



RESOURCE EFFICIENCY SCOREBOARD DATA CENTRE ON NATURAL RESOURCES

NETGREEN thematic policy workshop

'Maximizing resource efficiency throughout the EU economy'

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Evi Ford-Alexandraki

EUROSTAT, Environmental statistics and accounts; sustainable development



Resource efficiency scoreboard and data centre on natural resources

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1. RESOURCE EFFICIENCY SCOREBOARD

- STRUCTURE AND INDICATORS**

2. ENVIRONMENTAL DATA CENTRE ON NATURAL RESOURCES

- CONTENT AND STRUCTURE**



Resource efficiency scoreboard

RESOURCE EFFICIENCY SCOREBOARD

A three-tier system of 32 indicators based on statistics from Eurostat, the European Environment Agency, the Joint Research Centre and other internationally recognised sources

- **Lead indicator** (Resource productivity)
- **Dashboard indicators** (Materials, Land, Water, Carbon)
- **Thematic indicators**
 - ✓ Transforming the economy (Waste, Innovation, Taxes)
 - ✓ Nature and ecosystems (Biodiversity, Air, Land and Soils)
 - ✓ Key areas (Food, Buildings, Mobility)

Resource efficiency scoreboard

➤ **Lead indicator**

$$\text{Resource productivity} = \frac{\text{Gross Domestic Product}}{\text{Domestic Material Consumption}}$$

Economic value created per unit of material resources

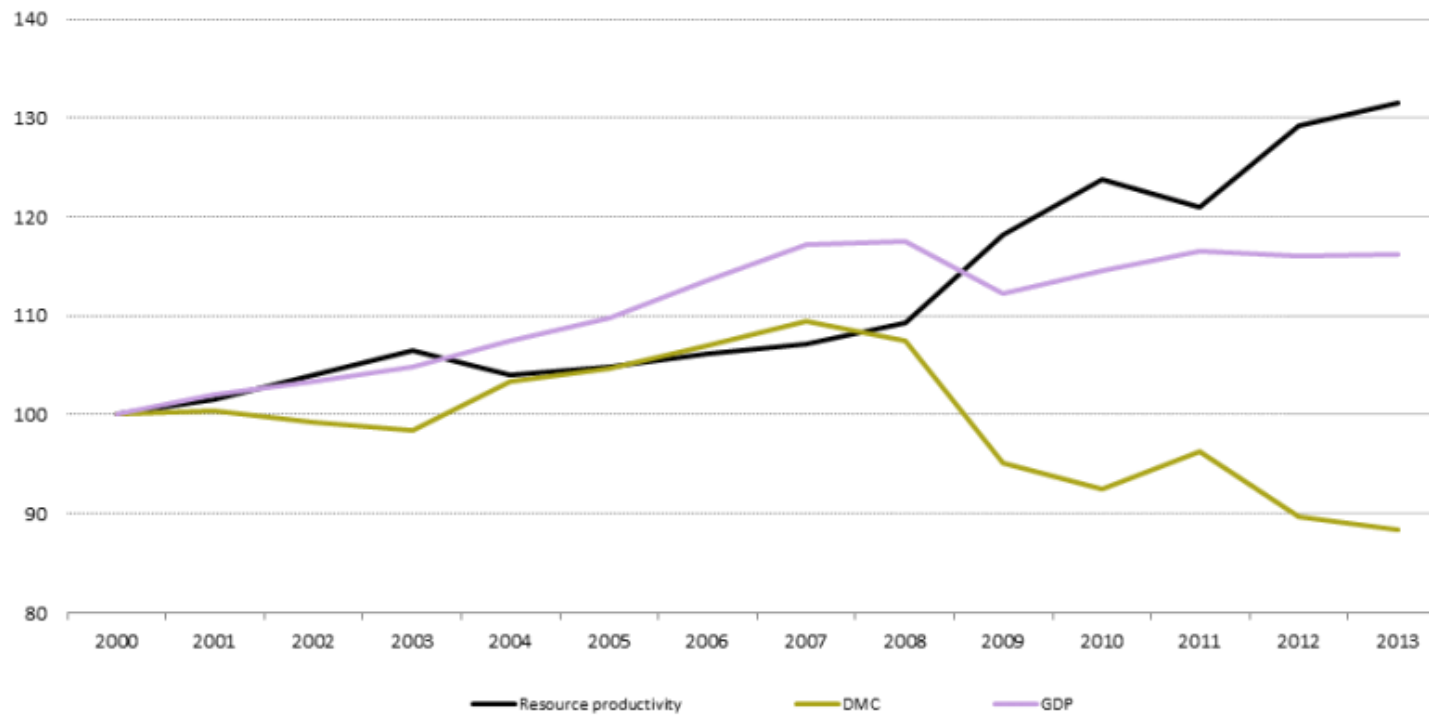
- DMC measures domestic extraction of materials in tonnes of gross harvest, but imports and exports of materials in mass weight of goods crossing the borders are not taken into account
- RMC (Raw Material Consumption) measures imports and exports in raw material equivalents (RME), i.e. amounts of domestic materials required to produce traded goods

Resource efficiency scoreboard

- High policy demand for RMC as the lead indicator for resource efficiency
- Raw material equivalents of imports and exports need to be estimated
- Eurostat has developed an RME-model for the aggregated EU economy and publishes relevant RME accounts
- Eurostat will provide a tool for countries to facilitate estimation of RME accounts at country level

Resource efficiency scoreboard

Lead indicator: Resource productivity, EU-27, 2000-13



Resource efficiency scoreboard

➤ **Dashboard indicators**

Materials

- Domestic material consumption per capita

Land

- Productivity of artificial land: GDP / artificial land
- Built-up areas: Surface of built-up areas in km² and as ratio of total land

Water

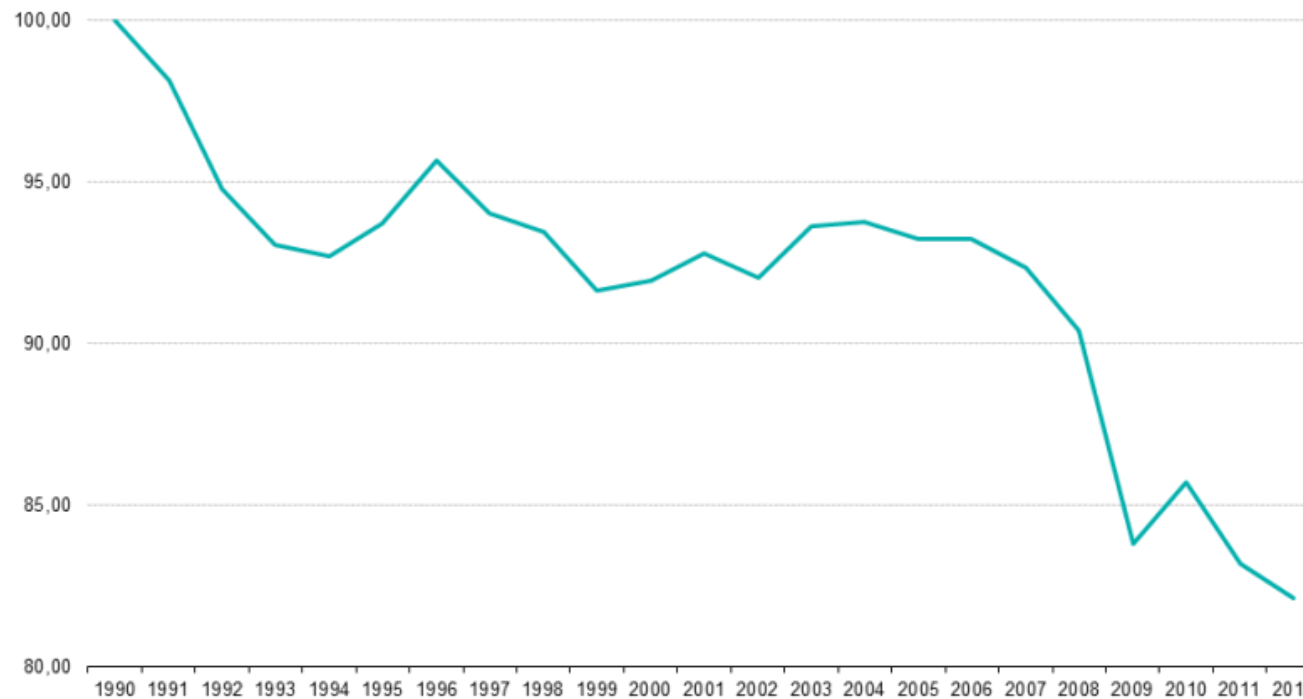
- Water productivity: DGP / total annual abstraction of fresh water
- Water exploitation index: ratio of annual total fresh water abstraction to the long-term average available water

Carbon

- Greenhouse gas emissions per capita
- Energy productivity: GDP / gross inland consumption of energy
- Energy dependence: net energy imports / sum of gross inland energy consumption
- Share of renewable energy in gross final energy consumption

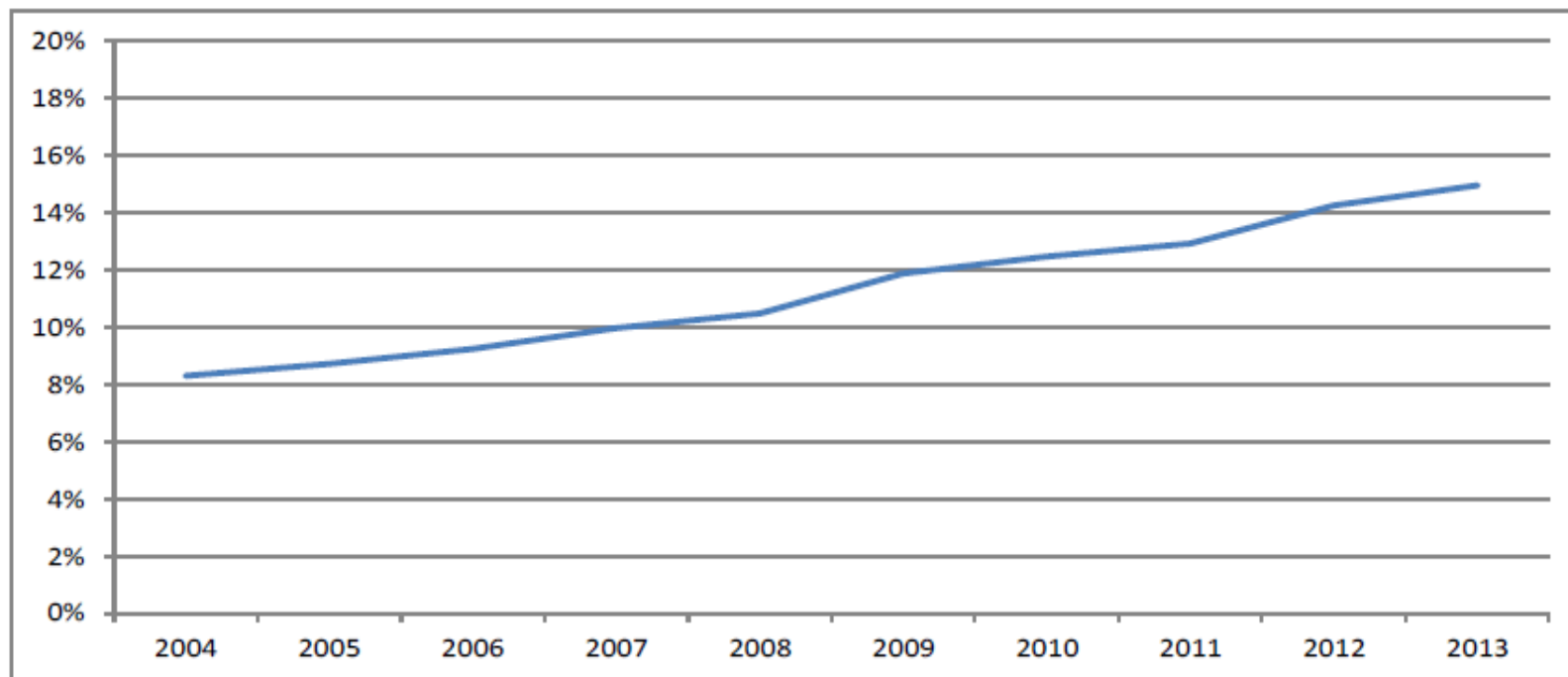
Resource efficiency scoreboard

Greenhouse gas emissions trend (including international aviation and excluding LULUCF), EU-28, 1990 - 2012



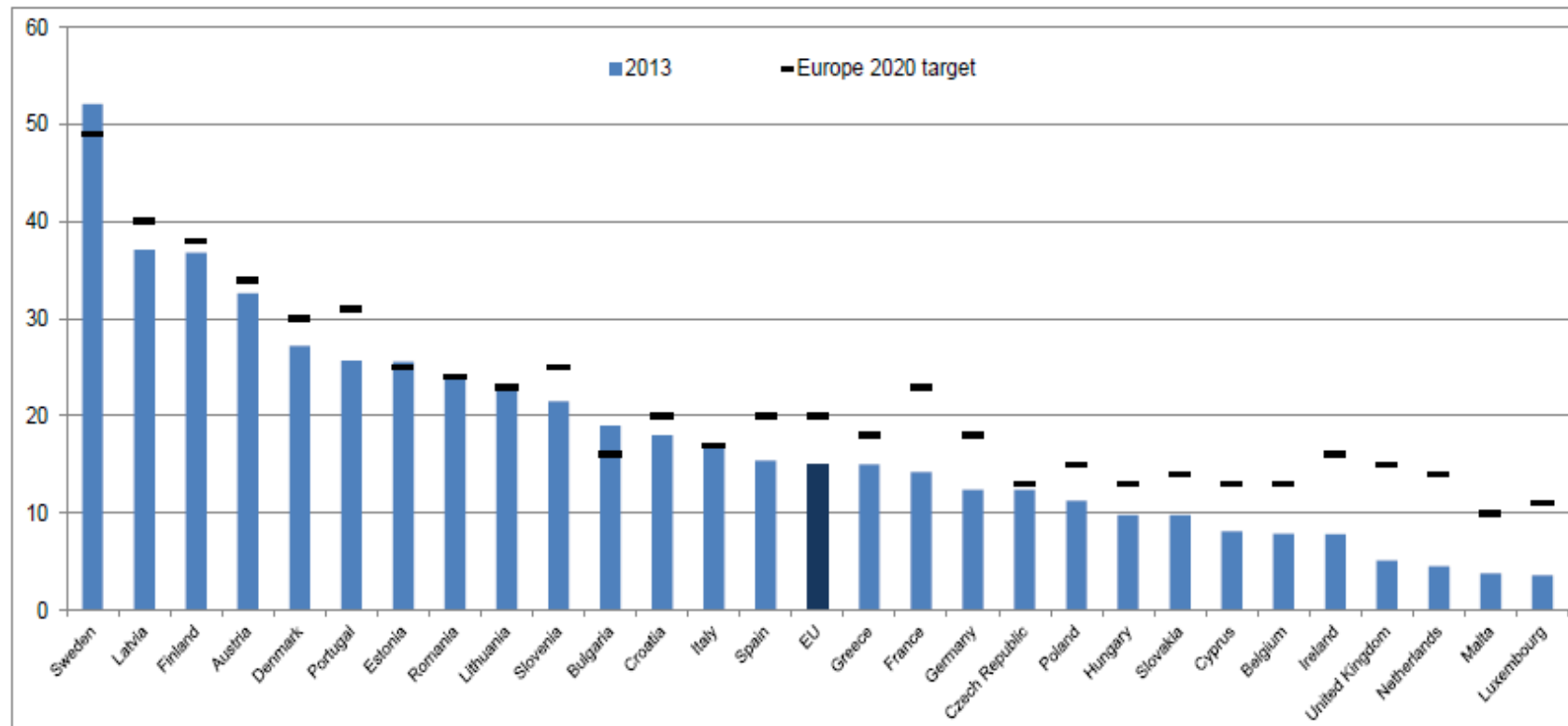
Resource efficiency scoreboard

Share of energy from renewable sources in the European Union
(in % of gross final energy consumption)



Resource efficiency scoreboard

Share of energy from renewable sources in the EU Member States, 2013
(in % of gross final energy consumption)



Resource efficiency scoreboard

➤ **Thematic indicators**

Transforming the economy

- Waste generation and treatment (generation and landfill rate of waste, recycling rate of municipal waste and e-waste)
- Research and innovation in environment related fields
- Environmental tax revenues and energy taxes by paying sector

Nature and ecosystems

- Biodiversity (farmland bird populations, organic farming, landscape fragmentation)
- Air pollution (urban population exposure to particulate matter, PM2.5 and PM10)
- Soil and land (soil erosion by water, gross nutrient balance in agricultural land)

Resource efficiency scoreboard

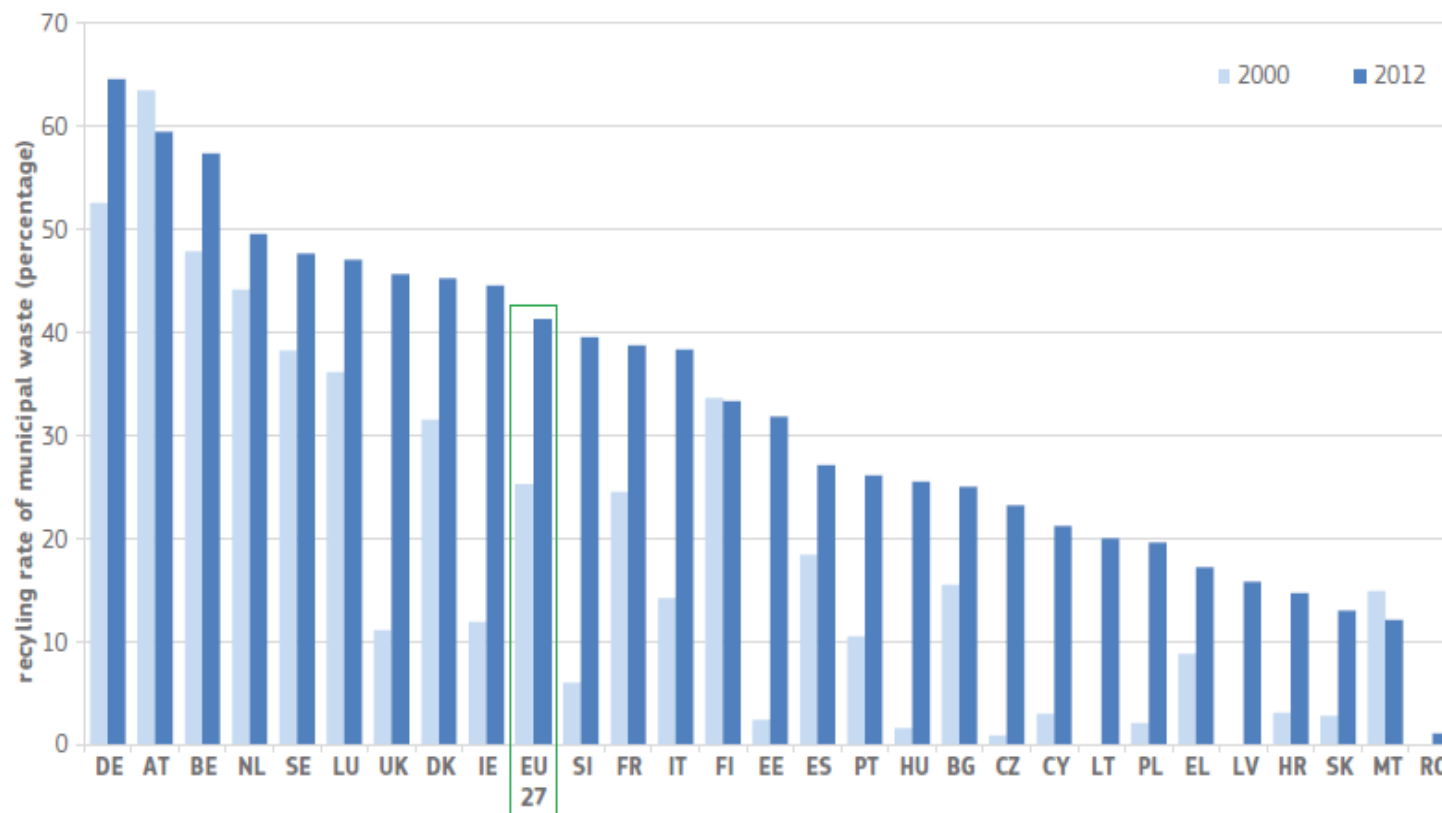
➤ **Thematic indicators**

Key areas

- Food consumption (daily calorie supply from animal and vegetal products)
- Efficient mobility (CO₂ emissions from new passenger cars, pollutant emissions from transport, modal split of passenger and freight transport)
- Improving buildings (proxy indicator on final energy consumption in households by type of fuel)

Resource efficiency scoreboard

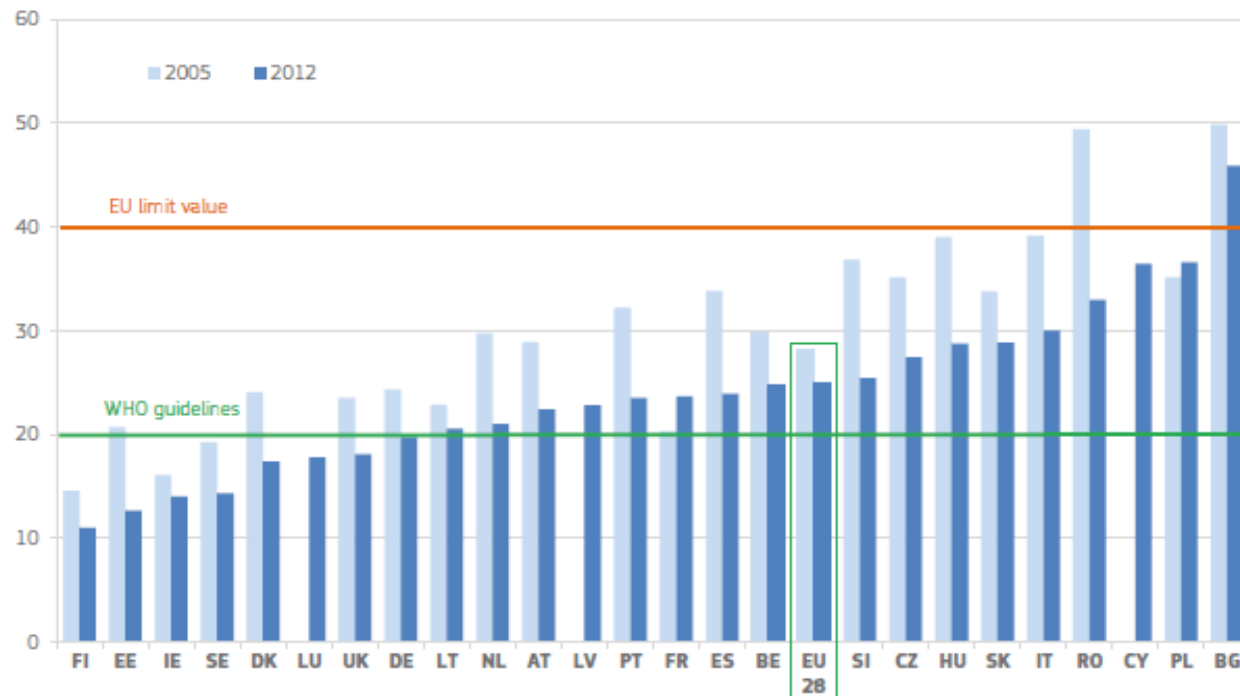
Recycling rate of municipal waste, 2000 and 2012



The data for Austria, Portugal, Sweden and Ireland show a break in series in 2010 due to methodological changes in data collection in these countries.

Resource efficiency scoreboard

Urban population exposure to air pollution by PM_{2.5}, µg/m³



Data for Croatia, Greece and Malta are not included since no urban or sub-urban background monitoring stations are present in the Urban Audit cities. Data for France for 2005 and 2012 are not comparable due to changed methodology.

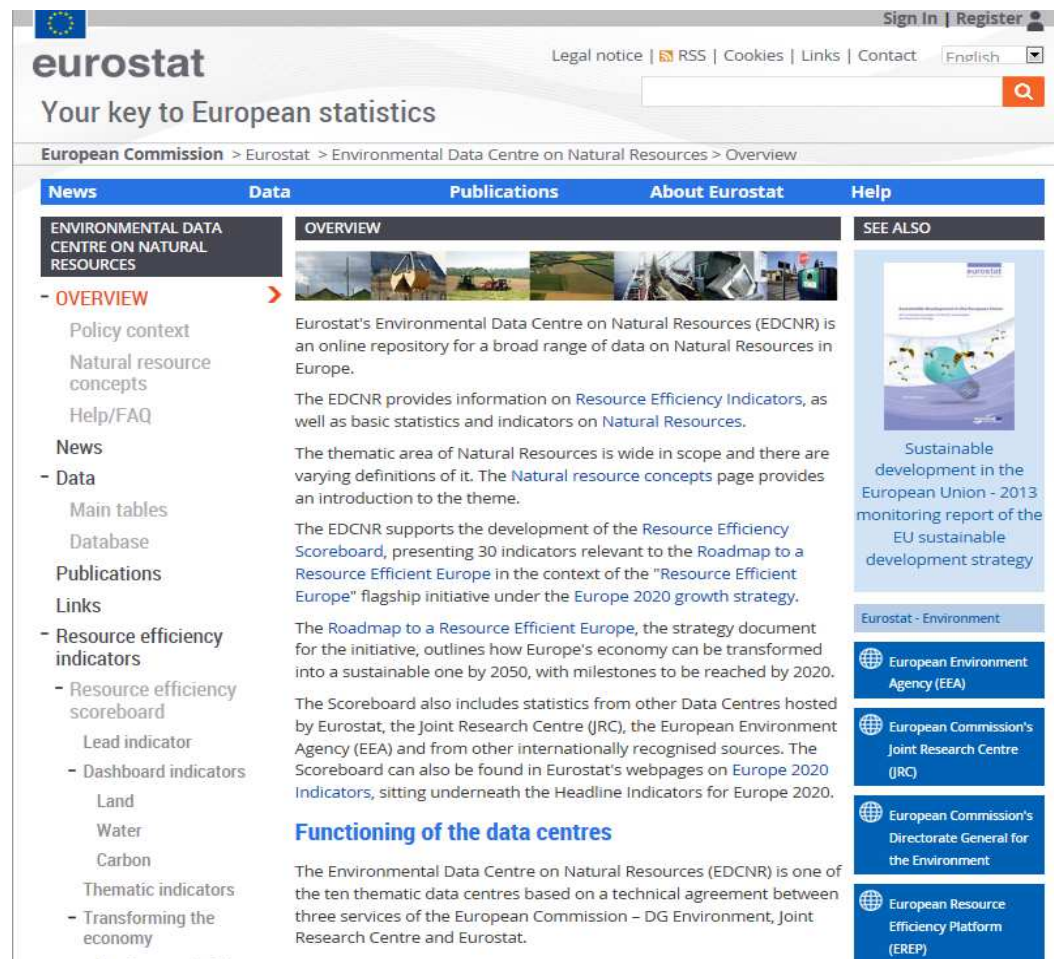
Data centre on natural resources

ENVIRONMENTAL DATA CENTRE ON NATURAL RESOURCES

One of the ten thematic data centres. Eurostat is responsible for its operation together with the data centre on waste. The data centre:

- is the central access point for information on resource efficiency and the sustainable use of natural resources. It provides basic statistics, indicators and statistical assessments
- has the same 'look and feel' as the waste data centre. It contains two main sections: 'Resource efficiency indicators' and 'Natural resources'
- supports the further development of the resource efficiency scoreboard and the dissemination of robust data on natural resources

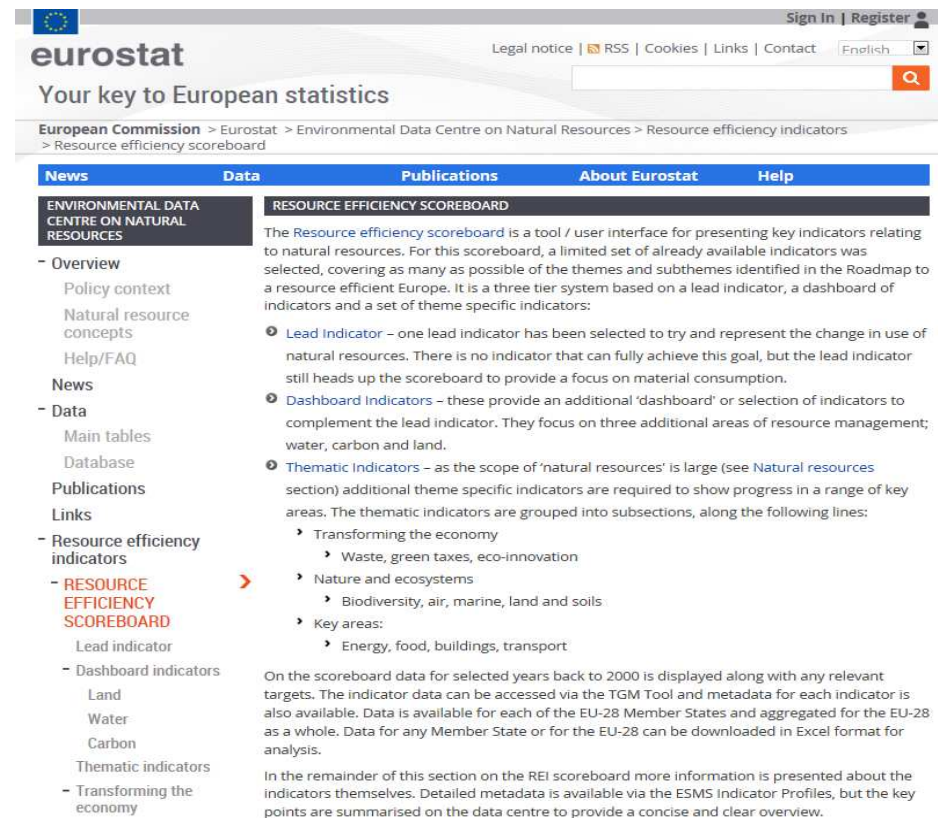
Data centre on natural resources



The screenshot shows the Eurostat website interface. At the top, there is a navigation bar with 'Sign In | Register', 'Legal notice', 'RSS', 'Cookies', 'Links', 'Contact', and a language dropdown set to 'English'. The main header features the Eurostat logo and the tagline 'Your key to European statistics'. Below this is a breadcrumb trail: 'European Commission > Eurostat > Environmental Data Centre on Natural Resources > Overview'. A secondary navigation bar includes 'News', 'Data', 'Publications', 'About Eurostat', and 'Help'. The main content area is divided into three columns. The left column contains a sidebar menu with categories like 'ENVIRONMENTAL DATA CENTRE ON NATURAL RESOURCES', 'OVERVIEW', 'Policy context', 'Natural resource concepts', 'Help/FAQ', 'News', 'Data', 'Publications', 'Links', 'Resource efficiency indicators', 'Resource efficiency scoreboard', 'Dashboard indicators', 'Thematic indicators', and 'Transforming the economy'. The middle column, titled 'OVERVIEW', features a banner image and text describing the EDCNR as an online repository for data on Natural Resources in Europe. It mentions the EDCNR's role in providing information on Resource Efficiency Indicators and its support for the Resource Efficiency Scoreboard. The right column, titled 'SEE ALSO', includes a link to the 'Sustainable development in the European Union - 2013 monitoring report of the EU sustainable development strategy' and a list of related entities: Eurostat - Environment, European Environment Agency (EEA), European Commission's Joint Research Centre (JRC), European Commission's Directorate General for the Environment, and European Resource Efficiency Platform (EREP).

Data centre on natural resources

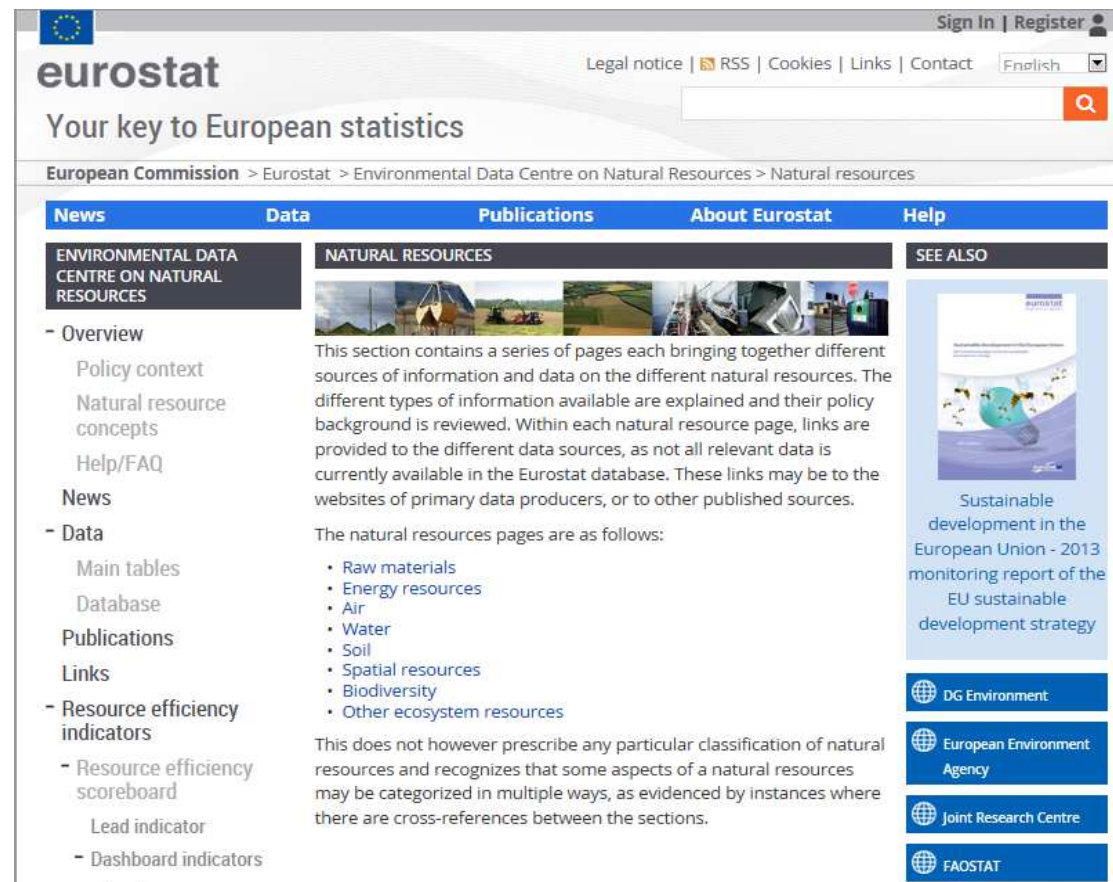
Data centre > Resource efficiency indicators section



The screenshot shows the Eurostat website interface. At the top, there is a navigation bar with the Eurostat logo, a search bar, and links for 'Sign In', 'Register', 'Legal notice', 'RSS', 'Cookies', 'Links', 'Contact', and a language dropdown set to 'English'. Below the navigation bar, the breadcrumb trail reads: 'European Commission > Eurostat > Environmental Data Centre on Natural Resources > Resource efficiency indicators > Resource efficiency scoreboard'. A blue navigation menu contains 'News', 'Data', 'Publications', 'About Eurostat', and 'Help'. The main content area is titled 'ENVIRONMENTAL DATA CENTRE ON NATURAL RESOURCES' and 'RESOURCE EFFICIENCY SCOREBOARD'. The left sidebar lists various sections: Overview (Policy context, Natural resource concepts, Help/FAQ), News, Data (Main tables, Database), Publications, Links, Resource efficiency indicators (with 'RESOURCE EFFICIENCY SCOREBOARD' highlighted in red), Dashboard indicators (Land, Water, Carbon), Thematic indicators, and Transforming the economy. The main content area contains an introductory paragraph about the Resource efficiency scoreboard, followed by three bullet points: 1. Lead Indicator (one selected, focus on material consumption), 2. Dashboard Indicators (three additional areas: water, carbon and land), and 3. Thematic Indicators (grouped into subsections: Transforming the economy, Nature and ecosystems, and Key areas). Below this, a paragraph explains that data for selected years back to 2000 is displayed, and a final paragraph notes that more information is available in the ESMS Indicator Profiles.

Data centre on natural resources

Data centre > Natural resources section



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ENVIRONMENTAL DATA CENTRE ON NATURAL RESOURCES

- Overview
 - Policy context
 - Natural resource concepts
 - Help/FAQ
- News
- Data
 - Main tables
 - Database
- Publications
- Links
- Resource efficiency indicators
 - Resource efficiency scoreboard
 - Lead indicator
 - Dashboard indicators

NATURAL RESOURCES

This section contains a series of pages each bringing together different sources of information and data on the different natural resources. The different types of information available are explained and their policy background is reviewed. Within each natural resource page, links are provided to the different data sources, as not all relevant data is currently available in the Eurostat database. These links may be to the websites of primary data producers, or to other published sources.

The natural resources pages are as follows:

- Raw materials
- Energy resources
- Air
- Water
- Soil
- Spatial resources
- Biodiversity
- Other ecosystem resources

This does not however prescribe any particular classification of natural resources and recognizes that some aspects of a natural resources may be categorized in multiple ways, as evidenced by instances where there are cross-references between the sections.

SEE ALSO

Sustainable development in the European Union - 2013 monitoring report of the EU sustainable development strategy

- DG Environment
- European Environment Agency
- Joint Research Centre
- FAOSTAT



Resource efficiency scoreboard and data centre on natural resources

***Thank you
for your attention***

evangelia.ford-alexandraki@ec.europa.eu