

Environmental Statistics

2014

High levels of quality for air and water waste production increased 11%

In 2013, the socio-economic context was marked by the contraction of economic activity which in general allows to an improvement of environmental indicators. The air quality index, measured in network monitoring stations, recorded in 2013 over 80% of days with air quality between "good" and "very good". The quality of water for human consumption, measured by the safe water indicator, reached in 2013 a value of 98.2%. In the opposite direction the amount of waste generated in 2013 increased by about 11%, with emissions from this sector to evolve at an annual average growth rate of 1.4% since 1990.

INE releases in digital format "[Environment Statistics](#)" having 2013 as the reference period. This publication is organized into 14 chapters with economic, financial and physical analysis, as well statistical tables, figures and maps. This press release presents a summary of the main indicators, using DPSIR model (Driving Forces, Pressure, State, Impact, Response), developed by the European Environment Agency and is based on a systemic analysis of the relationship between environmental system and human and economic system, reflecting the interaction between these systems on the basis of cause and effect (EEA 1999).



Negative variations but less intense in private consumption, public consumption and investment, significant deceleration in inflation, rising labor costs and further reduction of the resident population characterizes the socio-economic and demographic matrix of Portugal in 2013. In the European Union (EU-28), the trends were similar (zero GDP growth, slowing inflation rate and increase in the unemployment rate) but less pronounced. The exception is the resident population that, differing to the national demographic matrix, shows a growing trend.

The driving forces, measurable by providing information on the socio-economic developments, changes in lifestyle, consumption levels and production, influence the pressure on the environment and are particularly relevant in the context of climate change.

Chart 1 - Economic and social context 2006-2013

	measuring units	2006		2007		2008		2009		2010		2011		2012		2013	
		PT	UE	PT	UE	PT	UE	PT	UE	PT	UE	PT	UE	PT	UE	PT	UE
GDP (volume)	%(taxa de variação)	1,6	3,4	2,5	3,1	0,2	0,5	-3,0	-4,4	1,9	2,1	-1,8	1,7	-3,3	-0,4	-1,4	0,0
Private consumption	"	1,5	1,7	2,4	1,7	1,4	0,7	-2,4	-0,4	2,5	0,6	-3,7	0,1	-5,2	-0,4	-1,4	0,0
Public consumption	"	-0,2	0,4	0,6	0,4	0,4	0,5	2,6	0,4	-1,3	0,2	-3,8	0,0	-4,3	0,0	-1,9	0,1
FBCF	"	-0,8	1,2	3,1	1,3	0,4	-0,1	-7,6	-2,7	-0,9	0,0	-12,5	0,4	-15,0	-0,5	-6,3	-0,3
Exports (FOB)	"	12,4	3,3	7,3	2,3	-0,3	0,6	-10,2	-4,6	9,5	3,7	7,0	2,6	3,1	0,9	6,4	0,9
Imports (FOB)	"	7,5	-3,2	5,4	-2,4	2,5	-0,4	-9,9	4,5	7,8	-3,3	-5,8	-1,6	-6,6	0,2	3,6	-0,5
Funding needs of Public Administration	%(percentagem do PIB)	69,2	X	71,7	X	96,2	X	124,8	X	0,0	-6,4	0,0	-4,5	0,0	-4,2	0,0	-3,2
Public dept ⁽¹⁾	"	0,0	X	0,0	X	0,0	X	0,0	X	0,0	78,2	0,0	80,8	0,0	83,5	0,0	85,4
Prices index rate (IPC)	%(taxa de variação)	3,0	2,2	2,4	2,3	2,7	3,7	-0,9	1,0	1,4	2,1	3,6	3,1	2,8	2,6	0,4	1,5
Labour force costs by produced unit (nominal)	"	0,7	0,7	1,0	X	2,8	X	2,7	X	-1,2	X	-2,0	X	-2,9	X	1,9	X
Unemployment rate	%	7,6	8,2	8,0	7,2	7,6	7,0	9,4	8,9	10,8	9,6	12,7	9,6	15,5	10,4	16,2	10,8

Source: INE, Contas Nacionais (Base 2011; 2012 e 2013 - preliminary data; information available 29/09/2013), IPC (Base 2012) e Average unemployment rate (Séries 1998 e 2011), BP.

⁽¹⁾ - For 2012 and later years, the compilation of lending / net borrowing is done by INE and the gross debt is compiled by Banco de Portugal.

In 2013 the negative GDP growth (-1.4%) was less intense compared to 2012 (-3.3%) and 2011 (-1.8%). Unless sharp decline in GDP growth in 2013 resulted from the less negative contribution of domestic demand, reflecting trends in the same direction in private consumption and to a lesser extent, investment and government consumption. Private consumption (final consumption expenditure of households and Non-Profit Institutions Serving Households - NPISH) recorded a decrease in volume of 1.4% (-5.2% in 2012). Investment (Gross Fixed Capital Formation), which since 2008 has shown negative growth, decreased in real terms by 6.3% in 2013 (-15.0% in 2012). Public consumption in 2013 decreased by 1.9% in volume (-4.3% in 2012).

Given the variable impact of economic activities on the environment is important to assess their relative performance.

Chart 2 - GVA composition on the economy

Ano	2007	2008	2009	2010	2011	2012 Pe	2013 Pe
Gross value added by industry (%)	Structure						
Agriculture, forestry and fishing	2,0	-4,2	3,5	-3,4	0,6	-1,3	2,7
Industry	14,1	2,5	-2,4	-11,0	6,8	0,6	-2,1
Energy, water supply and sewerage	3,2	1,3	0,2	4,8	-1,6	-2,3	-1,9
Construction	7,3	1,8	-4,4	-11,0	-6,4	-6,5	-14,7
Wholesale and retail trade, repair of motor vehicles and motorcycles; accommodation and food service activities	18,3	1,1	-0,9	0,2	3,2	-0,5	-1,6
Transportation and storage; Information and communication	8,0	6,7	2,5	-2,9	1,5	1,7	-1,2
Financial and insurance activities	16,4	5,5	3,2	0,5	2,3	0,6	-0,6
Other services activities	30,7	2,6	1,9	-0,7	1,0	-3,0	-2,9

Source: INE, Contas Nacionais (Base 2011; Pe - preliminary data)

With consecutive negative change rates from 2008, the Construction industry GVA was the aggregate that lost more importance in the composition of total GVA, from 7.3% in 2007 to 4.2% in 2013. The financial activities, insurance and real estate observed positive growth rates by 2010 and negative in 2012 and 2013, but still contributed over 2007, with over 0.7 percentage points to total GVA. The agriculture activity presented the most significant positive growth rate in 2013 and contributed to the total GVA with over 0.2 pp compared to 2007. The second major positive growth rate in 2013 occurred in the industry, succeeding three consecutive negative rates. Compared to 2007 increased by only 0.1pp its importance in the total GVA.

Chart 3 - Population change and its components, Portugal

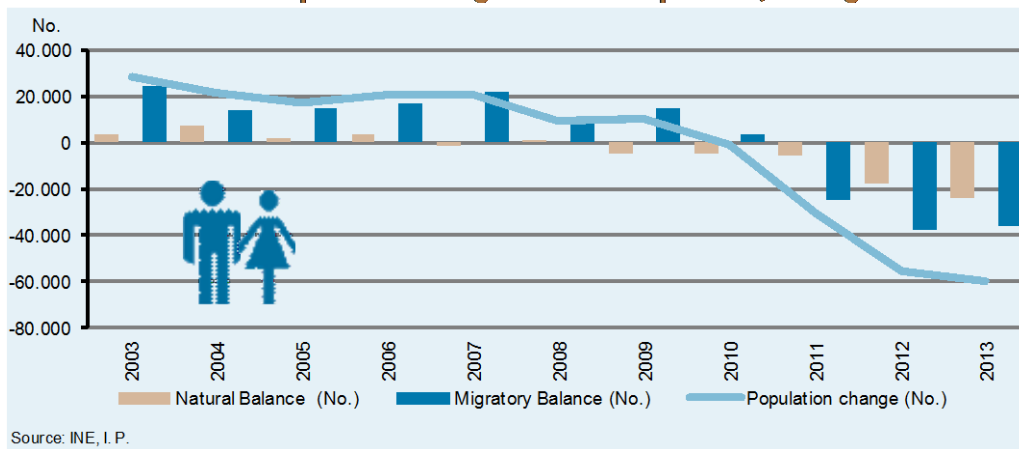
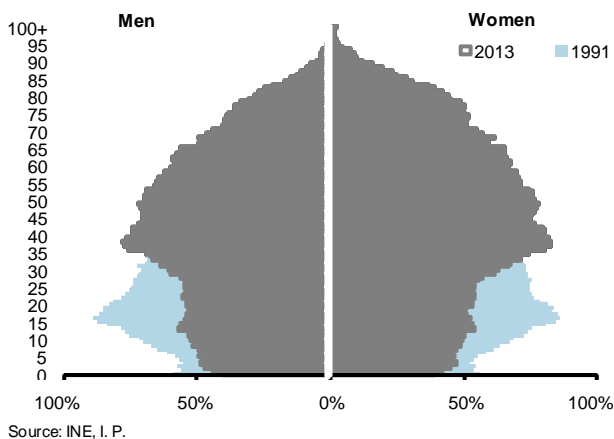


Chart 4 - Age pyramids, 1991 e 2013, Portugal



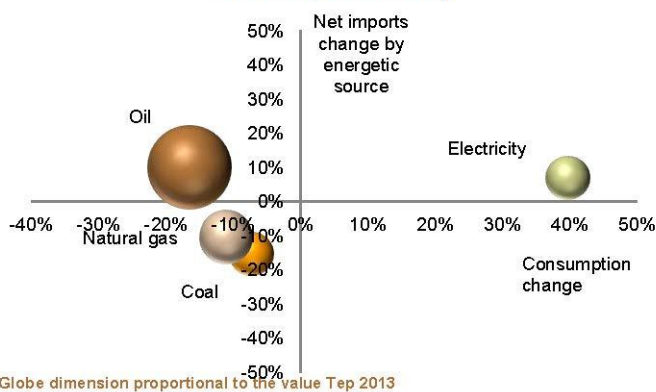
Demography is one of the main driving forces that currently is leading to significant changes in the environment. However, demographic trends point to a slowdown in population growth in Portugal which eventually diminishes the pressures on the environment. In recent years there has been a population decrease, combined with a continued process of population aging.

The resident population in Portugal increased gradually from 2000 to 2009, reaching a maximum of 10,573,479 individuals. Despite the increase in population, there was a slowdown in population growth in this period. In 2012 the resident population lost nearly 60 000 inhabitants, reaching in 2013 a total of 10,427,301 individuals. For this cut contributed the natural balance of -23,756 inhabitants (-17,757 in 2012) and above all the migratory balance of -36 232 individuals (-37,352 in 2012).

Renewable sources more than offset the 1.0% increase in energy consumption in 2013. Waste generation increased 11.1% compared to 2012. Decreased net kidnapping occurred in 2012, the lowest since 2006, indicating a slowdown in the decrease the potential greenhouse effect.

The energy sector is the largest emitter of greenhouse gases (GHG), contributing in 2012 with 69.4% to national emissions (71.4% in 2011). This sector has a strong environmental impact, either by the consumption of fossil fuels with a finite availability or essentially because it generates through the consumption of these fuels a considerable level of GHG emissions, in particular carbon dioxide (CO2) directly related to climate change.

Chart 5 - Primary energy consumption by energetic source (2009/2013)



Globe dimension proportional to the value Top 2013
Source: DGEG

In 2013, the primary energy consumption in Portugal was 21,704 ktoe, 1.0% more than in 2012 (21 482 ktoe). However, the primary energy consumption decreased in the period 2009/2013, due to the reduction of primary energy consumption between 2009 and 2012 (-10.2%), promoted mainly by the decrease in oil consumption (-19.4%).

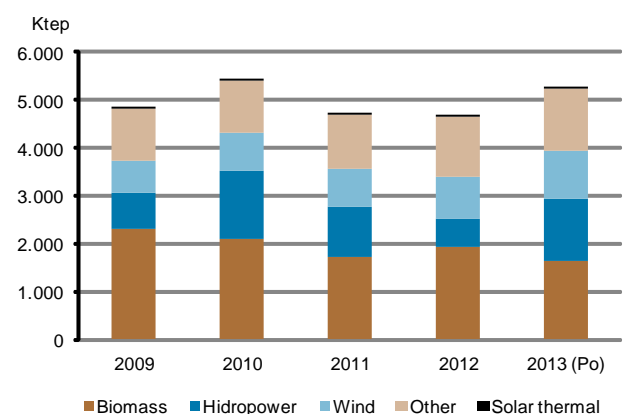
Net imports of primary energy gradually decreased between 2009 and 2013 at an annual average growth rate of 4.2%. Despite the increase in primary energy consumption in 2013, net imports decreased 5.7% due to increased consumption of renewable energy (+ 19.6% in 2013 compared with 3.2% in 2012).

The primary energy consumption by source reveals that, despite the downward trend, oil dependence remains very high (44.4% in 2013, compared with 46.3% for the average 2009-2013). Natural gas is the second most consumed energy source in 2013 with 17.4% (18.4% in 2012), followed by coal with 12.2% (13.6% in 2012).

Portugal is rich in some resources (water, wind, sun, biomass) and has no reserves of fossil fuels, which justifies the investment in renewable energy and energy efficiency.

In 2013, the installed capacity of renewable energy to produce electricity in Portugal amounted to 11 311.80 MW (11 052.33 MW in 2012), 48.9% corresponding to the installed hydropower, followed by wind energy with a share of 41.8%. Between 2009 and 2013 the total installed power in Portugal showed an annual average growth rate of 5.6%, mainly due to the growth of wind farms, which showed an average annual growth rate of 7.3%.

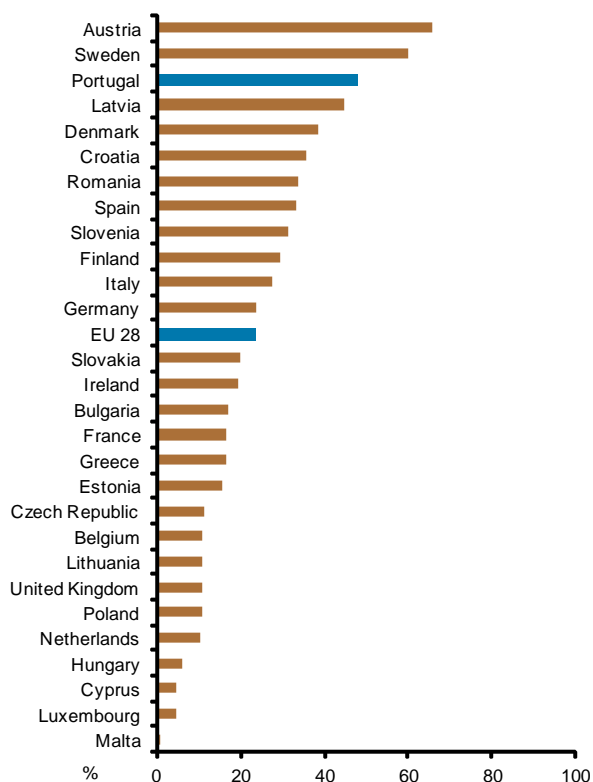
Chart 6 - Proportion of renewable sources in primary energy consumption



Source: DGEG

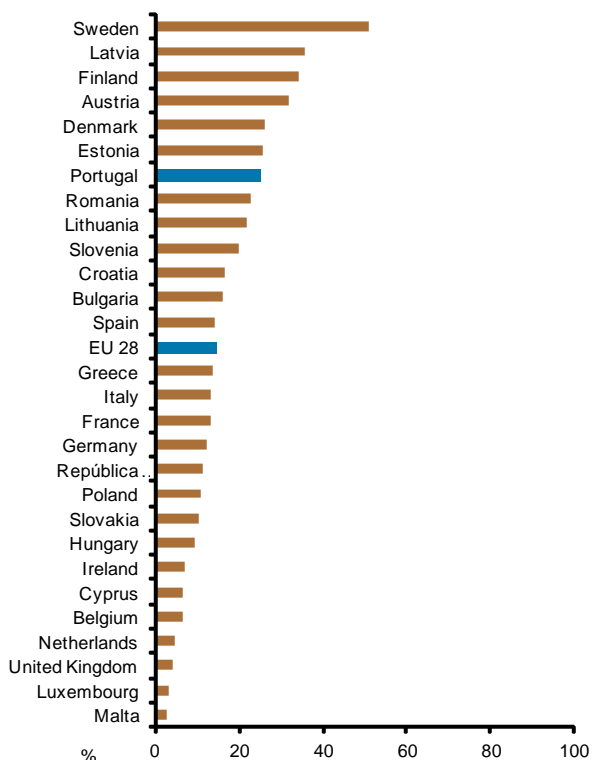
Between 2009 and 2013 the contribution of renewable sources was 22.4% and 48.8% of the total primary energy consumption and total electricity production.

Chart 7 - Electricity generated from renewable sources, by countries EU28 (2012)



Source: EUROSTAT
Footnote: %of gross electricity consumption

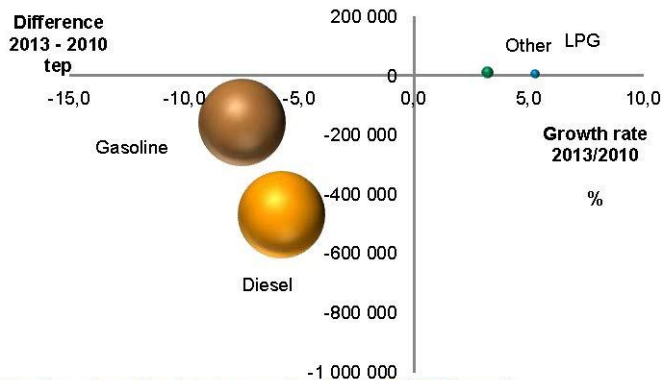
Chart 8 - Proportion of renewable sources in final consumption of energy, by countries EU28 (2012)



Source: EUROSTAT

In 2012 (the last year for which there is available data for the EU-28), Portugal had the seventh largest share of renewable energy in the EU-28. In 2012 the renewable energy represented 14.1% of gross final energy consumption in the EU-28 (12.9% in 2011) and 24.6% in Portugal (24.5% in 2011). For the production of electricity from renewable energy sources, Portugal had in 2012 a 47.6% rate of incorporation, the third largest of EU-28, after Austria (65.5%) and Sweden (60.0%), and well above the European average (23.5%).

Chart 9 - Road transportation fuels consumption



The dimension of the globe is proportional to the TEP 2013 quantity.

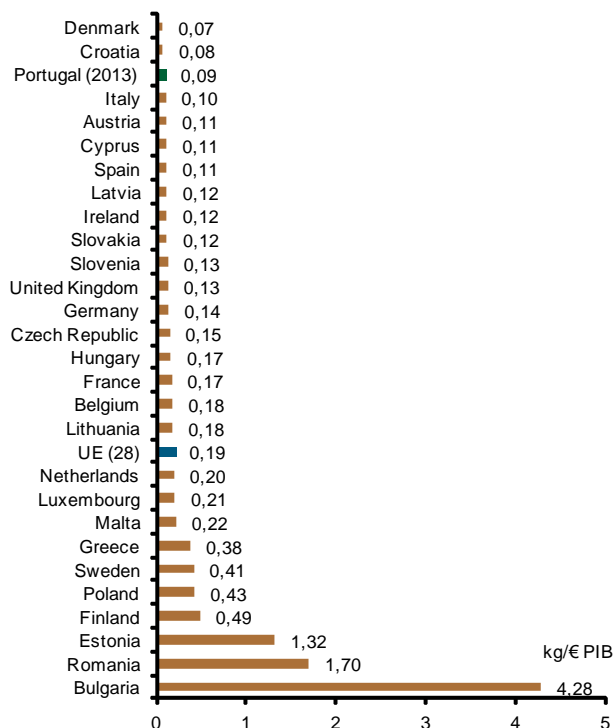
Source: INE, I. P.

In the period 2009-2013 the consumption of road transportation fuels decreased constantly. On annual basis average the diesel consumption decreases 5.8% and gasoline consumption decreases 7.5%. Although relatively low the consumption of LPG have been raising on an annual average of 5.3% in the same period.

In 2013 for each LPG motor vehicles on circulation there was 63,9 vehicles on diesel oil motors (68,3 in 2012) and 40,8 vehicles moved on gasoline (44.5 in 2012).

In 2013 Portugal generated 15.8 million tons of waste (municipal and industrial), an additional 1.6 million tons of waste (+11.1%) comparing with 2012.

Chart 10 - Waste (a) ratio by GDP (waste kg / GDP in euros) by EU countries



Fonte: EUROSTAT

(a) Municipal and industrial.

The ratio of quantities of waste by GDP is commonly accepted to evaluate economy efficiency, being an economy rather efficient the lesser the quantities of waste generated by GDP value. Nevertheless, we have to take into account some reservations when reading or evaluating such kind of indicators. The level of development of an economy (in general, a society more evolved and more complex generates more waste) and the existing production structures and industrial conditions in a country determines the kind of waste generated.

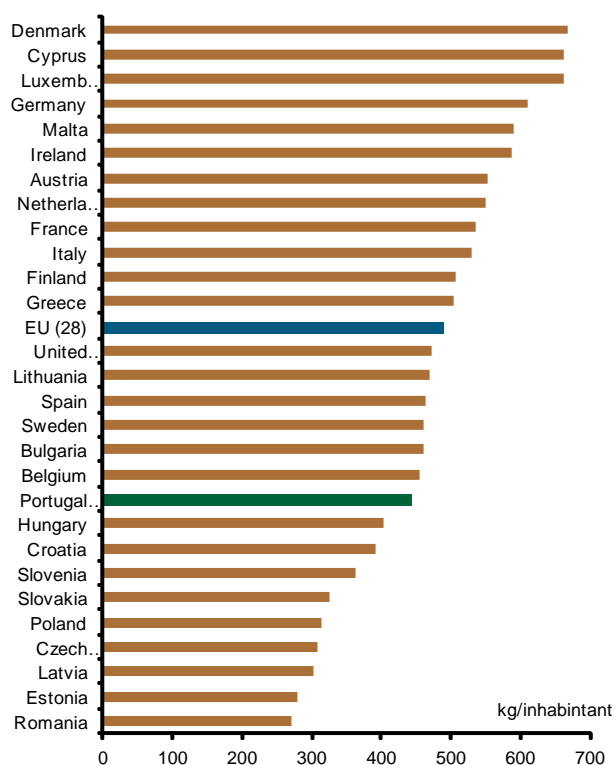
When comparing among the EU28, Portugal is placed on the third position starting with the countries having the lowest ratio of waste by GDP. Such position and condition is determined by the fact that Portugal is the ninth country in the less waste production list of countries and sorts out in the middle (fifteenth) of the EU 28 countries rank regarding GDP value. Denmark, with nearly half of the portuguese population and a GDP of 1.4 times the value of the portuguese GDP, leads the

indicator ranking due to the fact that generates an amount of waste similar to Portugal and is ranked on 11th largest GDP in the EU28. Croatia is ranked on second in what concerns the countries with lowest waste / GDP ratio indicator. With a population equivalent to 2/5 of the portuguese population and a GDP corresponding to 1/4 of the portuguese GDP, Croatia is placed on the EU28 with less waste generation list and ranked in the 20th position in the EU28 Environmental Statistics – 2013

largest GDP rank. On the last position in the indicator ranking is Bulgaria, with a population of 2/3 the portuguese population is the 7th largest waste producer and the 7th country with the lowest GDP in the EU28.

In 2013 Portugal generated 4.6 million tons of municipal waste, an amount 3.5% lower than the 2012 quantity. In the 2009-2013 time frame the amounts of municipal waste decreases on an annual average of 4.4%, falling a total of 900 thousand tons of waste from a maximum of 5.5 million tons in 2009. Such trend in the five years period is determined by the economic and social environment characterized by lowering consumption levels and consequently less amounts of waste generated.

Chart 11 - Municipal waste per capita (kg/inhabitant) by countries EU-28



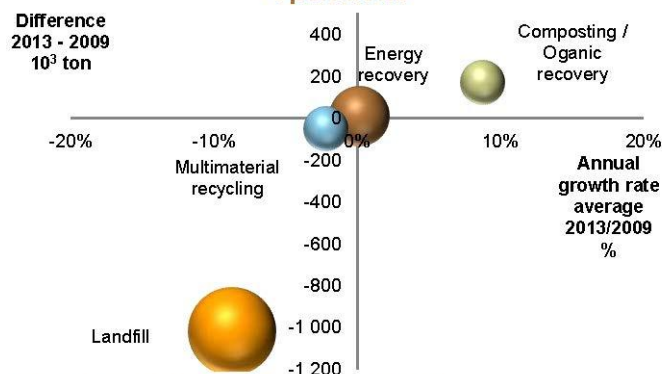
Source: EUROSTAT

Regarding the per capita generation of municipal waste each inhabitant in Portugal generates approximately 440 kg of waste in 2013, corresponding to a daily production of 1.2 kg per capita.

The comparison with the EU-28 partners (2012 data) placed Portugal below the EU average with a difference of nearly 47 kg per capita. Denmark, Cyprus, Luxembourg and Germany are the member states that generate more municipal waste per capita, each one above 600 kg per capita. On the opposite position sorts out member states Romania, Estonia, Latvia and the Czech Republic with the lowest per capita waste generation, in quantities which are less than half of the quantities of the countries in the top of the list. Greece with 503 kg / inhabitant per year and the UK with 472 kg / inhabitant per year are the 2 member states with the closest results to the per capita EU-28 average of 487 kg / inhabitant per year.

Despite the significant reduction and the gradual downward trend of the quantities of waste disposed of in landfills in the period 2009-2013 (average annual reduction of 8.71%), in 2013 nearly 50% of the municipal waste managed was sent out to landfill. This past year, the amounts of municipal waste submitted to organic recovery and recyclables recovery, amounted to a total of 1.2 million tons, approximately 26% of total waste.

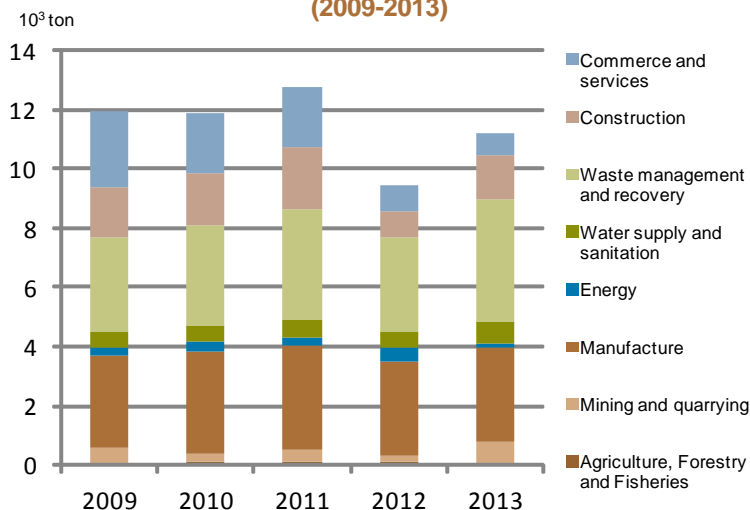
Chart 12 - Municipal waste by waste management operations



The globes dimension is proportional do 2013 quantities.

Source: APA, I.P., SREA e INE, I.P.

Chart 13 - Waste generated by major economy sectors (2009-2013)



Source: APA, I.P., INE, I.P., SREA e DRA dos Açores.

In the period 2009-2013, the economic activities in Portugal, generates about 57 million tons of waste. In 2013, the estimation points to a value of production of 11.2 million tons, an increase of 18.5% comparing with 2012, reversing the downward trend that was estimated for the biennium 2011 -2012.

In structural terms in the period 2009-2013 it appears that the proportion and significance of the various sectors has not changed substantially over the five years, except for the waste management and recovery sector, which increases almost 10

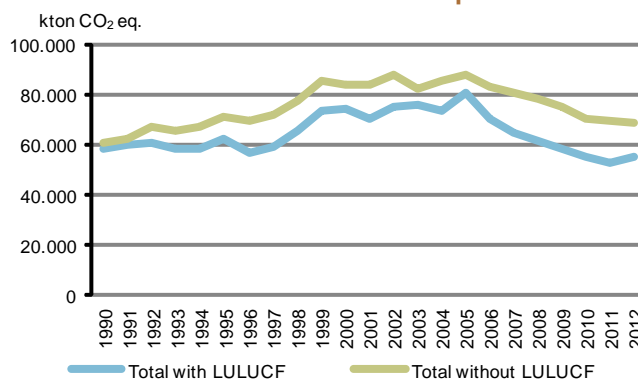
percentage points, from a proportion of 26.9% in 2009 up to 36.7% in 2013, meaning an increase of transfers of the same waste flows between different waste before it's recovery or disposal. On the contrary the trade and services sector decreases from a proportion of 21.3% down to 6.7% in 2013 (-14.6 percentage points).

Air emissions from agricultural activities have decreased continuously between 2005 and 2012. Emissions from the energy sector had a negative annual average growth rate of 4.2% for the same period, although maintaining its high contribution to the total emissions without LULUCF (English acronym: LULUCF, Land Use, Land-Use Change and Forestry). Waste industry stands out for its negative performance, growing at an annual average rate of 1.4% since 1990.

Greenhouse gases potential increased since 1990 to 2005 (sum of the three main greenhouse gases: carbon dioxide, nitrous oxide and methane), with and without LULUCF. After 2005 there was a trend reversal, with the GHG decreasing at an annual rate of 5.6% (with LULUCF) and 3.6% (without LULUCF).

In 2012 greenhouse gases emissions without LULUCF reached 67 039 kt CO₂ eq (67 780 kt CO₂ eq in 2011) and 53,590 kt CO₂ eq with LULUCF (51 371 kt CO₂ eq). The LULUCF sector was responsible for a net sequestration of 13 450 kt CO₂ eq (16 409 kt CO₂ eq). The net sequestration decrease in 2012, the lowest since 2006, had as consequence a slowdown in the decrease of greenhouse gases potential.

Chart 14 - Greenhouse effect potential

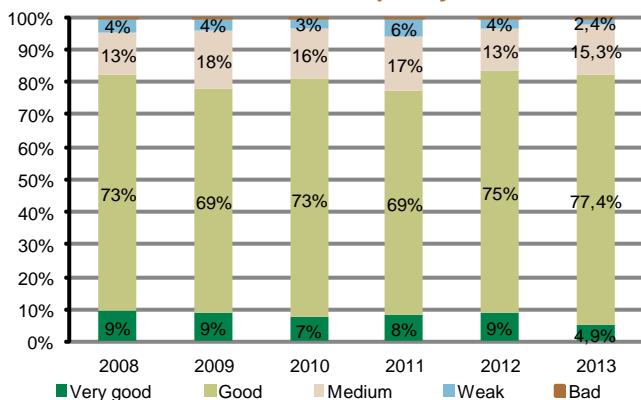


Footnote: Includes CO₂, CH₄ e N₂O

Source: APA, I.P.

Indicators for the air quality and drinking water continued to show a positive behavior. Taking into account the relation between wealth generation and natural resources and materials consumption, 2013 was characterized by dematerialization and denitrification. In 2012 (the latest year with available information on emissions) there was no decarbonisation of the economy.

Chart 15 - Air quality



Fonte: APA, I.P.

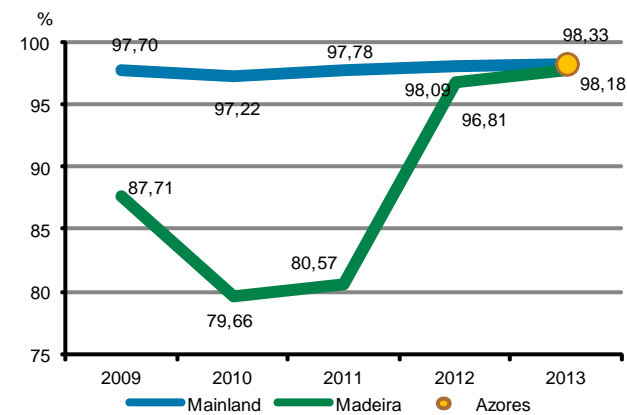
period.

The air quality index reflects the air quality in Portugal, considering pollutants such as nitrogen dioxide (NO₂), ozone (O₃) and fine particles with less than 10 micrometers in diameter (PM₁₀).

In 2013, 77.4% of the days showed "good" air quality and 15.3% "medium" quality. These two quality grades were also dominant in the remaining years. 2013 had the lowest proportion of days with "very good" air quality of the time

According to the latest data on the monitoring of drinking water quality, it is possible to provide for the first time in 2013 the all territory indicator of Safe Water for Portugal estimated at 98.2%. At the regional level we have in first the Autonomous Region of Azores (first year data availability) with the result of 98.33%, followed by Mainland territory with 98.27% and then the Autonomous Region of Madeira with 97.80 %.

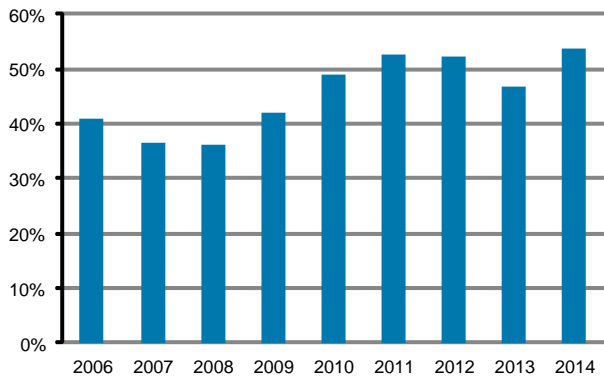
Chart 16 - Safe water indicator by regions



Source: ERSAR, DROTA e ERSARA

Since 2010 the indicator of Safe Water has shown in the Mainland and in the Autonomous Region of Madeira a sustained convergence. Within the four years period 2010-2013, the drinking water quality indicator increases 0.96 percentage points in the Mainland and 18.10 percentage points in Autonomous Region of Madeira, leading to a generally good quality of the water on tap.

Chart 17 - Bathing areas awarded with Blue Flag



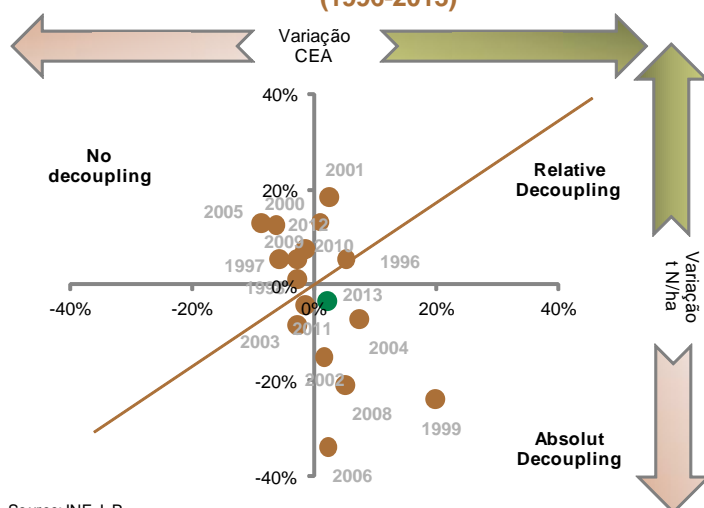
Source: ABAE

The Blue Flag attributed to bathing areas or beaches corresponds to the recognition of an environmental friendly excellence awarded to municipalities that manage their coastal, river and other inland bathing areas according to standards in order to protect and respect the environment. To receive the Blue Flag, the municipalities and its bathing areas must meet a set of criteria ranging from environmental information and education, the quality of the bathing water and the coastal environment, information, safety, equipment and services provided to users.

In 2014 Portugal had the highest number of blue flags ever. The 298 beaches classified this summer with the Blue Flag Award correspond to 53.5% of the total existing bathing areas (beaches) in the country, highest proportion in the last twelve years period. In terms of river basin districts, the Algarve and Norte regions hoisted the ever largest number of Blue Flags, while Alentejo and Centro regions since 2003 reveal the highest proportion increase of beaches recognised with the BFA.

Given the interaction between economic activity and the environment, it is necessary to measure the efficiency of production and consumption environmental and natural resources. Monitoring trends for dissociation of resources (decoupling in English terminology) from economic activity is one of the approaches used for measuring pressure on the environment.

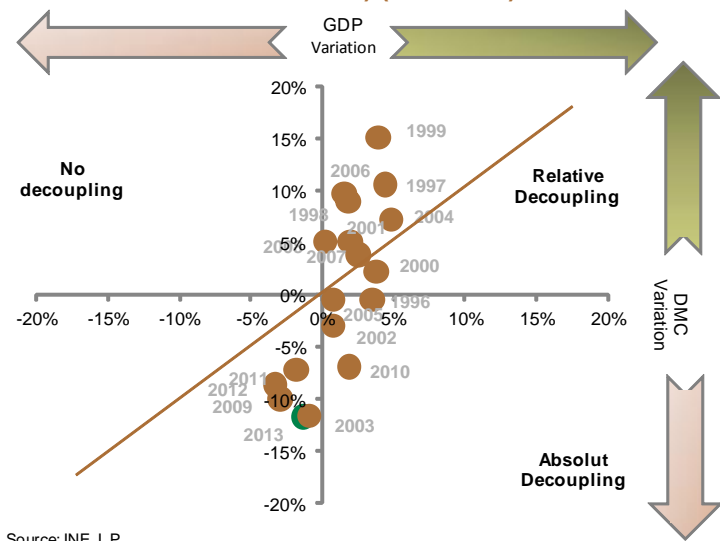
Figura 18 - Nitrogen Balance vs Agricultural Production (1996-2013)



Source: INE, I. P.

In 2013 there was a denitrification, ie, a decrease in the nitrogen balance per hectare (-3.3%), contrary to the agricultural production evolution (+ 2.2%). Although there is an absolute decoupling between nitrogen balance and agricultural production in 2013, during the period under is not possible to identify a clear trend of dissociation.

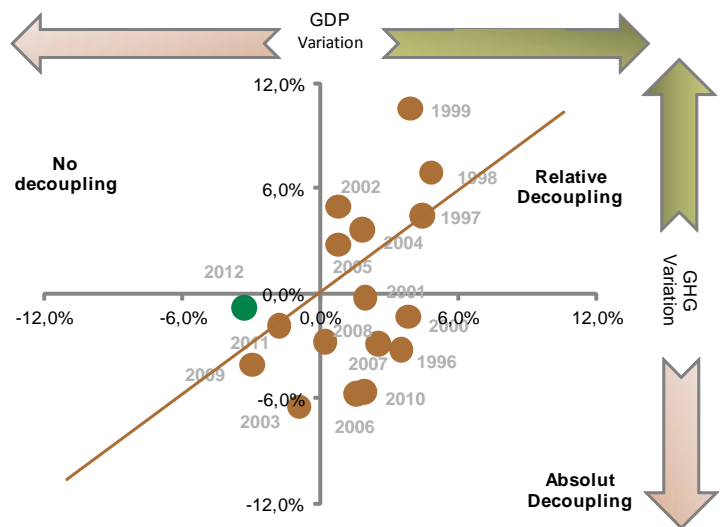
Chart 19 - GDP, DMC (economy resources productivity variation) (1996-2013)



Source: INE, I. P.

The Domestic Material Consumption (DMC) showed relative decoupling in 2013 with GDP, decreasing 11.7% and 1.4% respectively in relation to 2012. However, there is no clear trend towards the decoupling of GDP growth and the change in the consumption of materials.

Chart 20 - GDP and CO₂ emissions variation (1996-2012)

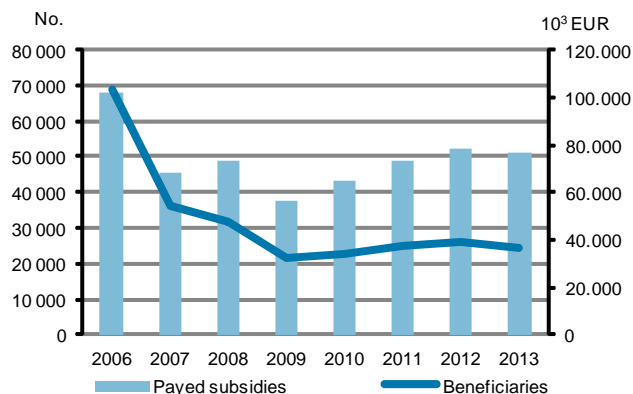


Source: INE, I.P. ; APA, I.P.

With regard to GHG emissions, there was in 2012 a reduction of 0.8%, a variation less pronounced when compared to GDP (-3.3%), which corresponds to a situation of no decoupling. For the time period in analysis, however, there is decoupling between GDP growth and GHG emissions, neither absolute neither relative.

The society response to pressures on the environment implies the formulation of policy measures, such as regulations, tax rates and benefits and dissemination of environmental information.

Chart 21 - Agri-environmental programmes beneficiaries and payed subsidies



Source: IFAP, I.P.

Regulation (EC) No 1698/2005 of the Council of 20 September established general rules for sustainable rural development support and aimed in particular to improve the environment and the rural areas.

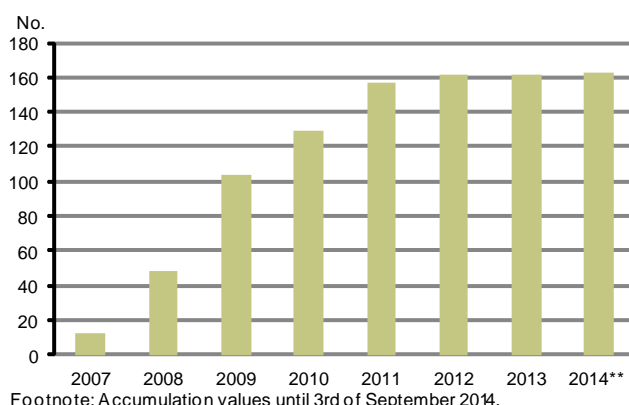
In 2013, 24 000 farmers (26,000 in 2012) received support under the Agri-Environmental Measures (Rural Development Program), receiving a total of EUR 77 million (78 million in 2012).

Since the beginning of the national rural development programs that the number of beneficiaries and payments has been declining. In 2013 there were 24 477 beneficiaries of these measures (less 44,159 than in the beginning of the program and less 1 404 than in 2012), which received a total amount of 76.9 million euros (-24.8 million than in the first year of membership and -1.4 million than in 2012).

The Forest Intervention Areas (ZIF) aim to integrate different aspects of policy for forest areas and especially in regions affected by biotic and abiotic agents and in need of a quick recovery process (Law No. 15/2009).

In 2014 there were 163 ZIF, one more than in 2013 and 151 more compared to 2007. The number of ZIF in the Mainland showed a higher growth until 2012 (annual average growth rate of 68.3%), stabilizing since then.

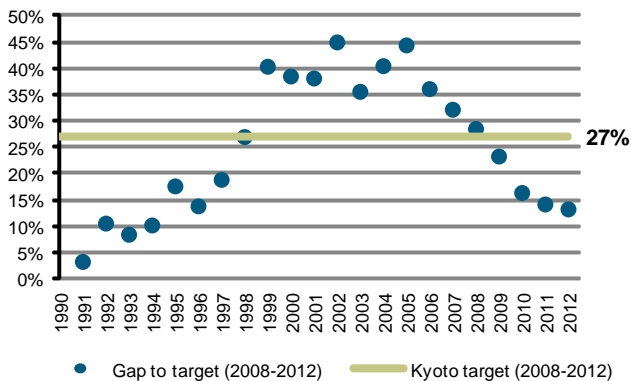
Chart 22 - Number of ZIF created* until September 2014



Footnote: Accumulation values until 3rd of September 2014.

Source: ICNF, I.P.

Chart 23 - GHG emissions variation rate (gap to target)

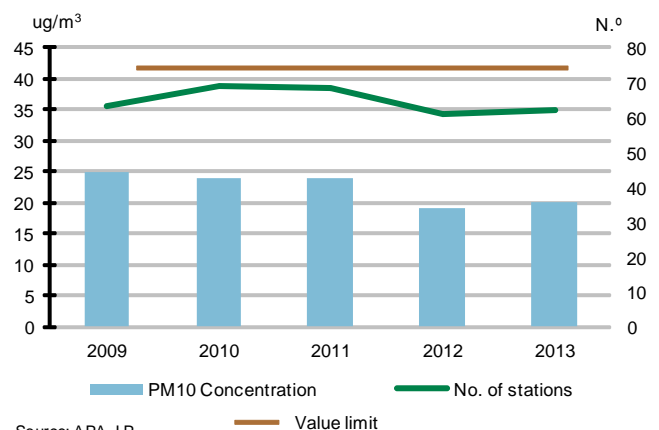


Source: APA, I.P.

Under the Kyoto Protocol and the agreement of shared responsibility, Portugal should limit by 27% the increase of GHG emissions between 2008 and 2012, in comparison with the reference value set at 1990.

Given this threshold, between 1999 and 2008 GHG emissions exceeded the set target. However, since 2009 the emissions level has been below the target.

Chart 24 - Annual average concentration and number of stations for monitoring PM₁₀

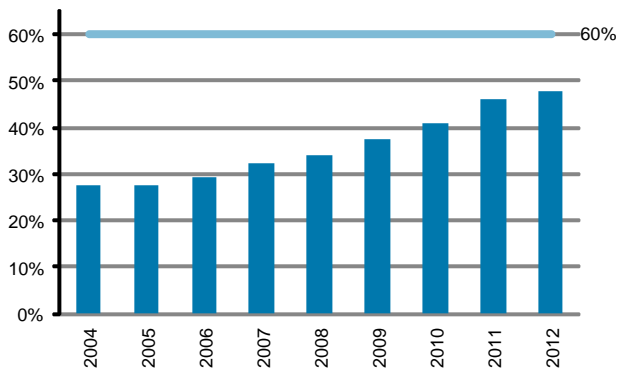


Source: APA, I.P.

Small particles with potential to cause harmful health effects can come from natural sources (volcanic eruptions, forest fires, pollen, atmospheric transport of particles from arid regions) and anthropogenic sources (industry, quarrying, transport). For the protection of human health, according to Decree-Law No. 102/2010 of 23 September, the annual average of PM₁₀ cannot exceed the limit of 40 µm/m³.

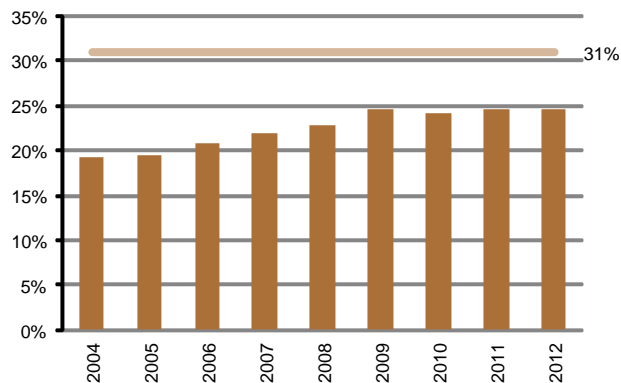
In 2012 and 2013 the annual average concentration of inhalable particles with less than 10 micrometers in diameter (PM₁₀) increased 5.3%. However, for the time period 2009-2013 the annual average concentrations have been below the legal limit (20µm/m³ in 2012).

Chart 25 - Contribution of endogenous renewable sources to the production of electricity (gap to target)



Source: EUROSTAT

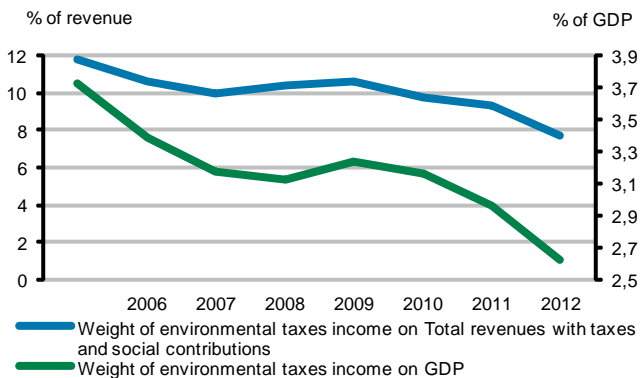
Chart 26 - Contribution of endogenous renewables sources to the gross energy consumption (gap to target)



Source: EUROSTAT

In 2012, 47.6% of the electricity produced and 24.6% of gross final energy consumption, according to Eurostat methodology, resulted from renewable resources (in 2011 these indicators were respectively 45.9% and 24.5%). The target for 2020 is that 60% of the electricity produced and 31% of gross final consumption of energy are originated from renewable resources.

Chart 27 - Taxes with environmental relevance

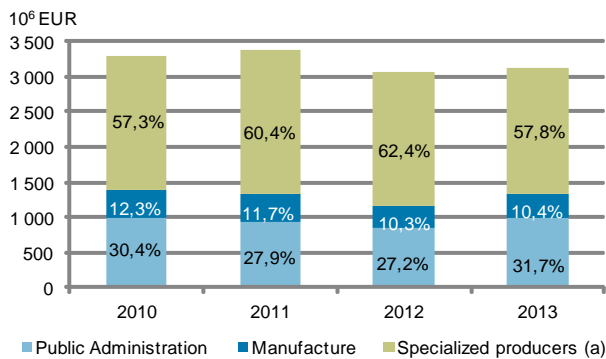


The tax burden with environmental taxes stood at 5 billion Euros, which is the lowest value for the period between 2006 and 2012. Over this period, the reduction in tax revenue surpassed one billion Euros (EUR 1 152 million). In 2012, the value was lower by 9.7% that recorded in 2011, a reduction that was more intense than that observed for the entire tax revenues and social contributions (variation -6.1%).

Footnote: For comparacy purposes, in 2006, all the former taxes replaced by the Imposto Único de Circulação (Unique Mobility Tax on Vehicles) (former municipal tax on vehicles, the mobility tax and trucks transportation activity tax).

Source: INE, I. P.

Chart 28 - Environment protection expenditure by main sectors

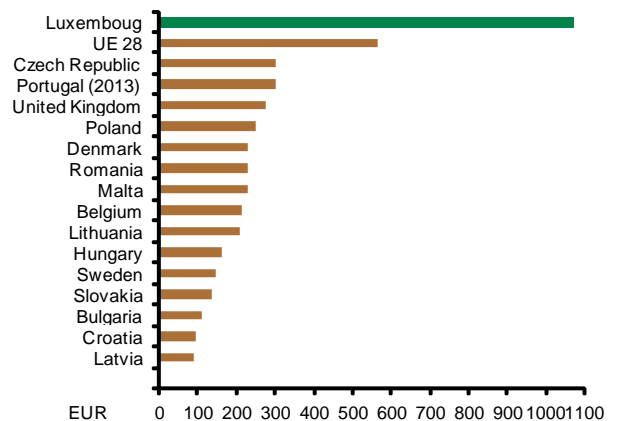


(a) 2013 Pe.
Source: INE, I. P.

Environmental protection expenditure (current and capital) applied by General Government, Industry (mining and quarrying, manufacturing, electricity, gas and water) and Specialized Producers (public and private companies specializing in environmental services such as waste collection and wastewater treatment) spent €3,1 billion euro in 2013, 1.8% more than in 2012. Compared to 2012, the Public Sector expenditure and Industry increased respectively 18.5% (€992 million) and 3.0% (€326 million), in opposition to Specialized Producers that declined by 5.8% (€1 806 million).

In 2012, environment expenditure/inhabitant/year totaled €299, just over half of the EU-28, whose indicator amounted to €566/inhabitant/year. In all Community countries for which information is available, Portugal is behind Luxembourg presenting an expense 3.6 times that of Portugal and almost twice the average EU-28.

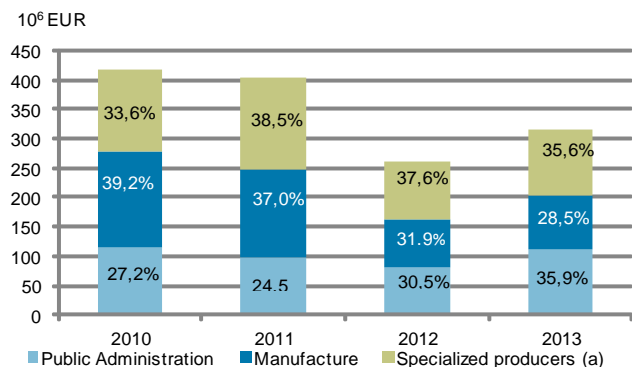
Chart 29 - Environment protection expenditure per capita (2012)



Source: EUROSTAT.

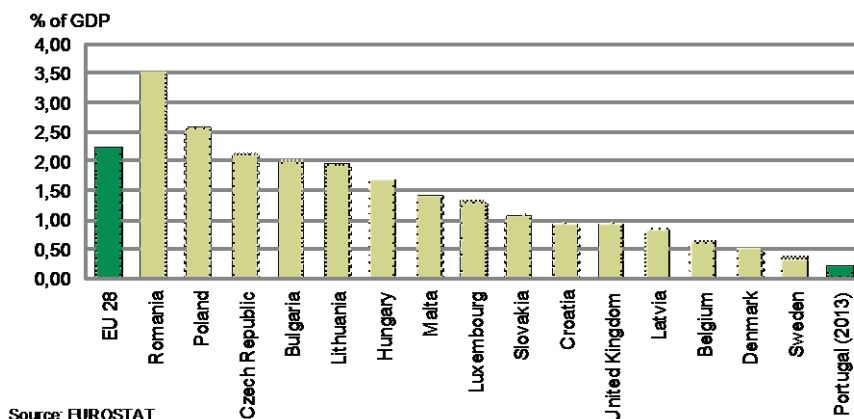
In 2013, investment in environmental protection activities recovered in all sectors, with an increase of 21.0% over 2012. The General Government increased 42.5%, Specialized Producers 14.5% and Industry 8.2%. However, only the General Government reached the investment level close 2010 with €113 million, as opposed to Specialized Producers that reduced €29 million (€112 million in 2013) and the Industry with less €74 million (€90 million in 2013).

Chart 30 - Investments on environment protection by main sectors



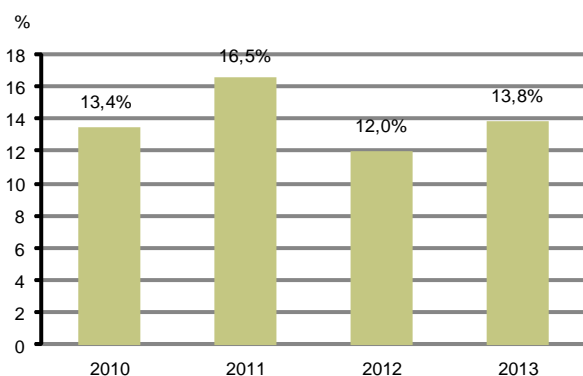
(a) 2013 Pe.
Source: INE, I.P.

Chart 31 - Investments on environment protection (2012)



The investment level in the environment as a percentage of GDP, Portugal has positioned in the last position with 0.19% of GDP, well below the European average which stood at 2.20% of GDP. The importance of environmental investment as a percentage of GDP is considerably higher in the countries of Central Europe and the Balkans which is related to the latest membership joining to the EU-28, since this required counterparts as reflected in expenditure on fixed assets, necessary to comply with European environmental legislation.

Chart 32 - Businesses with activity on environment protection

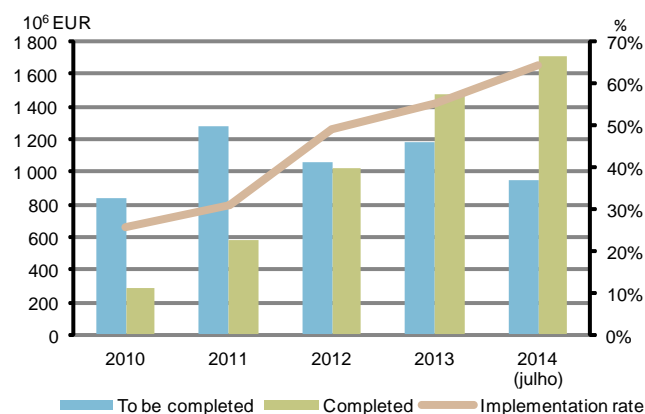


Source: INE, I.P.

In the period 2010 - 2013 the business park joining to the adoption of environmental protection measures in the production process was inconsistent, with a peak in 2011 with 16.5% of companies for the following year decreased to the lowest level of the series. In 2013, the proportion of companies that have adopted environmental protection measures increased 2 p.p. compared to 2012, exceeding the 2010 level, with 13.8% of the companies had this kind of commitment.

The National Strategic Reference Framework (QREN) for the period 2007-2013 has the strategic objective of qualification of human resources, valuing the knowledge, science, technology and innovation and the promotion of high and sustained levels of economic and socio-cultural development and territorial qualification. The Operational Programme for Territorial

Chart 33 - QREN actions on environment implementation rate



Enhancement (POVT) and the Regional Operational Programmes are used to achieve this goal.

By the end of July 2014 investment operations associated with the environment were approved in a total amount of EUR 3 746 million, 9.7% of the total approved for investments in operations financed by the QREN 2007-2013 (EUR 38 746 million).

Environmental QREN executed reached EUR 2.7 million, 71.0% of the total approved investment. The implementation rate at the end of July 2014 was 64.2% compared with 55.5% at the end of 2013.

Explanatory notes:

Environmentally related taxes - For comparacy purposes, in 2006, all the former taxes replaced by the Imposto Único de Circulação (Unique Mobility Tax on Vehicles) (former municipal tax on vehicles, the mobility tax and trucks transportation activity tax).

DPSIR Model (Driving forces – Pressures – State – Impact – Response) was developed by the European Environment Agency and is based on a systemic analysis of relations between the environmental system and the human and economic system, reflecting the interaction between these systems on the basis of cause / effect (EEA 1999).

Decoupling - term used to express the economic growth without increasing the pressure on the environment.

The **Consumer Price Index (IPC)** measures the evolution of prices of a set of goods and services representative of the consumption expenditure structure of the resident population in Portugal. It is important to note that the IPC is not an indicator of the price level but rather an indicator of the respective variation.