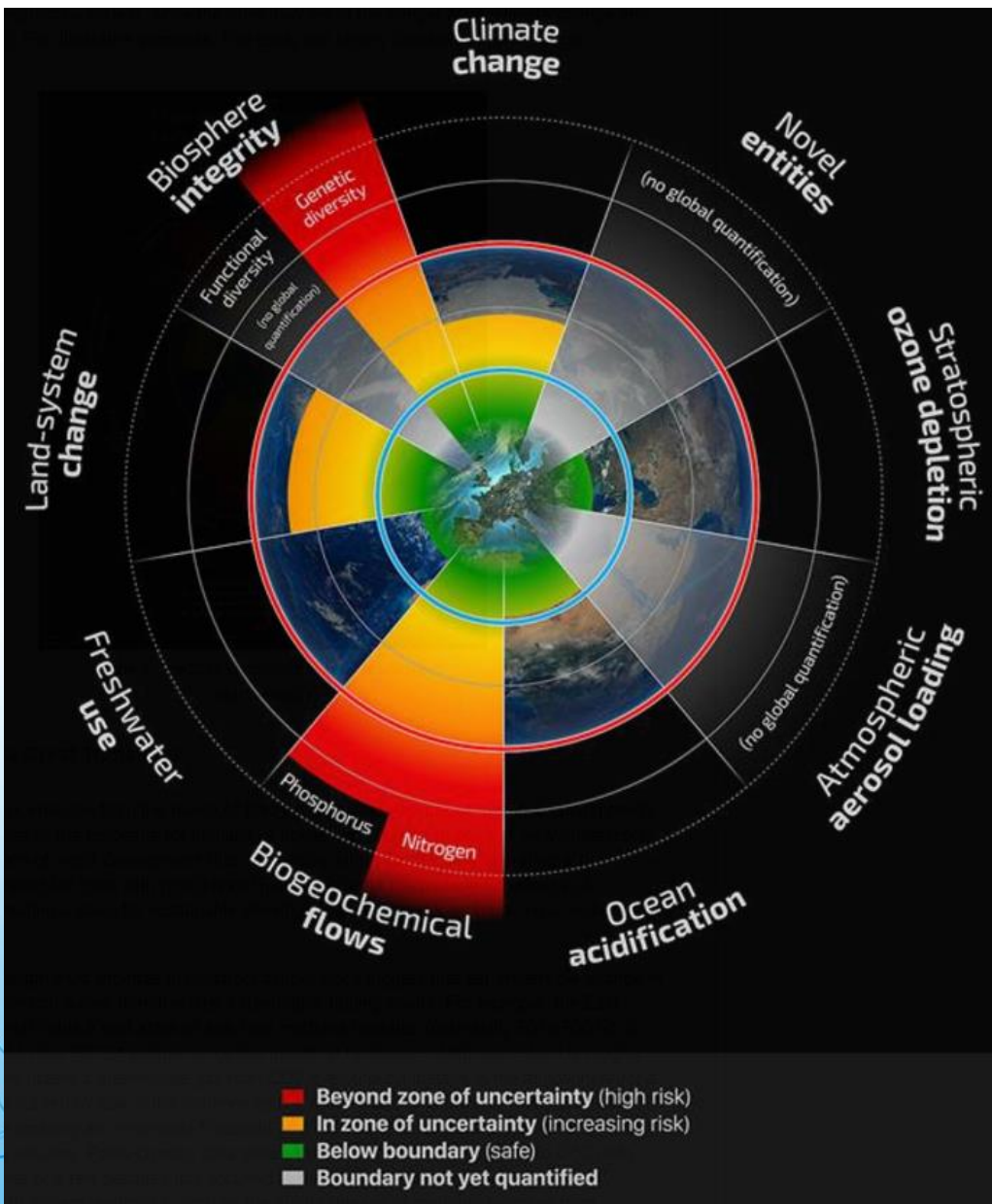
10 Planet Ecosystems to be kept under control:

1. Climate change
2. Biodiversity loss
3. Nitrogen cycle
4. *Phosphorus cycle*
5. Stratospheric
ozone depletion
6. *Ocean acidification*
7. *Global
freshwater use*
8. *Land system
change*
9. Atmospheric
aerosol loading
10. Chemical pollution



Source: Rockstrom et al (2009)

BE BASED ON AVAILABLE SCIENCE: THE PLANETARY BOUNDARIES

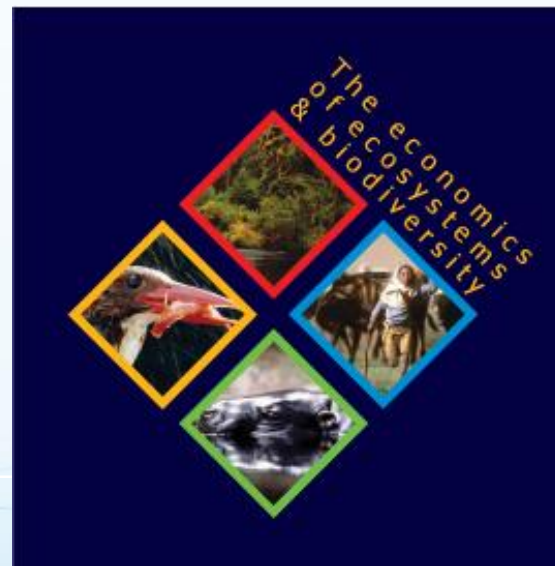
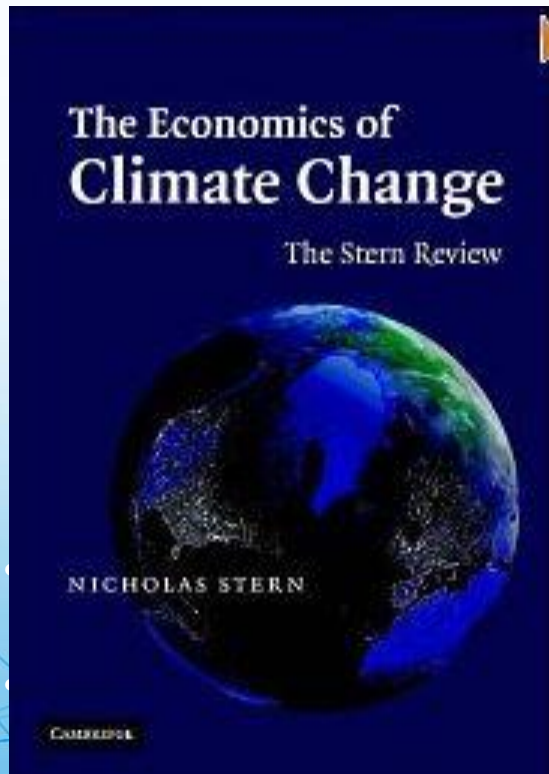


9 Planetary Boundaries to be kept under control:

1. *Climate Change*
2. *Biosphere integrity*
(Biodiversity)
3. *Stratospheric ozone*
4. *Atmospheric aerosol*
5. *Ocean acidification*
6. *Biogeochemical flows* (P, N)
7. *Land-system change*
8. *Freshwater use*
9. *Novel entities ...*

Source: Rockstroem et al. (2009) and Steffen et al. Planetary Boundaries: Guiding human development on a changing planet, Science, 16.1.2015; <http://www-ramanathan.ucsd.edu/files/pr210.pdf>

Economia dello Sviluppo Sostenibile (Crescita Verde, Green Economy, Efficienza delle Risorse, Economia Circolare, etc.)



- 0 e 2011), TEEB - The Economics of Ecosystems & Biodiversity: Ecological and Economic Foundations for National and International Policy Making”, Earthscan, London
- E. Von Weizsaecker et al. (2009), Factor 5 - Transforming the Global Economy through 80% Improvements in Resource Productivity”, Earthscan, London

Tassazione Ambientale e Riforma Fiscale Ambientale

- **GFR: Green/Environmental/Ecological Tax/Fiscal Reforms**
- **Level of Environmental taxation still low (1-5% of GDP, 2-14% of Total Revenues); wide margins; shifting tax-bases;**
- **Distribution problems can be solved (income tax, direct s.)**
- **Removing EHS Environmentally Harmful Subsidies (Fossil Fuel Subsidies but not only: Nuclear, Water, Waste, Transport, Land, ...)**
- **Introducing EFS Environmentally Friendly Subsidies must be done efficiently but is justifiable for a transition period**
- **Environmental taxes do not distort the market, they restore fair market conditions (transparency, competition, economic efficiency, level playing field)**



OECD Policy Instruments

Instruments for EP-GG-SD

(Environmental Policy – Green Growth – Sustainable Development)

- **Regulatory Instruments**
- **Voluntary Instruments**
- **Economic Instruments**
- + **Environmental Assessment Instruments** (IA/SDIA/RIA-SEA-EIA-Emas- Ecolabel)

Economic Instruments for EP-GG-SD

- **Environmental Taxes or Taxes with an environmental impact**
- **Environmental Fees/Charges/Tariffs**
- **Deposits systems**
- **Sanctions-penalties**
- **Creation of markets where they do not exist**
(e.g. ETS-Insurance-GPP-GreenCertificates-WhiteCertificates)



OECD Data, Analysis & Policy Work

Effective Carbon Rates

Inventory of Fossil Fuel Subsidies

Scaling up Financial Instruments for Biodiversity

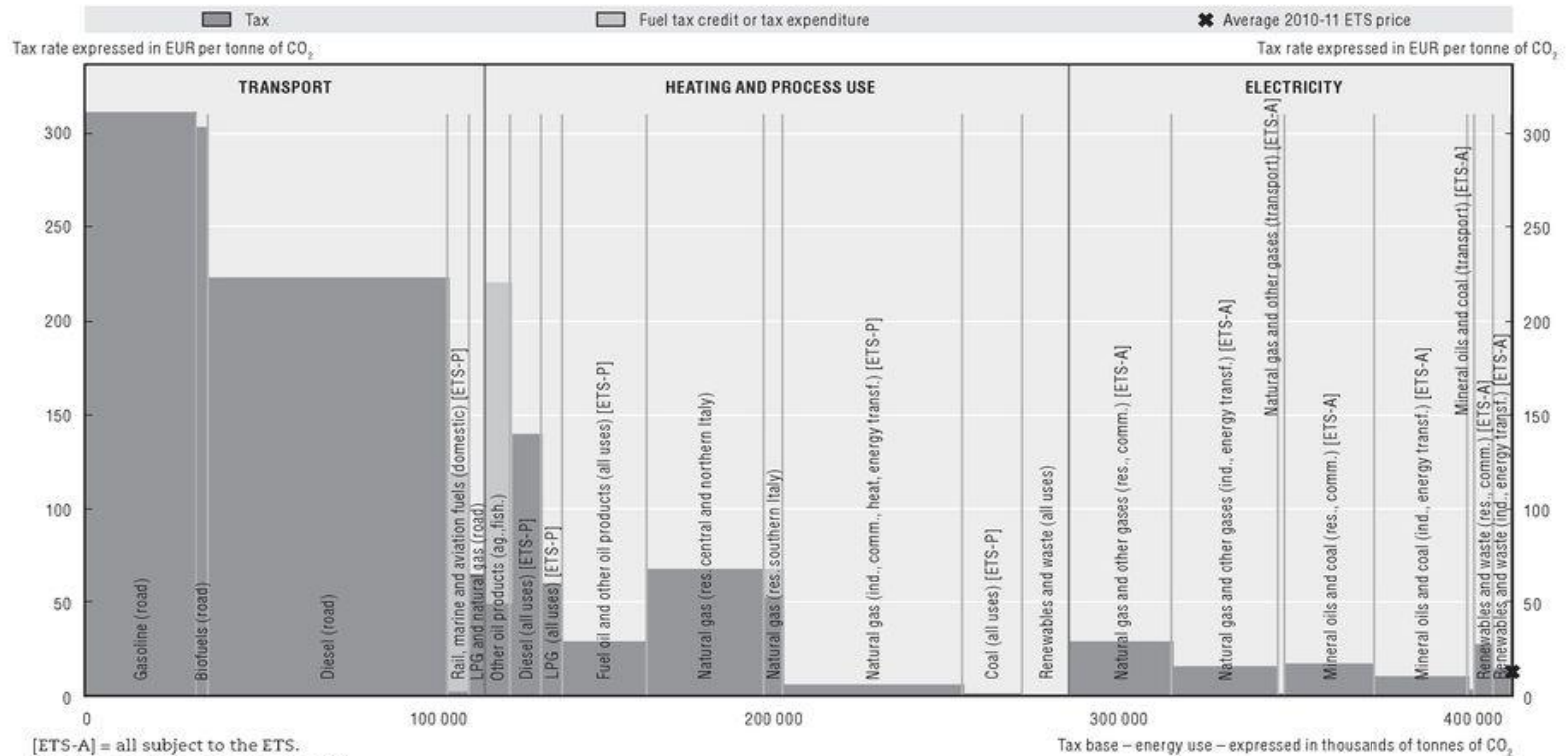
Green Budgeting

Environmental Performance Country Reviews

POINTS OF VIEW ON ENERGY TAXATION IN ANY COUNTRY (E.G. ITALY (1/5))

2012 ANALYSIS (OECD)

Figure 17.2. Taxation of energy in Italy on a carbon emission basis



Abbreviations: Res. = residential; comm. = commercial; ind. = industrial; ag. = agricultural; fish. = fishery; energy transf. = energy transformation; heat = merchant heat.

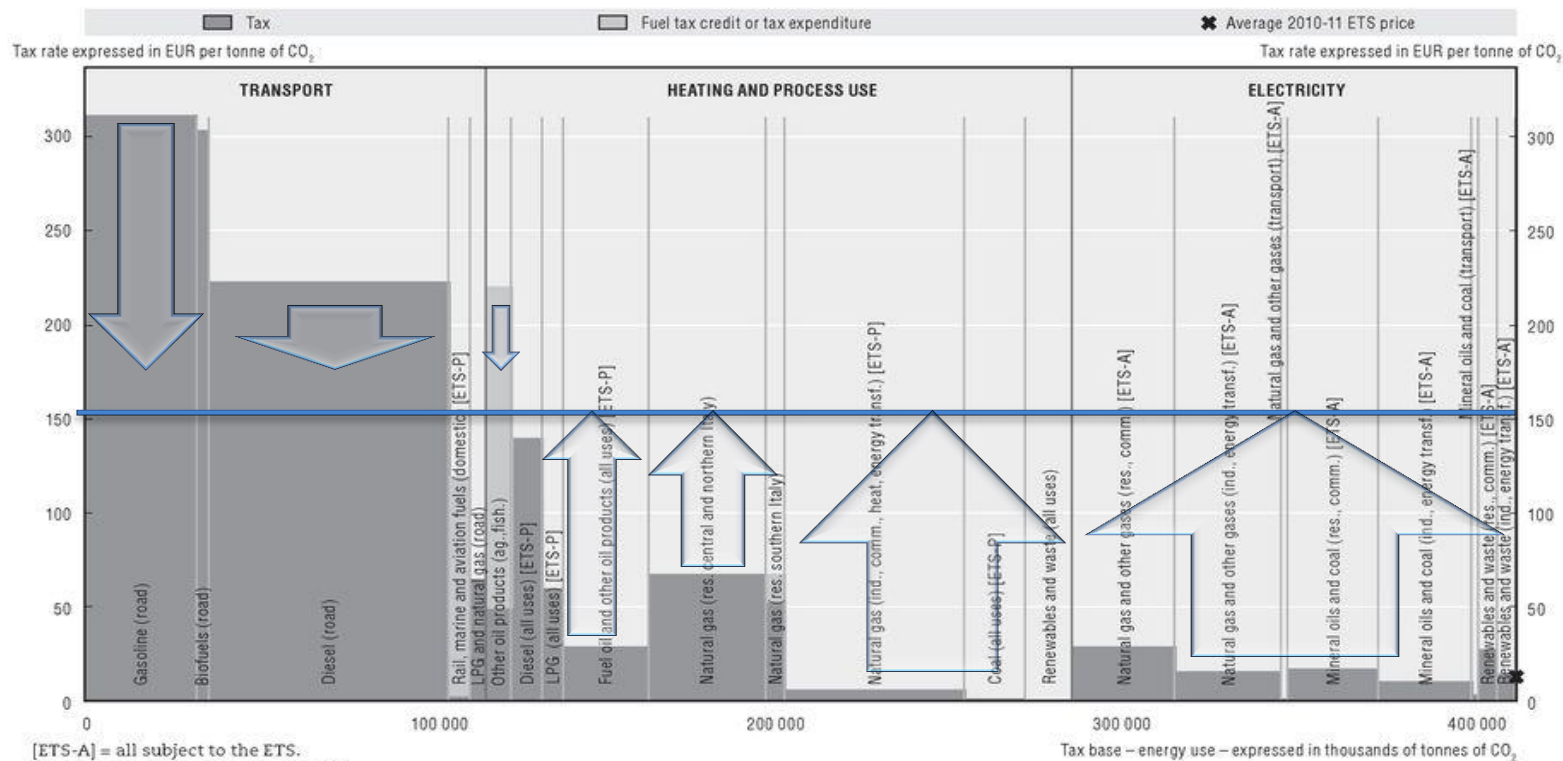
Source: OECD calculations based on IEA data and country-specific tax information (detailed in Annex A). Tax rates are as of 1 April 2012; emissions are based on IEA data for 2009.

StatLink <http://dx.doi.org/10.1787/888932766548>

POINTS OF VIEW ON ENERGY TAXATION IN ANY COUNTRY (E.G. ITALY (2/5))

LIKELY MINISTRY OF ECONOMY & FINANCE: HARMONIZE TAXATION (LEVEL PLAYING FIELD)

Figure 17.2. Taxation of energy in Italy on a carbon emission basis



[ETS-A] = all subject to the ETS.
[ETS-P] = partially subject to the ETS.

Abbreviations: Res. = residential; comm. = commercial; ind. = industrial; ag. = agricultural; fish. = fishery; energy transf. = energy transformation; heat = merchant heat.

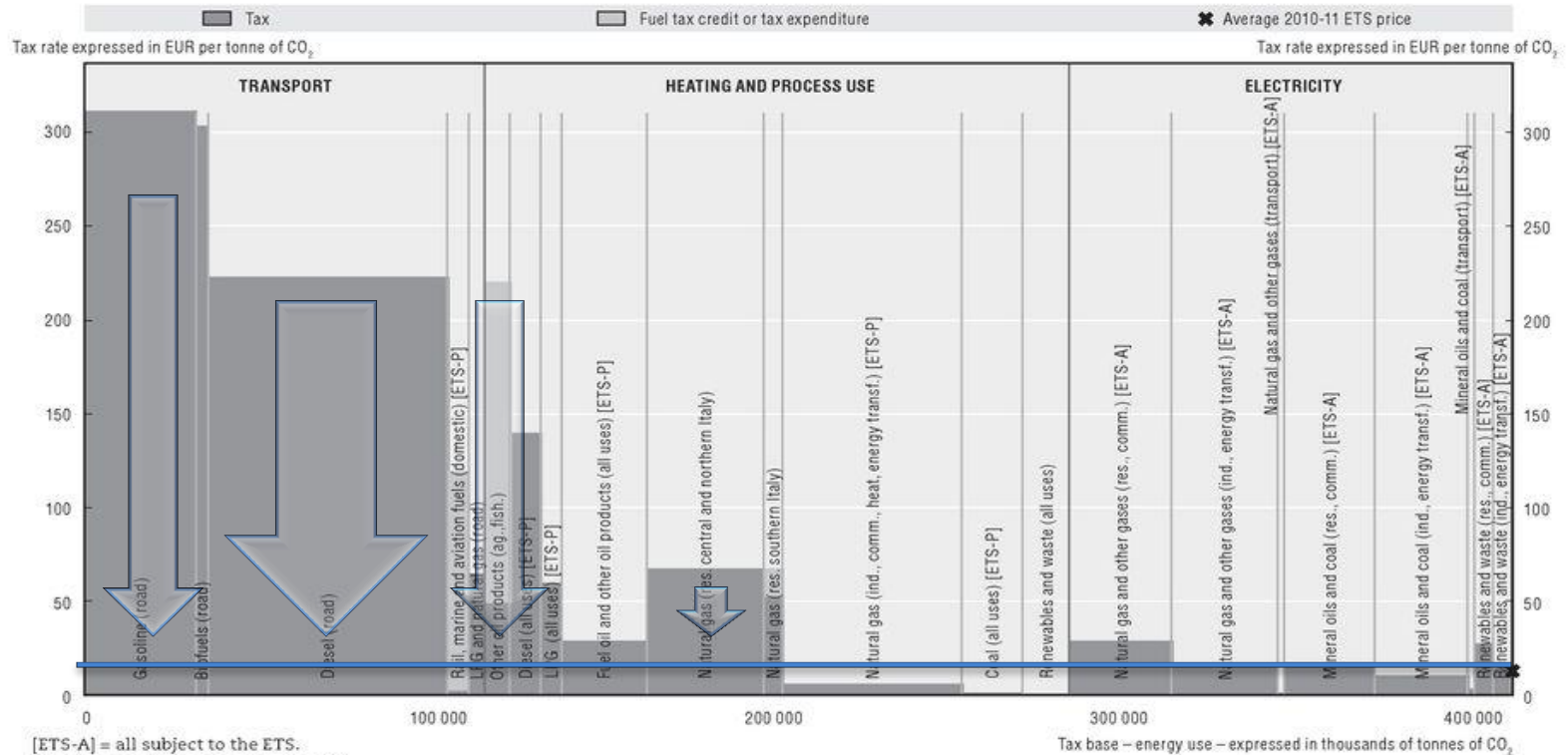
Source: OECD calculations based on IEA data and country-specific tax information (detailed in Annex A). Tax rates are as of 1 April 2012; emissions are based on IEA data for 2009.

StatLink <http://dx.doi.org/10.1787/888932766548>

POINTS OF VIEW ON ENERGY TAXATION IN ANY COUNTRY (E.G. ITALY (3/5))

LIKELY MINISTRY OF ECONOMIC DEVELOPMENT (INDUSTRY, ENERGY, TRADE):
HARMONIZE TAXATION AT THE LOWEST LEVEL TO INCREASE COMPETITIVITY

Figure 17.2. Taxation of energy in Italy on a carbon emission basis



[ETS-A] = all subject to the ETS.
[ETS-P] = partially subject to the ETS.

Abbreviations: Res. = residential; comm. = commercial; ind. = industrial; ag. = agricultural; fish. = fishery; energy transf. = energy transformation; heat = merchant heat.

Source: OECD calculations based on IEA data and country-specific tax information (detailed in Annex A). Tax rates are as of 1 April 2012; emissions are based on IEA data for 2009.

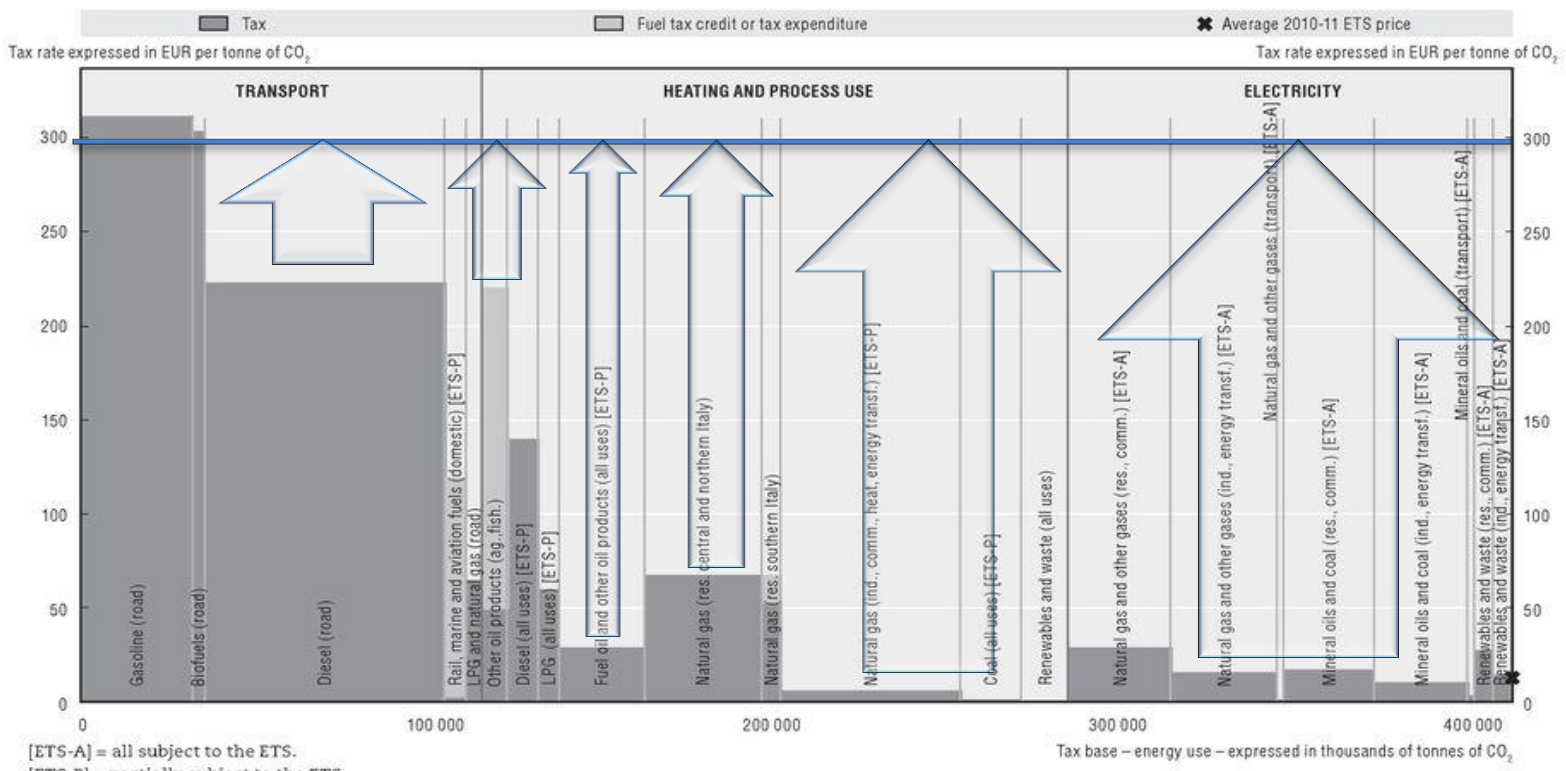
StatLink <http://dx.doi.org/10.1787/888932766548>

POINTS OF VIEW ON ENERGY TAXATION IN ANY COUNTRY (E.G. ITALY (4/5))

LIKELY MINISTRY OF ENVIRONMENT (ECOLOGY, SD):

HARMONIZE TAXATION AT THE HIGHEST LEVEL TO PROTECT THE ENVIRONMENT

Figure 17.2. Taxation of energy in Italy on a carbon emission basis



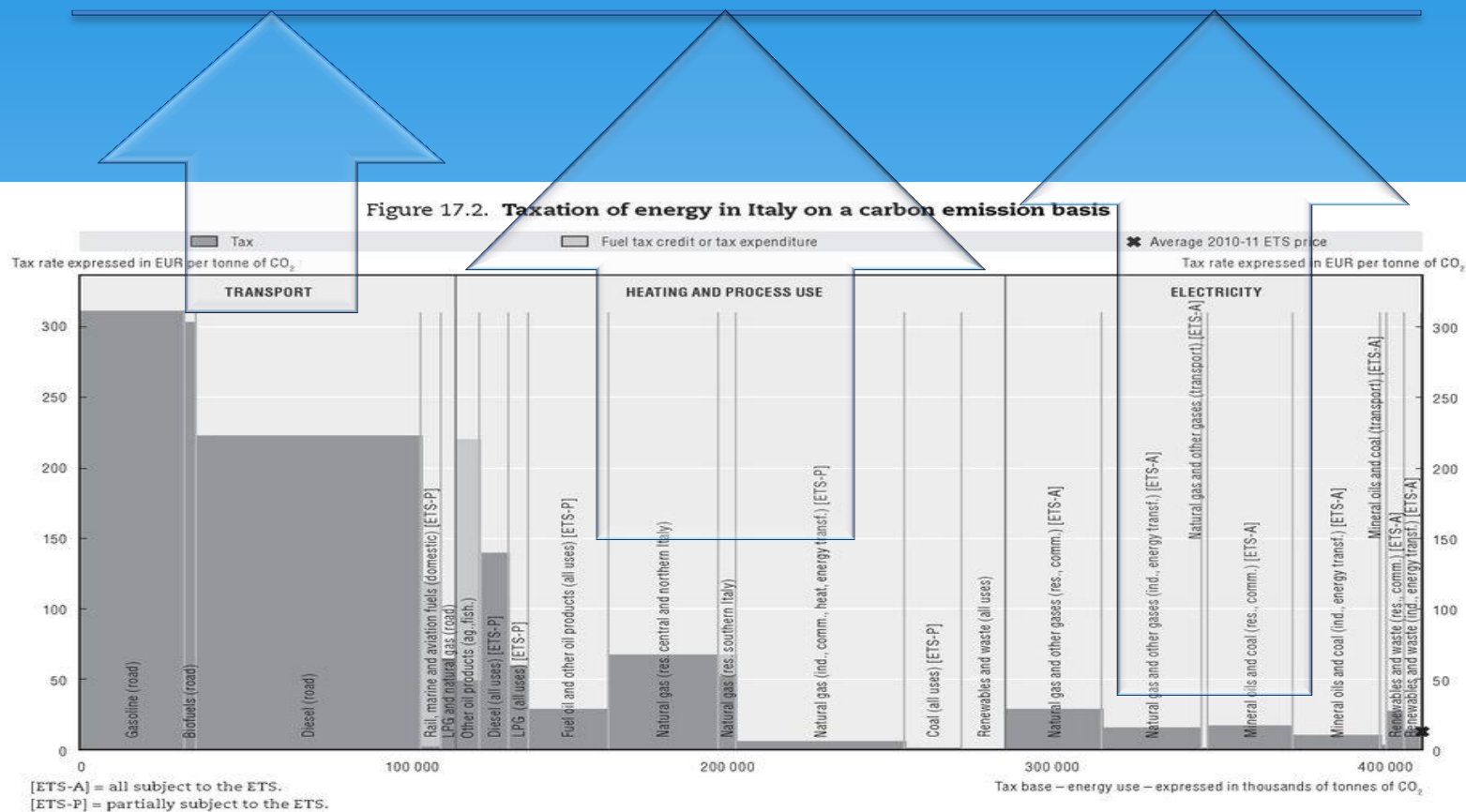
[ETS-A] = all subject to the ETS.
 [ETS-P] = partially subject to the ETS.

Abbreviations: Res. = residential; comm. = commercial; ind. = industrial; ag. = agricultural; fish. = fishery; energy transf. = energy transformation; heat = merchant heat.
 Source: OECD calculations based on IEA data and country-specific tax information (detailed in Annex A). Tax rates are as of 1 April 2012; emissions are based on IEA data for 2009.
 StatLink <http://dx.doi.org/10.1787/888932766548>

POINTS OF VIEW ON ENERGY TAXATION IN ANY COUNTRY (E.G. ITALY (5/5))

SCIENTIFIC COMMUNITY:

INCREASE ALL TAXES ON GOODS AND SERVICES WITH AN IMPACT ON EMISSIONS SO TO MAINTAIN THE PLANET WITHIN +2 C° AND POSSIBLY 1,5C° OF AVERAGE GLOBAL WARMING



Source: OECD calculations based on IEA data and country-specific tax information (detailed in Annex A). Tax rates are as of 1 April 2012; emissions are based on IEA data for 2009.
 StatLink <http://dx.doi.org/10.1787/888932766548>

CPLC - Carbon Pricing Leadership Coalition

Paesi + OCSE + ONU + Imprese + COP + WB + IMF

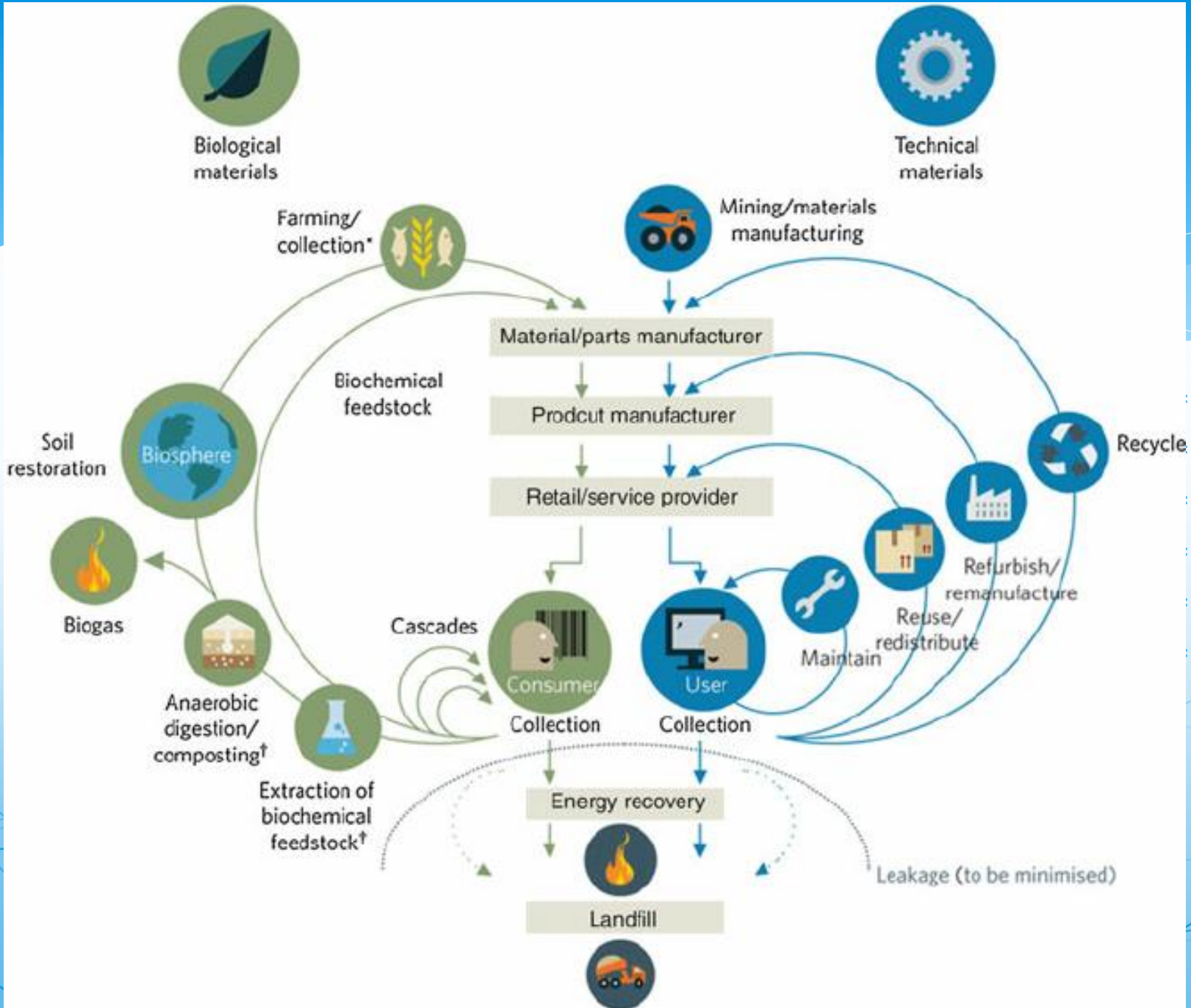
Carbon Pricing Principles, a Big Fat Carbon Price





THE GLOBAL GOALS For Sustainable Development





Source:
Ellen
Mc
Arthur
Foun-
dation
(2012)



SEZIONE 3: FATTORI ABILITANTI (EEA, 2016)

Box 1.2 Key characteristics and enabling factors of a circular economy

Key characteristics	Enabling factors
<p>Less input and use of natural resources</p> <ul style="list-style-type: none"> minimised and optimised exploitation of raw materials, while delivering more value from fewer materials; reduced import dependence on natural resources; efficient use of all natural resources; minimised overall energy and water use. <p>Increased share of renewable and recyclable resources and energy</p> <ul style="list-style-type: none"> non-renewable resources replaced with renewable ones within sustainable levels of supply; increased share of recyclable and recycled materials that can replace the use of virgin materials; closure of material loops; sustainably sourced raw materials. <p>Reduced emissions</p> <ul style="list-style-type: none"> reduced emissions throughout the full material cycle through the use of less raw material and sustainable sourcing; less pollution through clean material cycles. <p>Fewer material losses/residuals</p> <ul style="list-style-type: none"> build up of waste minimised; incineration and landfill limited to a minimum; disposative losses of valuable resources minimised. <p>Keeping the value of products, components and materials in the economy</p> <ul style="list-style-type: none"> extended product lifetime keeping the value of products in use; reuse of components; value of materials preserved in the economy through high-quality recycling. 	<p>Eco-design</p> <ul style="list-style-type: none"> products designed for a longer life, enabling upgrading, reuse, refurbishment and remanufacture; product design based on the sustainable and minimal use of resources and enabling high-quality recycling of materials at the end of a product's life; substitution of hazardous substances in products and processes, enabling cleaner material cycles. <p>Repair, refurbishment and remanufacture</p> <ul style="list-style-type: none"> repair, refurbishment and remanufacture given priority, enabling reuse of products and components. <p>Recycling</p> <ul style="list-style-type: none"> high-quality recycling of as much waste as possible, avoiding down-cycling (converting waste materials or products into new materials or products of lesser quality); use of recycled materials as secondary raw materials; well-functioning markets for secondary raw materials; avoidance of mixing and contaminating materials; cascading use of materials where high-quality recycling is not possible. <p>Economic incentives and finance</p> <ul style="list-style-type: none"> shifting taxes from labour to natural resources and pollution; phasing out environmentally harmful subsidies; internalisation of environmental costs; deposit systems; extended producer responsibility; finance mechanisms supporting circular economy approaches. <p>Business models</p> <ul style="list-style-type: none"> focus on offering product-service systems rather than product ownership; collaborative consumption; collaboration and transparency along the value chain; industrial symbiosis (collaboration between companies whereby the wastes or by-products of one become a resource for another). <p>Eco-innovation</p> <ul style="list-style-type: none"> technological innovation; social innovation; organisational innovation. <p>Governance, skills and knowledge</p> <ul style="list-style-type: none"> awareness raising about changing lifestyles and priorities in consumption patterns; participation, stakeholder interaction and exchange of experience; education; data, monitoring and indicators.

INCENTIVI ECONOMICI E FINANZIARI

- Riforma fiscale ecologica (spostamento carico fiscale dal lavoro alle risorse)
- Eliminazione sussidi dannosi per l'ambiente
- Internalizzazione costi ambientali
- Sistemi di vuoto a rendere
- Responsabilità estesa del produttore
- Finanza sostenibile

Circular economy in Europe
Developing the knowledge base

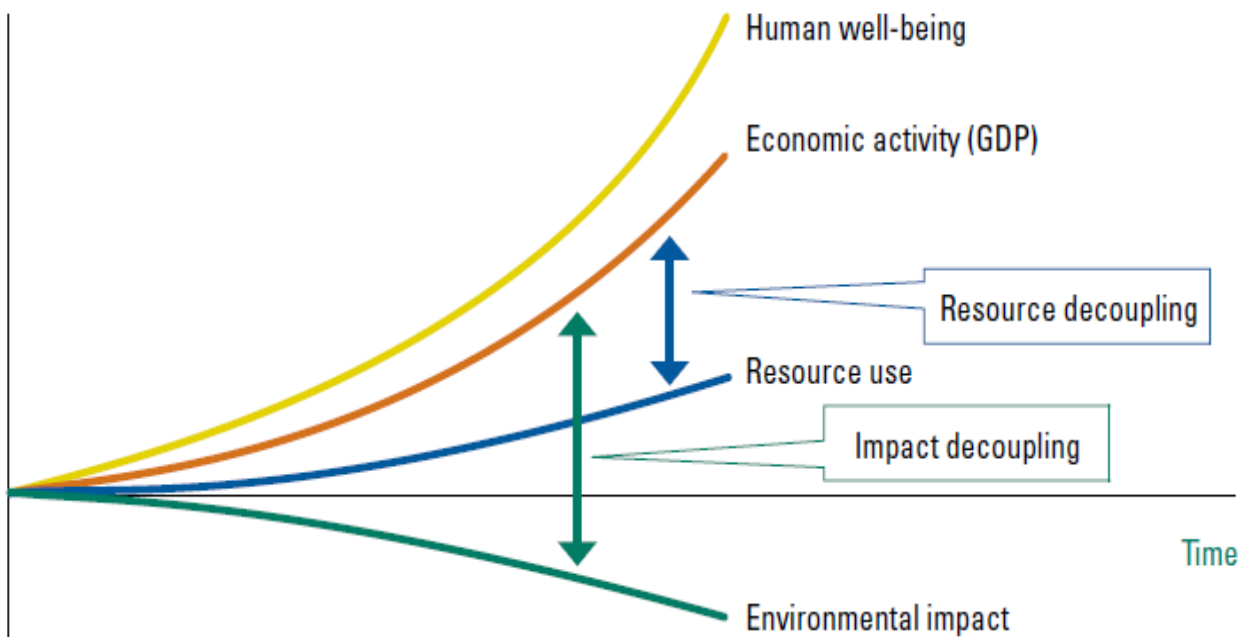
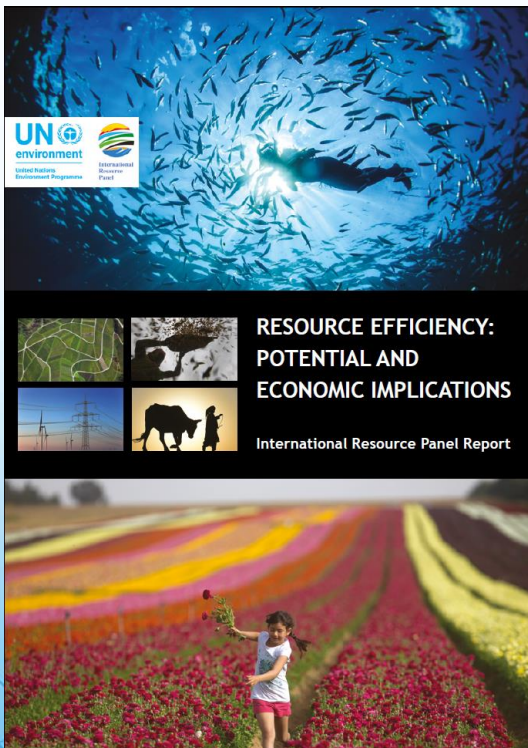


3Rs – CE – RE - Convergenza di concetti e politiche

- ✱ **3Rs (Reduce, Reuse, Recycle) – Japan – G8**
- ✱ **Waste Hierarchy - Resource Efficiency - Circular Economy -EU**
- ✱ **Material flows and resource productivity, Sustainable materials management - OECD**
- ✱ **Circular Economy - China**
- ✱ **Zero-Waste or Low-Waste Economy or Sound Material Cycle Economy - Japan**
- ✱ **Cleaner Production and Technologies - USA**
- ✱ **Product design, Life cycle assessment, GPP**
- ✱ **From Cradle to Cradle**
- ✱ **Sustainable Production & Consumption Models – UN-UNEP-CSD**
- ✱ **Extended Producer Responsibility**
- ✱ **Green Purchasing Procurement**
- ✱ **Factor 4 policies**

CIRCULAR ECONOMY: DECOUPLING

Rapporto UNEP per il G7 - Von Weizsaecker – Khosla – Potocnik - Ekins



CIRCULAR ECONOMY: POLICY OPTIONS

Rapporto OCSE per il G7

CATEGORY OF INSTRUMENTS

- ✓ REGULATORY (COMMAND & CONTROL, PERFORMANCE E TECHNOLOGY STANDARDS)
- ✓ VOLUNTARY (MoU, COVENANTS, /DEALS, LABELS, REPORTING, ...)
- ✓ ECONOMIC (TAXES, TARIFFS/CHARGES/FEES, MARKET CREATION, SUBSIDIES EHS_EFS, SANCTIONS)

• EFFICIENCY ASSESSMENT

- ✓ ENVIRONMENTAL EFFECTIVENESS (CONSISTENCY ALONG THE WHOLE LIFE CYCLE)
- ✓ ECONOMIC EFFICIENCY
- ✓ INCENTIVE TO INNOVATION
- ✓ ADMINISTRATIVE COSTS
- ✓ DISTRIBUTIONAL IMPACT
- ✓ COMPETITIVENESS IMPACT



Policy Guidance
on Resource Efficiency



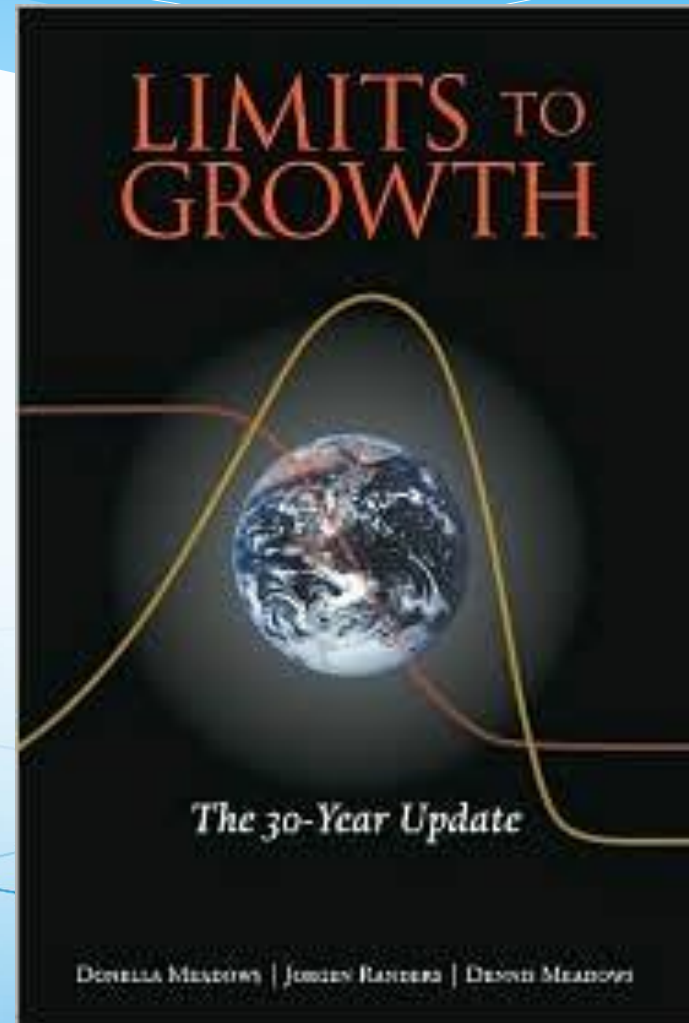
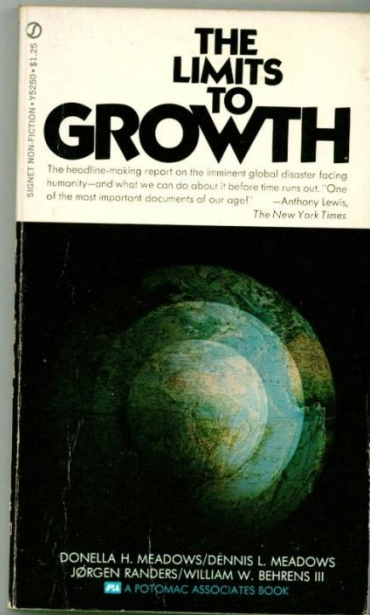
 OECD

European reflection

Examples of economic instruments and other measures to provide incentives for the application of the EU waste hierarchy

1. Charges and restrictions for the landfilling and incineration of waste
2. 'Pay-as-you-throw' schemes
3. Fiscal incentives for **donation** of products, in particular food
4. **Extended producer responsibility schemes**
5. **Deposit-refund schemes**
6. Investments in waste management infrastructure
7. Sustainable[/Green] public procurement [GPP]
8. Phasing out subsidies [EHSs, BHSs, FFSs, RECEHSs]
9. Fiscal measures to promote the **uptake of recyclable products & materials** [tax/fee on caves, quarries, mines, gravel/sand from riverbeds, ...]
10. Support to research and innovation [Eco-Innovation]

Club of Rome (1968): the MIT study 1972 - Oct. 2018: 50 years celebration in Rome



Il Catalogo dei Sussidi Ambientalmente Dannosi e dei Sussidi Ambientalmente Favorevoli

- * Art. 68 della Legge n. 221/2015: «Per la redazione del Catalogo il Ministero dell'ambiente e della tutela del territorio e del mare si avvale, oltre che delle informazioni nella disponibilità propria e dell'Ispira, delle informazioni rese disponibili **dall'Istat, dalla Banca d'Italia, dai Ministeri, dalle regioni e dagli enti locali, dalle università e dagli altri centri di ricerca**, che forniscono i dati a loro disposizione secondo uno schema predisposto dal medesimo Ministero dell'ambiente e della tutela del territorio e del mare.
- * I sussidi sono intesi nella loro **definizione piu' ampia** e comprendono, tra gli altri, **gli incentivi, le agevolazioni, i finanziamenti agevolati e le esenzioni da tributi [...]**»

Panoramica dei principali risultati CSA (1)

- 131 misure individuate per un ammontare di ca. 41 miliardi di Euro;
- 5 categorie (Agricoltura, Energia, Trasporti, Altri, IVA);
- 56 spese fiscali, 75 sussidi diretti;
- Ca. 22 miliardi di Euro di Spese Fiscali e ca. 19 miliardi di Euro di Sussidi Diretti.

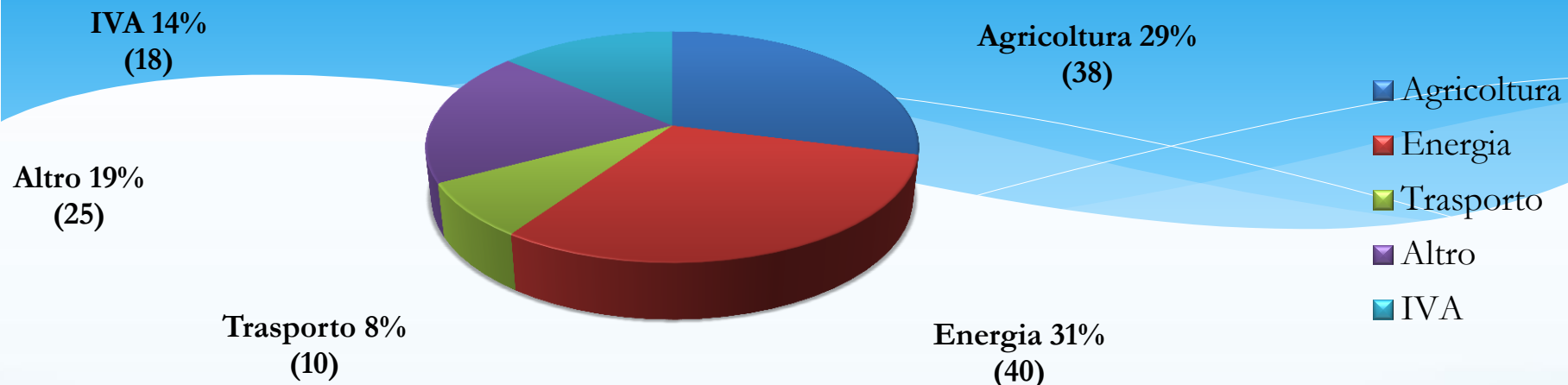
Numero dei sussidi analizzati (n°)



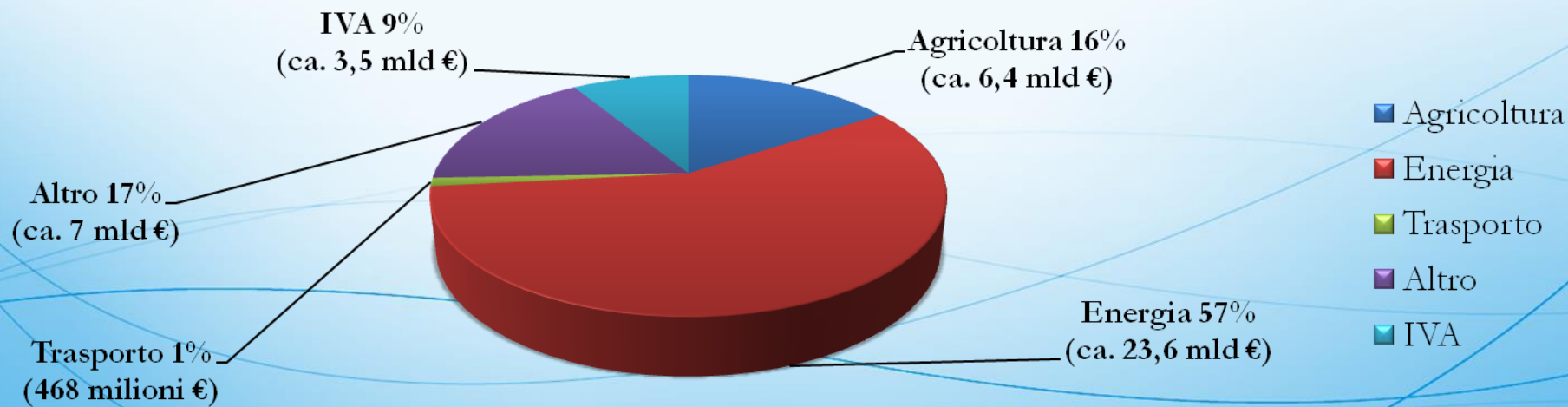
Valore dei sussidi analizzati (€)



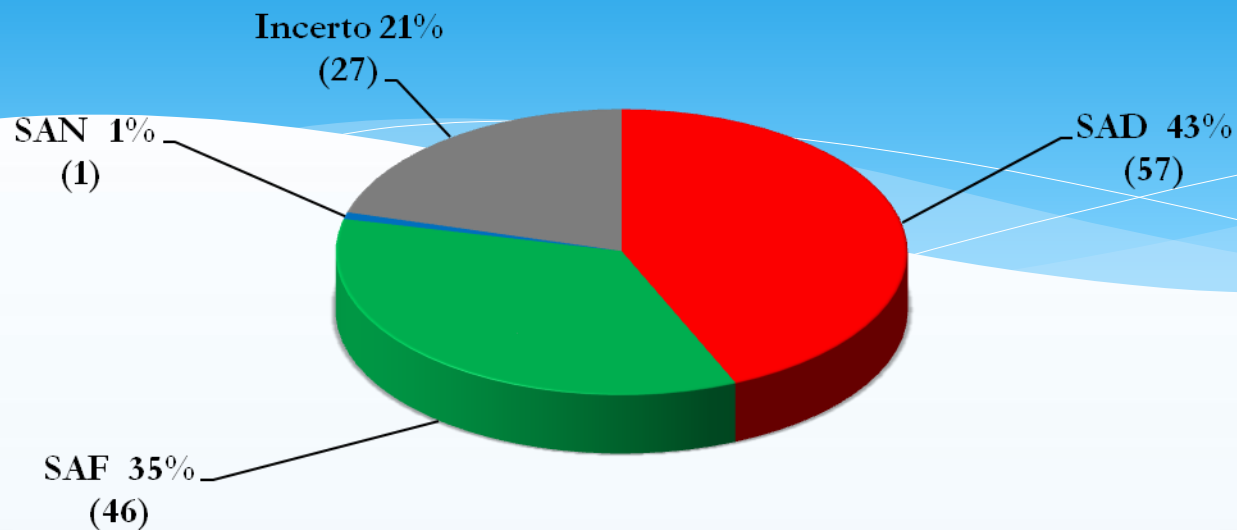
Numero dei sussidi per Categoria (n°)



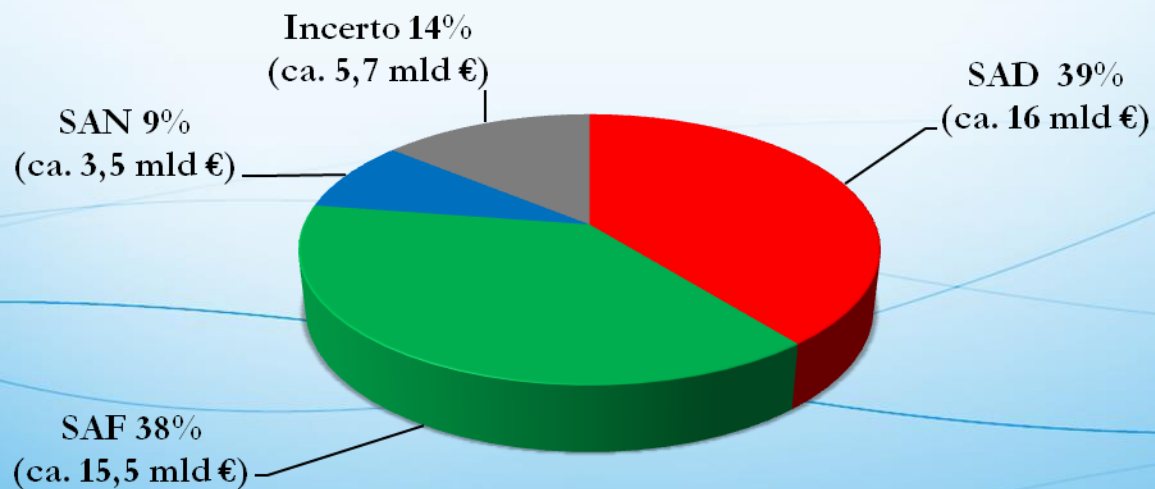
Valore dei sussidi per Categoria (€)



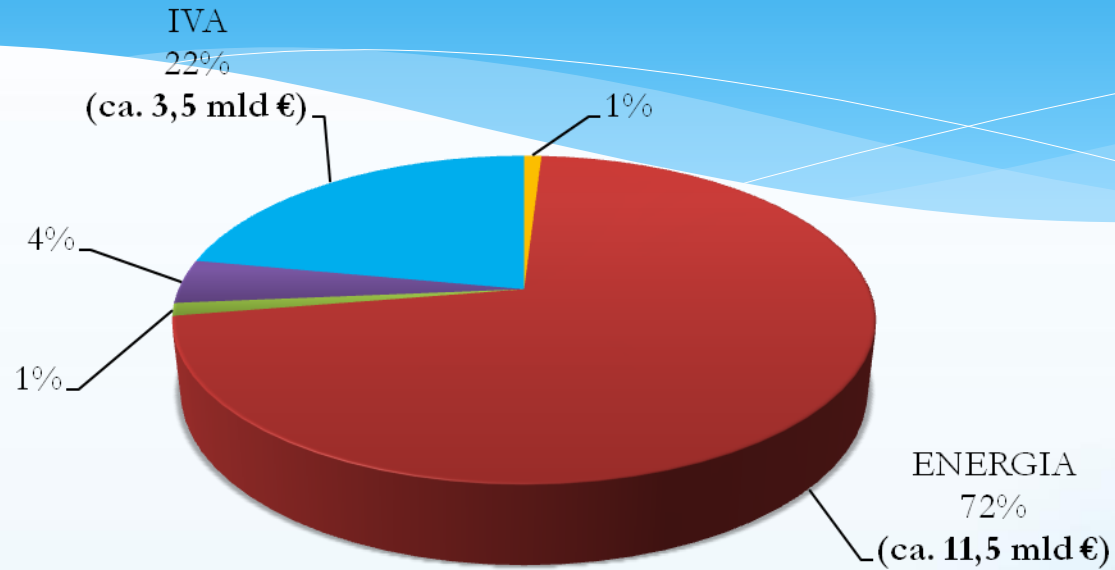
Numero dei sussidi per tipologia (n°)



Valore dei sussidi per tipologia (€)



SAD per Categoria (€)



■ Agricoltura ■ Energia ■ Trasporto ■ Altro ■ IVA

Energia:

Spese Fiscali = ca. 11,2 mld € (97%)

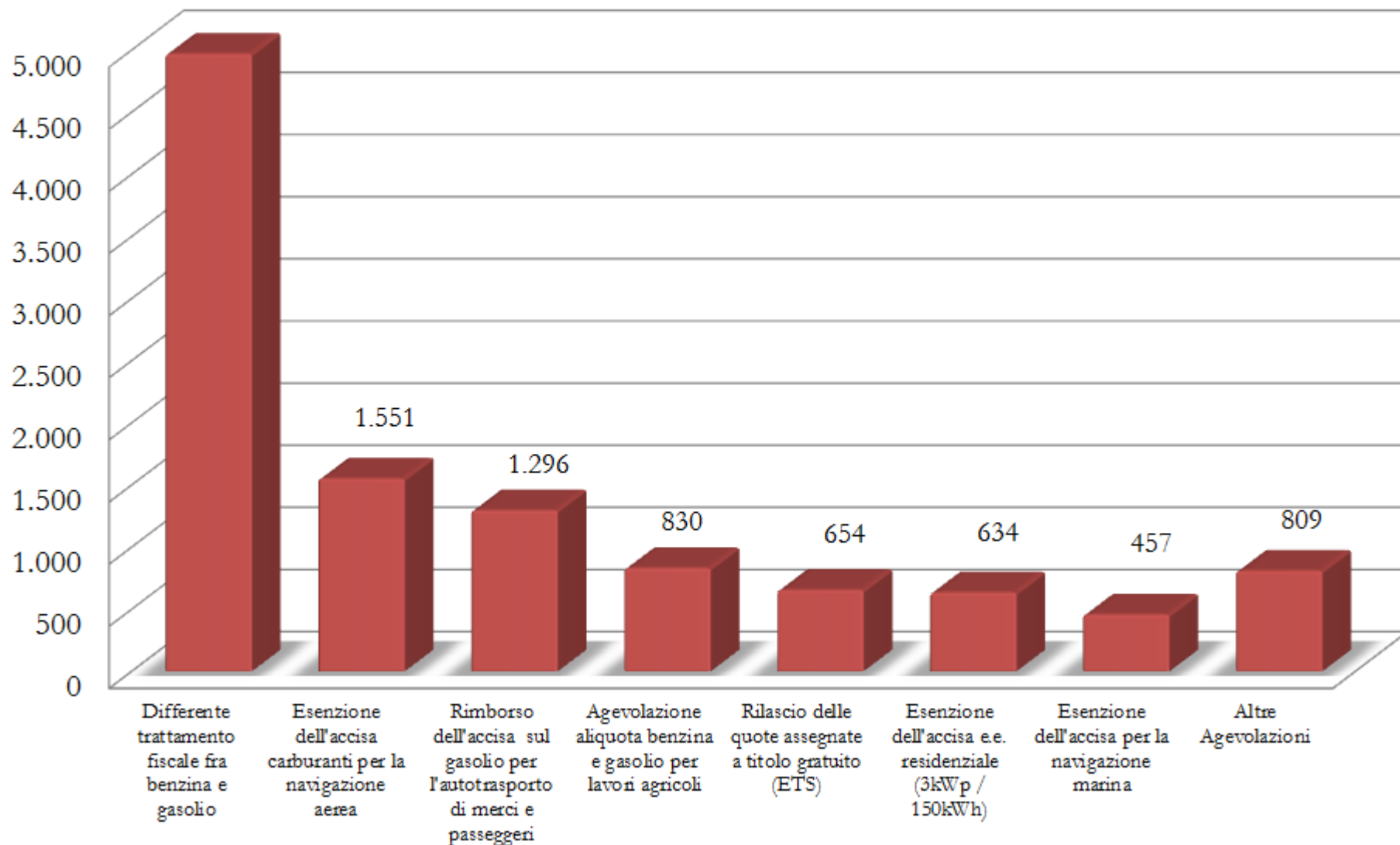
Sussidi Diretti = ca. 310 mln € (3%)

IVA:

Spese Fiscali = ca. 3,5 mld €

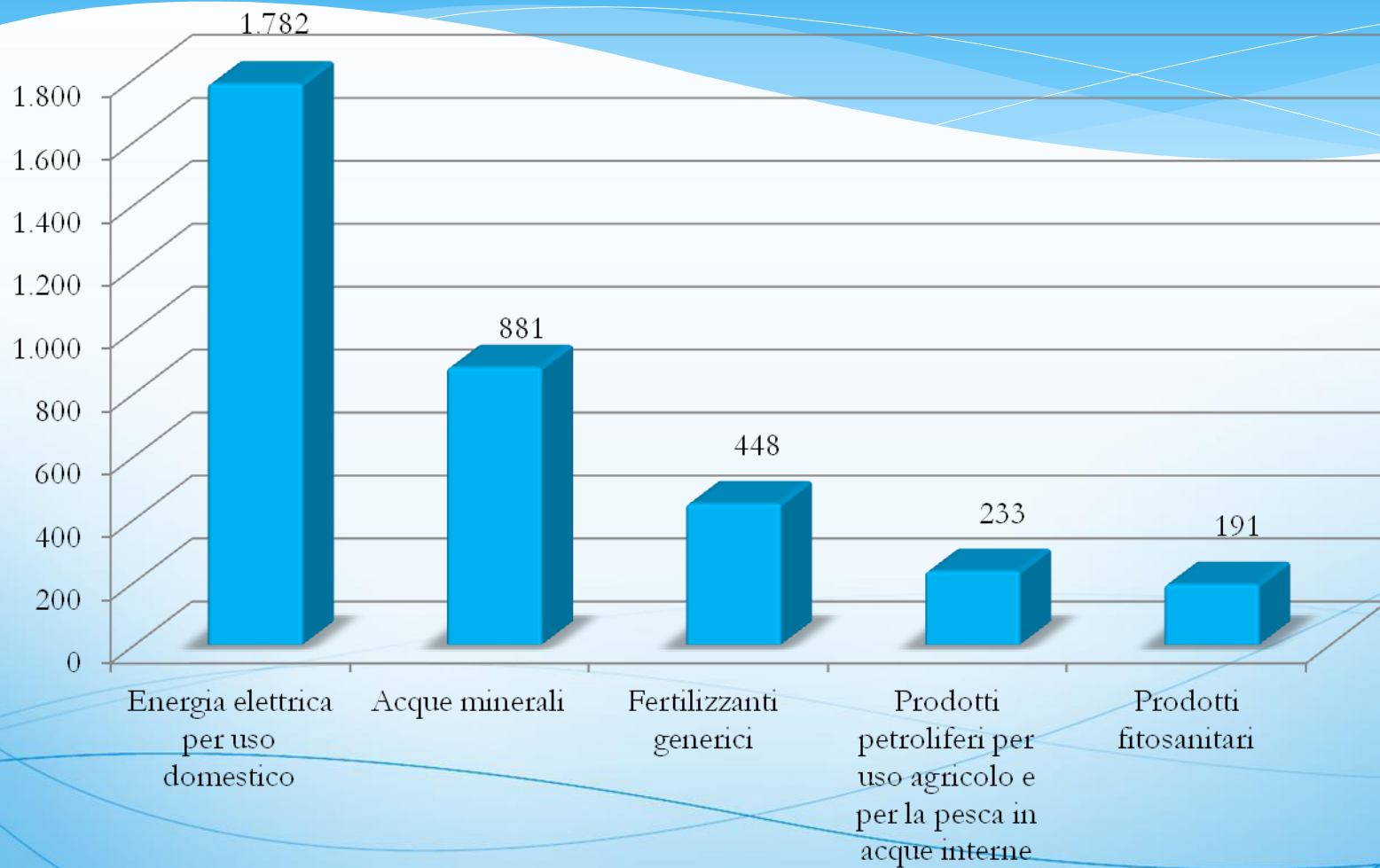
SAD Energia (mln €)

4.969

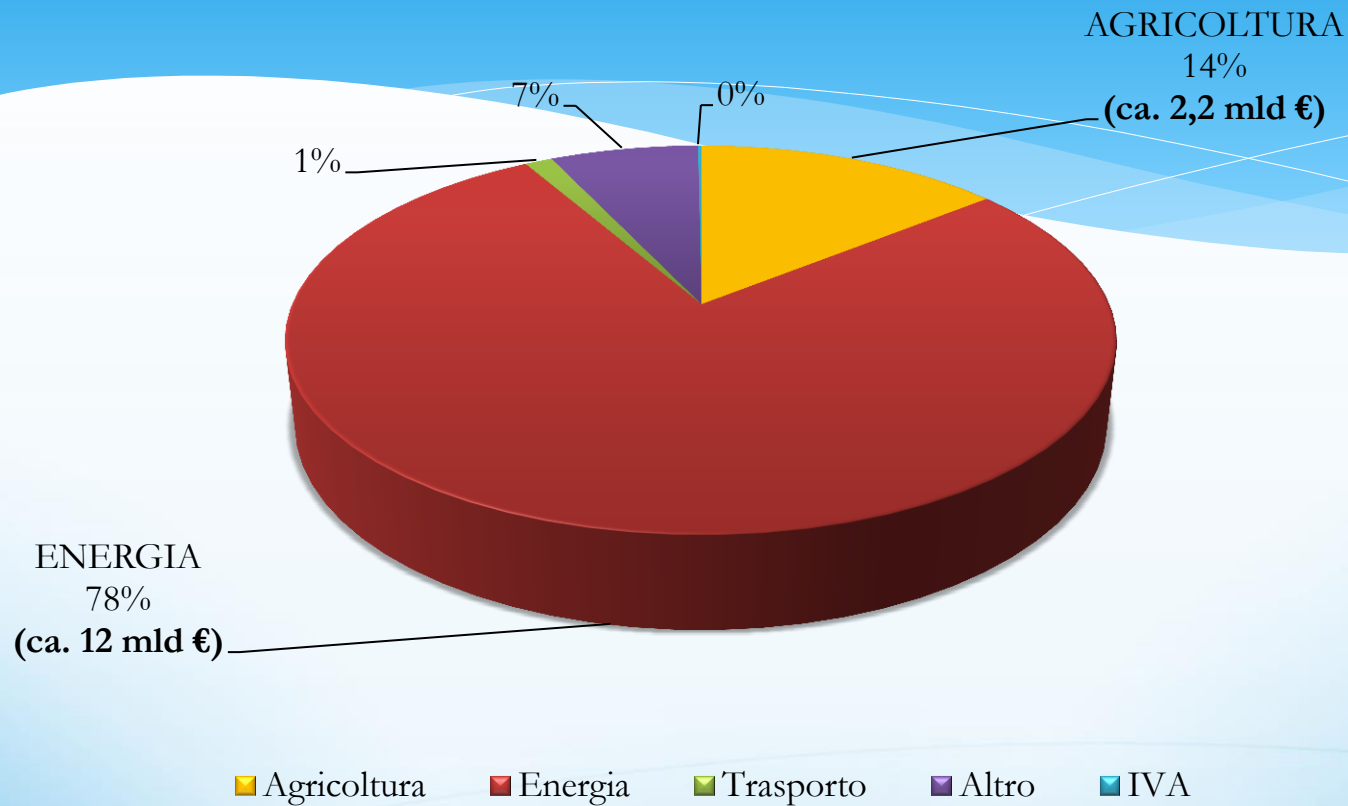


- **IVA:** Spese Fiscali = ca. 3,5 mld € (100%)

SAD IVA (mln €)



SAF per Categoria (€)



Energia:

Sussidi Diretti = ca. 12 mld € (99%)

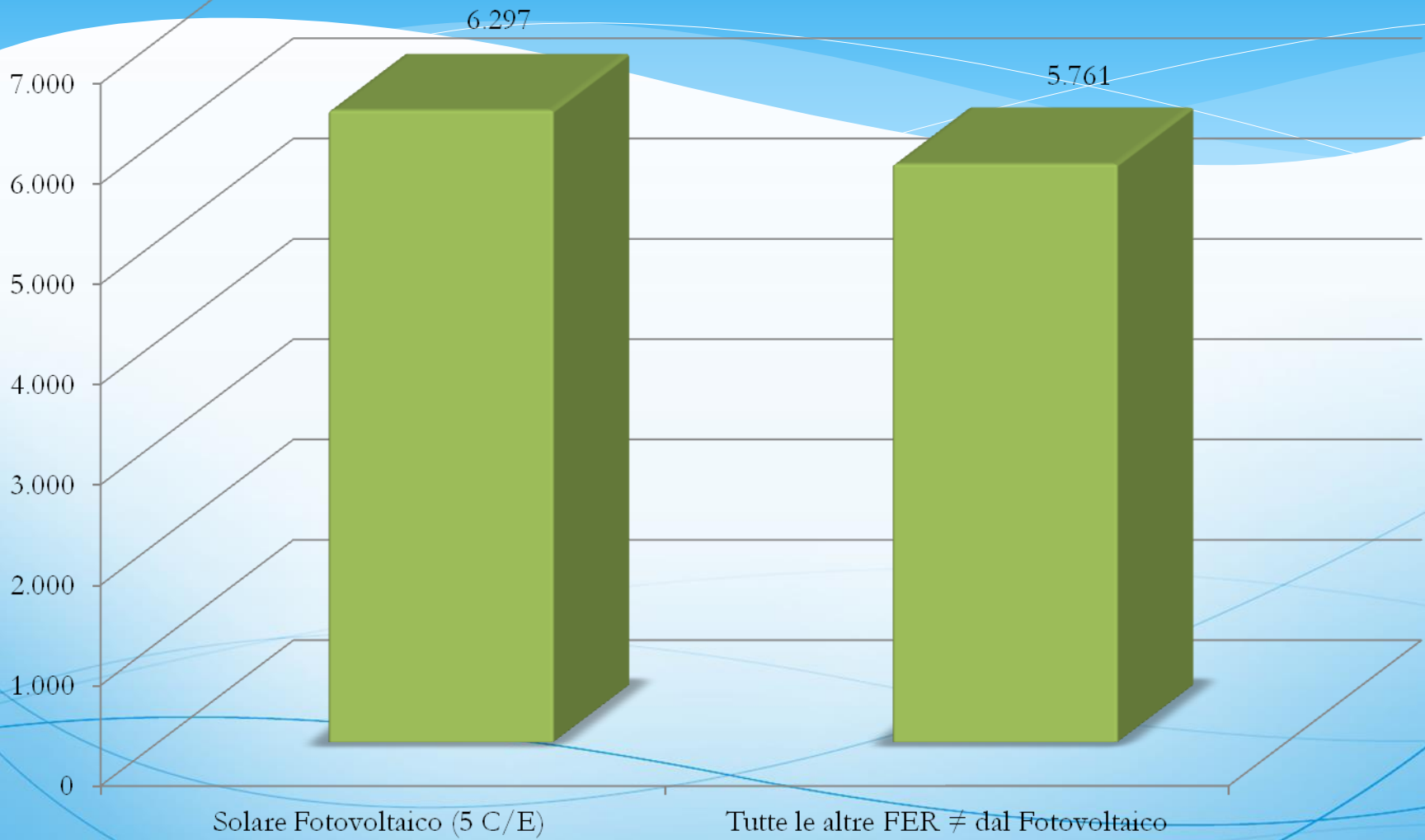
Spese Fiscali = ca. 86 mln € (1%)

Agricoltura:

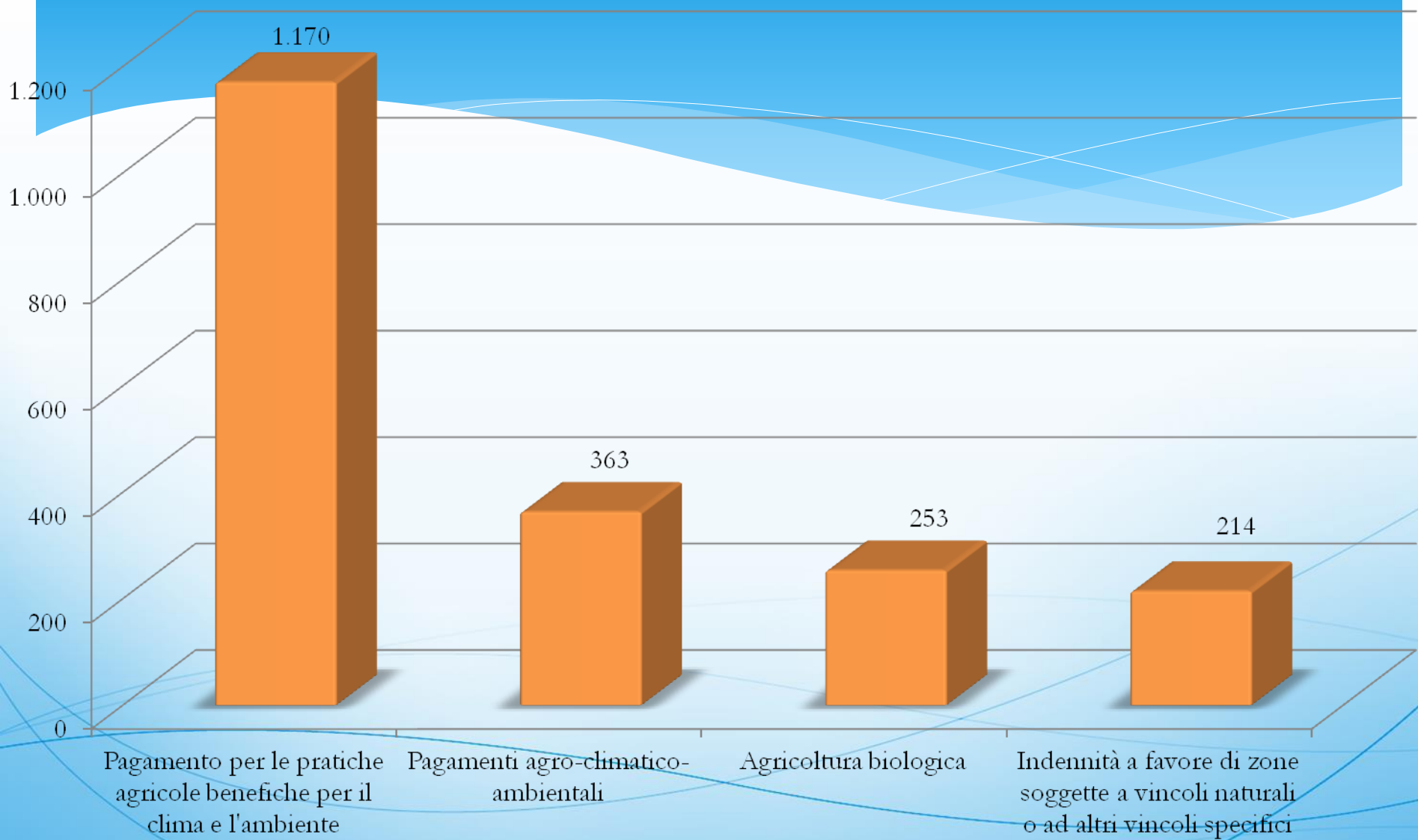
Sussidi Diretti = ca. 2,2 mld € (99,8%)

Spese Fiscali = ca. 4 mln € (0,2%)

SAF Energia (mln €)



SAF Agricoltura (mln €)



Panoramica dei principali risultati CSA1 (su 2016)

Sussidio Categoria	SAD	SAF	SAN	Incerto	Totale (mln €)	Totale (%)
Agricoltura	154	2.231		4.068	6.453	15,7%
Energia	11.550	12.145			23.695	57,6%
Trasporto	202	200		65	468	1,1%
Altro	700	1.079	3.538	1.634	6.950	16,9%
IVA	3.561	25			3.586	8,7%
Totale (mln €)	16.167	15.679	3.538	5.767	41.151	100,0%
Totale (%)	39,3%	38,1%	8,6%	14,0%	100,0%	

Dei ca. 41 miliardi di Sussidi analizzati le Spese Fiscali (ca. 22 miliardi di euro) eccedono i Sussidi Diretti (ca. 19 miliardi di euro).

Prima Stima dei SAD: 16,2 Mld€

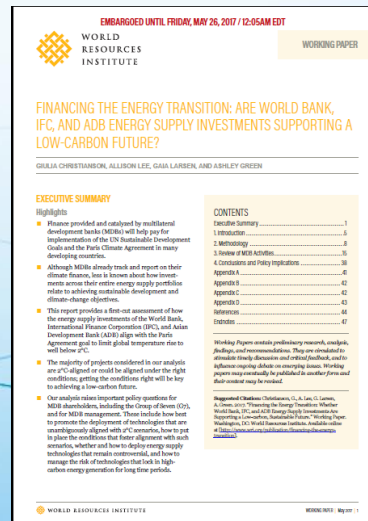
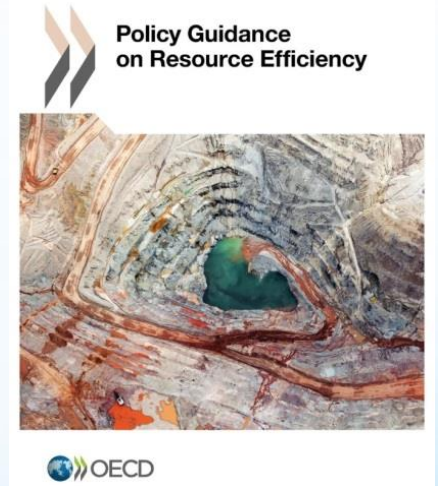
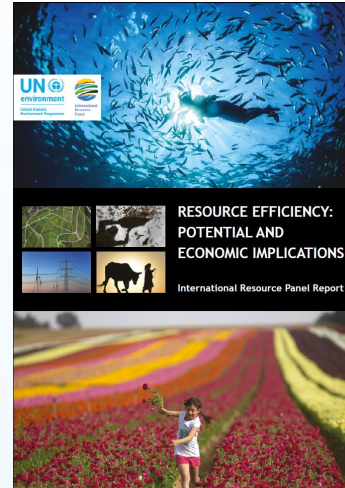
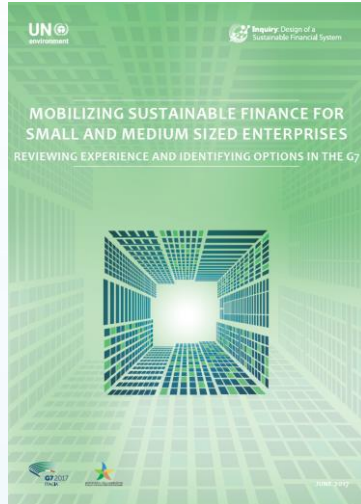
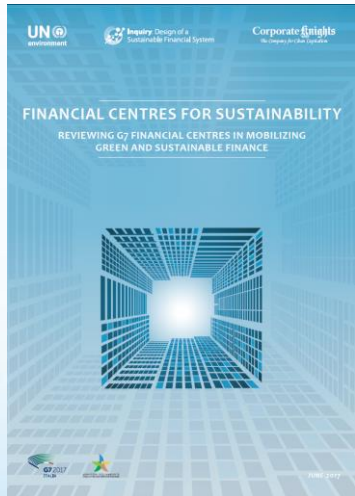
Prima Stima dei SAF: 15,7 Mld€

Cosa ci resta da investigare

- * Sussidi favorevoli/dannosi alla biodiversità;
- * Sussidi regionali/locali;
- * Sussidi dovuti all'*underpricing* di risorse naturali;
- * Sussidi dannosi/favorevoli che noi esportiamo all'estero (e.g., crediti all'esportazione)
- * Nuovi ed eventuali sussidi introdotti dal legislatore;
- * Traccia di sussidi esistenti non più in vigore da un'edizione all'altra.



G7 Bologna Summit - IRP-UNEP, OECD, WRI support to G7 Environment Italian Presidency





MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

G7 Environment Italian Presidency Bologna Summit

EFR and EHSs



G7 Bologna Environment Ministers' Meeting Communiqué¹¹

(Bologna – Italy, 12th June 2017):

“7. Environmental Fiscal Reform and Sustainable Development

50. We recognize and support effort by G7 and other countries interested in examining and removing incentives, particularly inefficient fossil fuel subsidies, not coherent with sustainability goals.

51. We recognize the benefits of monitoring progress in the phasing out of incentives, including subsidies, not coherent with the sustainability goals, such as inefficient fossil fuel subsidies which encourage wasteful consumption and we support existing initiatives underway such as the G20 voluntary peer review process.

52. We take note of the OECD work on these issues, and we recognize that OECD is considering further work for improving understanding of incentives, including subsidies.

53. We support G7 and all countries interested in exploring approaches to better align fiscal systems with environmental goals. In particular we intend to contribute to the implementation of the commitment of our Heads of State and Government adopted in Ise-Shima in 2016 for the elimination of inefficient fossil fuel subsidies that encourage wasteful consumption by 2025.

54. Furthermore, we consider the need to exchange views and information, to better understand the impact of fiscal policies and measures on the achievement of our sustainability goals.”



G20 Peer Review of Fossil Fuel Subsidies

In 2009, G20 partners decided to start phasing out fossil fuels subsidies “*over the medium term*” while emphasizing one of the major consequences of such fiscal measures, that is to undermine “*efforts to deal with the threat of climate change*”.

2016: Cina e Usa

2017: Messico e Germania

2018: Indonesia e Italia (expected Spring 2019)

2019: Argentina e Canada



G20 Peer Review of Fossil Fuel Subsidies

“inefficient fossil fuel subsidies which encourage wasteful consumption”

Dialettica in ogni paese fra esperti a) industria-energia;
b) finanze-fiscali; c) ambiente-clima

Definizione Restrittiva ? o Descrittiva?

Tutti i fossil fuel subsidies sono inefficienti dal punto di vista economico ed ecologico, tutti incoraggiano lo spreco nel consumo...

Piani Energia e Clima dei Paesi UE

parte dedicata ai sussidi all'energia, in particolare ai FFSs

- Prima lista SAD: misure da approfondire
- Seconda lista SAD: misure da approfondire molto
- Terza lista SAD: misure da riformare a livello UE o globale
- Quarta lista: misure SAF



PROGETTO UE-SG-SRSP “La Riforma Fiscale Ambientale in Italia e in Europa”

- ✓ Segretariato Generale della Commissione Europea - Structural Reforms Support Programme
- ✓ Proposto a ottobre dall'Italia e approvato dal Collegio dei Commissari UE il 27 febbraio 2019
- ✓ The need a) to respect the polluter-pays-principle inserted in the EU Treaties and in many Directives, b) address the issue of externalities associated to environmental damage, c) shift the burden from labour and firms to the use of natural resources and pollution (moving taxation from “goods” to “bads”)



PROGETTO UE-SG-SRSP “La Riforma Fiscale Ambientale in Italia e in Europa”

As an urgent matter, for 2017 and 2018 the European Semester Country Specific Recommendations state, at point 1, that Italy should *“shift the tax burden from the factors of production onto taxes less detrimental to growth in a budgetary neutral way by taking decisive action to reduce the number and scope of tax expenditures”*.

Last but not least, Italy is part of the “Green Growth Group” defined during the Environment Council in May 2018, and composed by 14 EU Ministers for Environment that signed a statement asking for stronger commitments to limit global warming to 1,5 degrees by the end of this century.

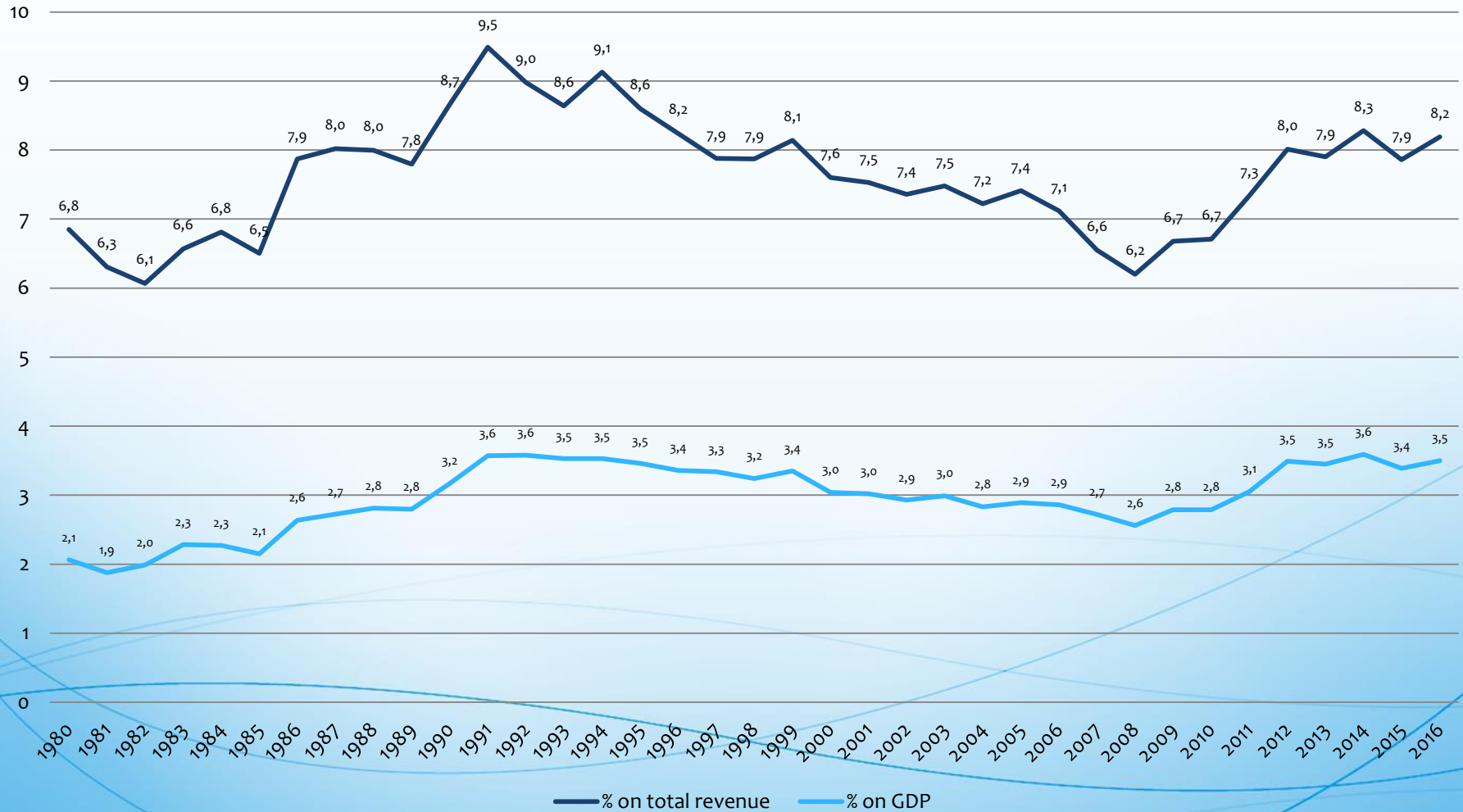
Total premature deaths due to air pollution for G7 European Countries

Country	2012	% pop.	2013	% pop.	2014	% pop.
Italy	84.400	0,142%	91.050	0,153%	79.820	0,131%
Germany	72.000	0,090%	86.510	0,107%	81.160	0,100%
France	52.600	0,081%	55.130	0,084%	45.840	0,070%
UK	52.430	0,083%	50.580	0,079%	52.240	0,081%
Eu-28	491.000	0,097%	520.000	0,103%	487.600	0,096%

Source: Elaboration MATTM on Eurostat & European Environmental Agency (EEA) data.

% revenue from environmental taxation on GDP and total revenue

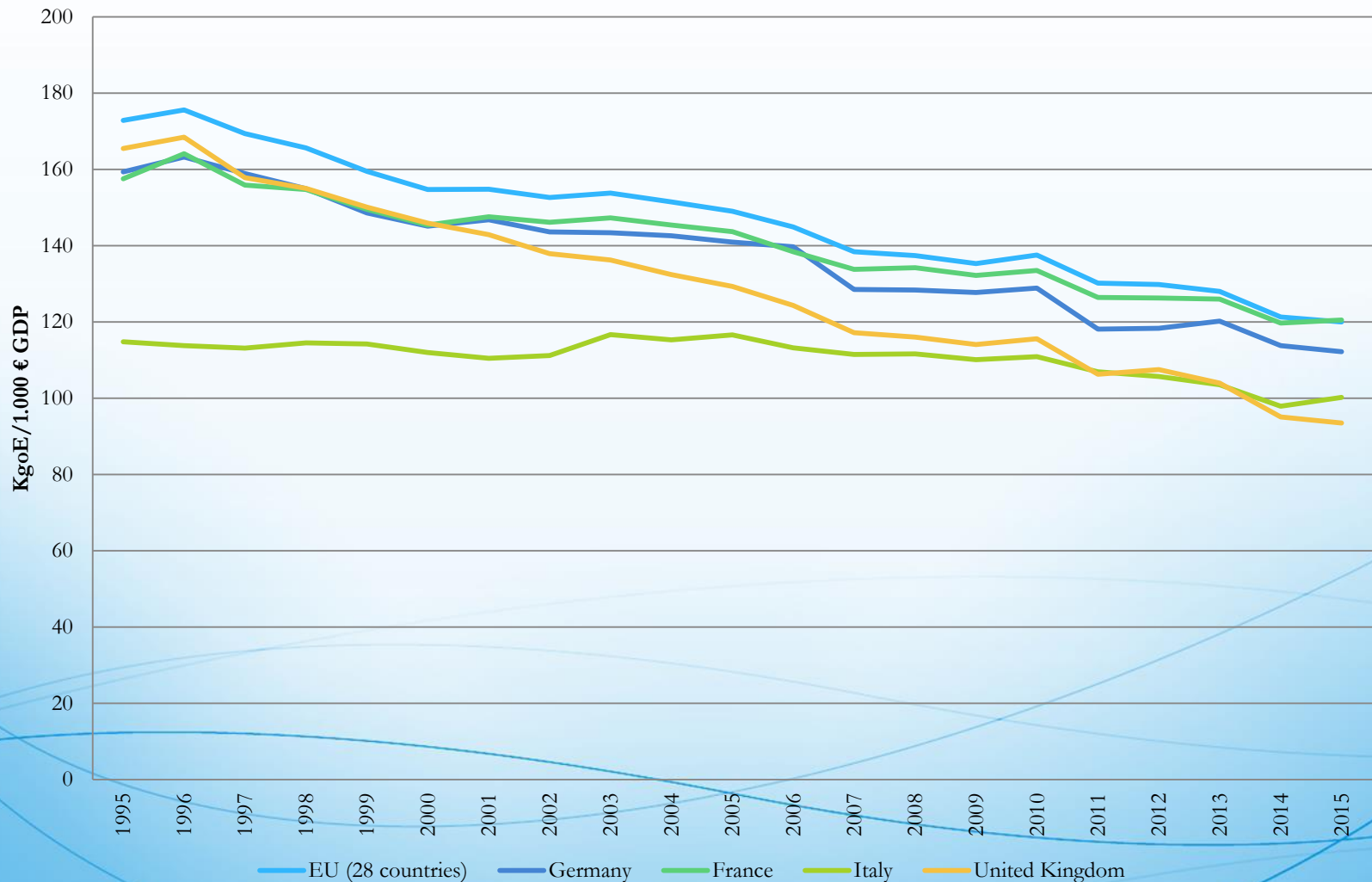
Source: elaboration MATTM on ISTAT data



Energy intensity of the economy (Europe G7)

Gross inland consumption of energy divided by GDP (kg of oil equivalent per 1.000 EUR)

Source: Eurostat





PROGETTO UE-SG-SRSP “La Riforma Fiscale Ambientale in Italia e in Europa”

- ✓ Non ci si può muovere da soli
- ✓ Meglio muoversi in (buona) compagnia
- ✓ Regola dell'unanimità in materia fiscale
 - Carbon-Energy Tax 1992 Delors-Majocchi-Convery-Delbeke
- ✓ Coalition of the willing
- ✓ Like-minded Countries
- ✓ Enhanced Cooperation (9 Paesi su 27/28)