SUSTAINABLE DEVELOPMENT INDICATORS FOR MALTA 2010

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Contents

Foreword

Today we live in a world that is giving due importance to sustainable development and social cohesion as the basis for economic growth. But to walk the talk we must, first and foremost, have a set of harmonised and reliable statistics that transcends purely economic data; in other words, indicators that really help us understand what is happening to our seawater, groundwater, waste management, land development and transport as a result of economic expansion.

The concept of Green GDP is gaining in appeal. In essence it refers to an index of economic growth, factoring in the environmental impacts or consequences of such growth. When we talk of these impacts, we are also signifying the broader meaning of the term, which includes social welfare and the progress of individuals. Ultimately, this reflects the development of a nation which does not compromise the quality of life of present and future generations.

This publication encompasses data ranging from employment to public finance stability, to energy intensity of the economy, and its evaluation should go beyond the figures being presented. It establishes linkages between economic data and climate change statistics, sectoral emission trends and air quality, to name but a few. The publication does not attempt to cover all aspects of environmental statistics, but is a start on which future publications will be built, as well as a lead to the pursuance of future studies.

I acknowledge the contribution of Professor Lino Briguglio who acted as consultant for this project. My thanks are also due to Mr George Said and the members of the Environment and Resources unit for their work in putting together this interesting collation of numbers.

Michael Pace Ross
Director General

September 2010

1. Economic Indicators

ECN 1.1: Economic Growth

Definition:
Gross domestic product (GDP) is a measure of aggregate economic activity. It is defined as the sum of value added generated by private firms and by the government during a given period. GDP in real terms is the adjustment of GDP for price inflation over time, thus making it possible for comparing year to year changes in economic activity.

From 2000 to 2008, the growth rate of GDP has fluctuated, with the highest growth being registered in 2005. On the other hand, two episodes of negative growth were recorded, with the highest being that of 2001. Overall during the period under review the economy experienced an average positive growth rate of 1.9 per cent per annum.

This indicator also makes reference to Real GDP per capita, which is calculated by dividing GDP in real terms by the average total population. Such a measure is often used to compare the stages of development across countries. A greater degree of comparability is achieved by measuring GDP in PPS (Purchasing Power Standards) so as to adjust for price differences across countries. Measured in PPS, Malta's GDP per capita amounted to 76.0 per cent of the EU27 average in 2008.

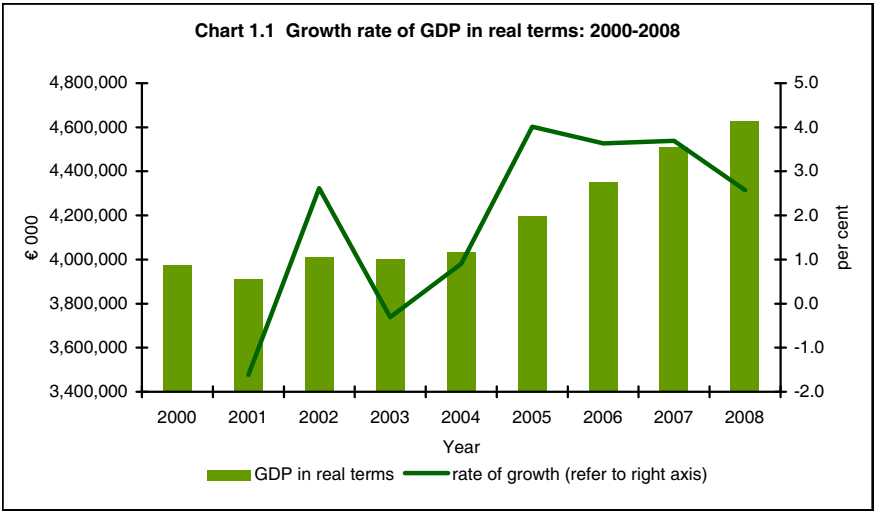
1.1 Gross Domestic Product in real terms

Year	GDP in real terms	Rate of growth	Real GDP per capita
	€ 000	per cent	€
2000	3,973,322		10,189.0
2001	3,909,090	-1.6	9,944.4
2002	4,011,516	2.6	10,131.8
2003	3,999,212	-0.3	10,036.5
2004	4,035,341	0.9	10,059.2
2005	4,197,338	4.0	10,405.0
2006	4,349,920	3.6	10,710.1
2007	4,510,693	3.7	11,028.8
2008	4,626,815	2.6	11,222.5

Source of GDP data: 2000-2003 News release 96/2007; 2004-2008 News release 169/2010.

Figures are provisional.

Source: National Statistics Office.



ECN 1.2: Employment Rates

Definition:
The employment rate represents persons in employment (15-64 years old) as a percentage of the population of working age (15-64), while the unemployment rate represents unemployed persons as a percentage of the labour force (employed + unemployed).

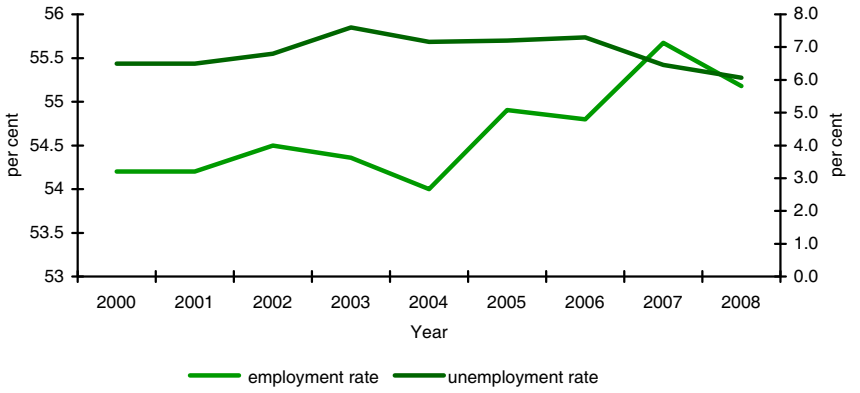
From 2000 to 2008 the average employment rate fluctuated between 54.0 per cent recorded in 2004 and 55.7 per cent recorded in 2007. On average, throughout these nine years, the employment rate has shown a percentage increase of 0.2 per cent per annum. During the same period the employment rate in the EU27 rose by 3.7 percentage points from 62.2 per cent to 65.9 per cent.

As in other European countries, the gap between male and female employment is narrowing in Malta. The difference has narrowed from 44.8 percentage points in 2001 to 35.1 percentage points in 2008. In 2008 the female employment rate in Malta stood at 37.4 per cent, while in the EU27 the corresponding figure was 59.1 per cent.

During the period under review the unemployment rate averaged 6.8 per cent. The greatest increase was recorded in 2003 when the unemployment rate rose by 11.8 per cent over the previous year to reach 7.6 per cent. By 2008 the rate had gone down to its lowest level at 6.1 per cent. During this year the corresponding figure for the EU27 stood slightly above the 7 per cent mark.

From 2001 onwards the unemployment rate was higher among females. On average, during period under review, the female unemployment rate was 1.6 per cent higher than that for males.

Chart 1.2 Employment and unemployment rates: 2000-2008



1.2 Employment/unemployment rate: 2000-2008

Year	Employment rate		Unemployment rate	
	Males	Females	Males	Females
	%			
2000	75.1	33.1	7.0	5.4
2001	76.4	31.6	6.0	7.8
2002	74.2	34.5	6.2	8.2
2003	74.8	33.6	7.0	8.8
2004	75.1	32.7	6.4	9.1
2005	74.6	34.9	6.6	8.7
2006	74.5	34.9	6.5	8.9
2007	74.2	36.9	5.8	7.7
2008	72.5	37.4	5.7	6.9

Definitions:

Activity rates – represent the labour force (15-64 years old) as a percentage of the population of working age (15-64).

Employment rates – represent persons in employment (15-64) as a percentage of the population of working age (15-64).

Unemployment rates – represent unemployed persons as a percentage of the labour force (employed + unemployed).

Labour force - This comprises persons in gainful employment and unemployed persons.

Unemployment - This comprises all persons above 15 years of age who, during the reference week, satisfied the following criteria:

a) without work.

b) actively seeking work during the previous 4 weeks, e.g. includes contacting the ETC, applied directly with an employer, contacting a private employment agency, inserting or answering to an advert in a newspaper.

c) currently available for work – available to start work within 2 weeks of the reference week.

Included with the unemployed are persons who were without work and were not actively seeking work since they had found a job which would start at a later date.

ECN 1.3: Competitiveness

Definition:
Labour productivity is a measure of the real economic output generated per unit of labour input. It is calculated by dividing GDP in real terms by the total number of hours worked. The total number of hours worked is determined by multiplying the yearly average number of hours worked (excluding overtime) by the average working population.

Between 2001 and 2008 labour productivity in Malta registered a positive trend with an average percentage increase of 1.5 per cent per annum. However, an episode of negative growth was registered in 2003. The small growth registered in 2008 may be attributable to the economic recession. Other EU countries also registered low or negative growth rates during this year.

1.3 Labour productivity: GDP in real terms, per hour worked

Year	GDP in real terms (€'000)	Mean hours worked	Average working population	GDP per hour worked	percentage change
2001	3,909,090	2,082	146,110	12.85	
2002	4,011,516	2,074	147,571	13.10	1.97
2003	3,999,212	2,077	147,815	13.02	-0.62
2004	4,035,341	2,066	147,871	13.21	1.45
2005	4,197,338	2,052	148,508	13.78	4.27
2006	4,349,920	2,040	152,366	13.99	1.57
2007	4,510,693	2,033	156,360	14.19	1.40
2008	4,626,815	2,028	160,283	14.24	0.33

Source: National Statistics Office.

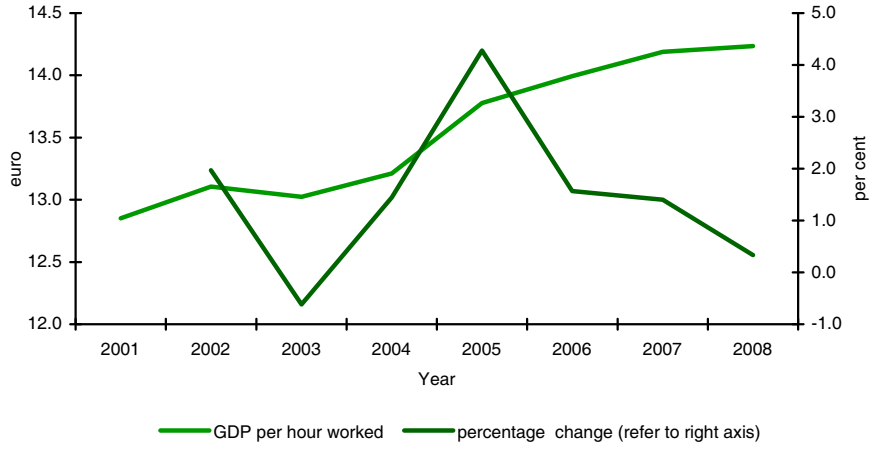
Source of GDP data: 2000-2003 News release 96/2007; 2004-2008 News release 169/2010.

Mean hours worked includes full-time, part-time and reduced hours workers and is derived from the Labour Force Survey.

Employed Population figures refer to the main occupation, both full-time and part-time.

These figures are provisional.

Chart 1.3 Labour productivity: 2001-2008



ECN 1.4: Public Finance Sustainability

Definition:
Public finance sustainability is defined as the long-term viability of public finances which is achieved through the controlled management of the general government deficit and debt. In the context of the Stability and Growth Pact of the Eurozone, of which Malta has formed part since 2008, the annual general government deficit should be no higher than 3 per cent of nominal GDP and the general government debt should be lower than 60 per cent of nominal GDP, or approaching that value.

Between 2000 and 2008, the general government deficit as a percentage of GDP registered its highest level in 2003. From a high of 9.9 per cent registered during that year, it dropped to 2.3 per cent in 2007. This came about after a stricter fiscal policy stance was employed by Government. By the end of 2008, reflecting the onset of the economic crisis, the deficit again increased to 4.8 per cent of GDP.

The general government debt as a percentage of GDP has shown a fluctuating trend throughout the period under review, with notable increase 15.2 per cent over the previous year was recorded in 2003. Reflecting the trend set by the deficit, the general government debt as a percentage of GDP decreased from 2005 to 2007, but rose by 2.5 percentage points in 2008.

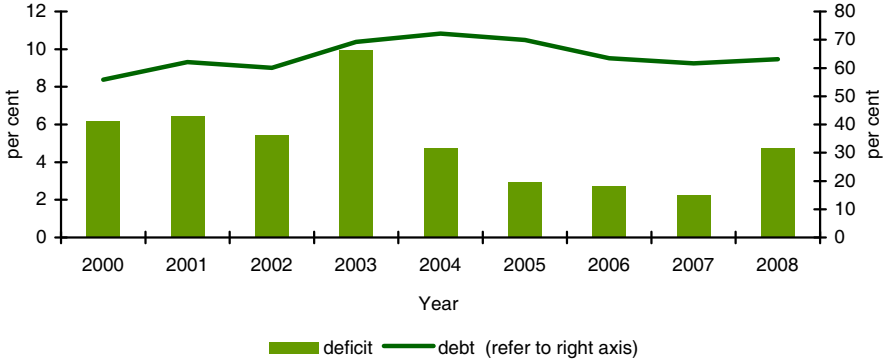
1.4 General Government deficit and debt as a percentage of nominal GDP

Year	Nominal GDP	Deficit		Debt	
	€000	€000	as a % of GDP	€000	as a % of GDP
2000	3,973,320	245,656	6.2	2,220,914	55.9
2001	4,036,975	259,962	6.4	2,506,742	62.1
2002	4,275,614	233,484	5.5	2,569,622	60.1
2003	4,388,372	436,233	9.9	3,039,208	69.3
2004	4,501,831	213,204	4.7	3,249,327	72.2
2005	4,800,270	142,015	3.0	3,355,350	69.9
2006	5,131,289	140,921	2.7	3,253,650	63.4
2007	5,479,801	124,681	2.3	3,379,212	61.7
2008	5,743,531	273,698	4.8	3,626,632	63.1

Source: National Statistics Office.

GDP data: 2004-2008 News Release 169/2010, 2000-2003 News Release 96/2007.

Chart 1.4 General government deficit and debt as a percentage of GDP: 2000-2008



ECN 1.5: Energy Intensity of the Economy

Definition:
Energy intensity of the economy is the ratio of energy consumption to GDP in real terms. Its major use is to identify the association between economic growth and energy consumption. Malta's energy needs are almost totally dependent on fossil fuels both for transportation and for electricity generation, and thus fuel consumption is used as a measure for energy consumption in tonnes of oil equivalents (TOE). The EU's Sustainable Development Strategy does not set any particular target in this regard. However in 1998, the European Commission set the goal of reducing energy intensity by 1 per cent per annum by 2010.

From 2000 to 2008 fuel consumption grew by an average rate of 2.3 per cent per annum, while GDP in real terms grew at a slower pace, averaging 1.9 per cent per annum. As a consequence, the energy intensity has shown an average annual increase of 0.5 per cent.

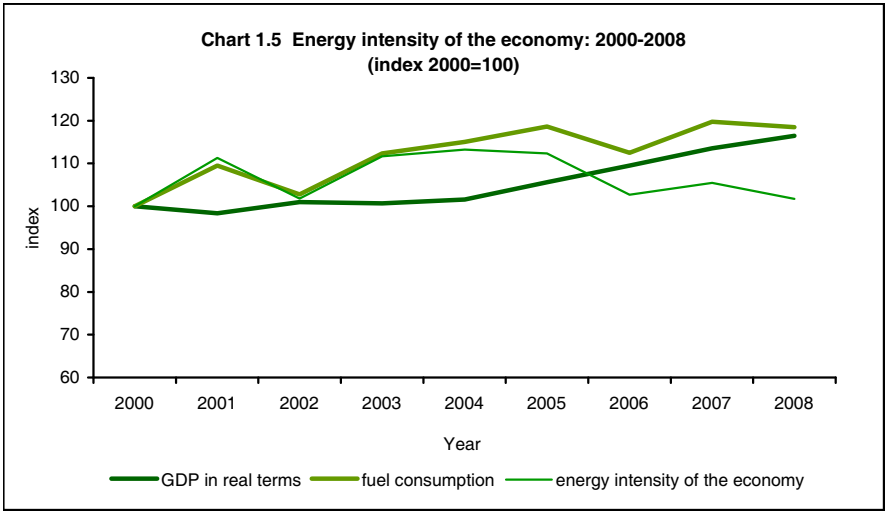
If the period following Malta's accession to the EU is taken into consideration, the picture changes considerably. In fact, from 2004 to 2008, the energy intensity decreased by an average rate of 2.6 per cent per annum. This occurred because the annual GDP growth averaged 3.5 per cent while fuel consumption experienced a slower average increase of 0.8 per cent per annum. From 2000 to 2007 energy intensity at the EU27 level was reduced by an average rate of 1.5 per cent per annum.

1.5 Energy intensity of the economy

Year	GDP in real terms	Fuel consumption	Energy intensity of the economy
	€ 000	TOE	TOE per million euro
2000	3,973,322	830,925	209.1
2001	3,909,090	909,841	232.8
2002	4,011,516	854,280	213.0
2003	3,999,212	933,781	233.5
2004	4,035,341	955,726	236.8
2005	4,197,338	985,969	234.9
2006	4,349,920	934,586	214.9
2007	4,510,693	995,054	220.6
2008	4,626,815	984,295	212.7

Source: National Statistics Office.

Source of GDP data: 2000-2003 News release 96/2007; 2004-2008 News release 169/2010.



2. Environmental Indicators

ENV 2.1: Climate Change

Definition:
Climate change is determined by a number of factors, among which is the contribution of various human activities that generate greenhouse gases. This indicator presents data relating to the emissions of such gases. The data, which have been extracted from the National Greenhouse Gas Emissions Inventory, is expressed as Carbon dioxide (CO_2) equivalents in order to facilitate sectoral comparisons. This indicator classifies greenhouse gas emissions in five different sectors depending on the type of process with which they are generated.

The energy sector refers to fuel combustion, which takes place in energy production, transport, households and economic units. The industrial processes sector comprises direct and indirect emissions which arise as by-products of industrial processes. Solvent and Other Product Use include emissions from the use of Nitrous oxide for anaesthetic use and Non-methane volatile organic compounds (NMVOC) emissions from the use of solvents and solvent-containing products. The Agricultural sector includes emissions from enteric fermentation, manure management and from soils which are used for agricultural purposes. In the waste sector, emission sources include solid waste disposal, wastewater handling, waste incineration and compost production.

Greenhouse gases can also be withdrawn from the atmosphere by means of carbon sinks such as trees. In this indicator land-use, land-use change and forestry represent the withdrawal of greenhouse gases depending on the land cover of different vegetation types.

From 1990 to 2008, greenhouse gas emissions in Malta have shown an average increase of 2.1 per cent per annum. The greatest increase occurred in 1991 when a percentage increase of 8.7 per cent was recorded. 1995, 2004 and 2008 were the only years in which a reduction in emissions was achieved. The greatest reduction was achieved in 2008 when emissions decreased by 1.8 per cent over the previous year.

In 2007 the EU27 greenhouse gas emissions were 12.5 per cent lower than in 1990; however the majority of reductions were made prior to 2000. By 2020 the EU is committed to reduce its emissions by at least 20 per cent when compared to 1990 levels.

From 2000 to 2008 the energy sector was the major contributor of greenhouse gases, emitting an average share of 90.4 per cent of the total. Energy production industries, which on average contributed 73.5 per cent of emissions, dominated this sector, and consequently, the national emission trends as well. These were followed by transport, which accounted for an average share of 19.8 per cent of the sector's total. Withdrawals of greenhouse gases only amount to an average 2.2 per cent when compared to the total emissions from all processes. In 2008 withdrawals were 6.7 per cent higher than in 1990. In comparison, the 2008 figure for total emissions was 44.2 per cent higher when compared to 1990.

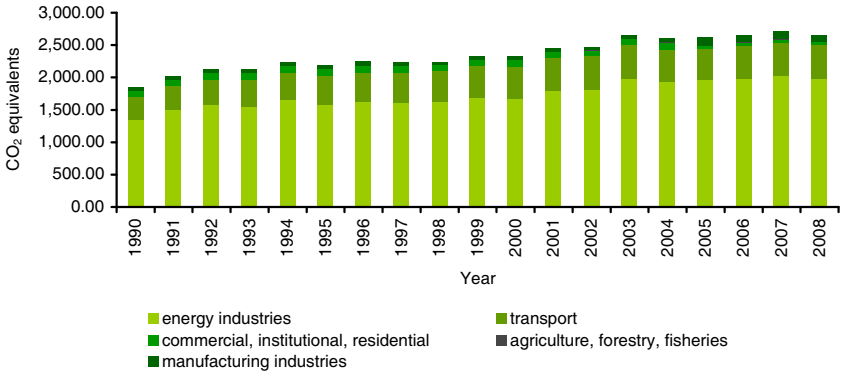
2.1 Emission trends by sector CO_2 equivalence

000 tonnes

Year	Greenhouse gas emissions					Withdrawals from land-use, land-use change and forestry
	Energy production	Industrial processes	Solvent and other product use	Agriculture	Waste	
1990	1,854.6	0.4	2.5	83.6	105.9	-57.0
1991	2,027.8	0.6	2.5	81.4	112.4	-57.0
1992	2,130.8	1.7	2.5	84.6	118.4	-57.0
1993	2,126.5	1.7	2.5	84.5	126.2	-57.0
1994	2,237.1	2.2	2.5	83.8	134.9	-57.0
1995	2,195.1	5.5	2.5	86.4	141.9	-57.0
1996	2,248.0	7.7	2.5	84.1	145.3	-58.5
1997	2,236.8	10.7	2.5	86.0	151.2	-58.5
1998	2,240.0	11.5	2.5	87.5	155.3	-58.5
1999	2,331.3	11.8	2.7	84.0	154.6	-57.8
2000	2,329.1	12.8	3.0	94.3	158.5	-57.8
2001	2,446.5	14.2	2.3	90.7	155.2	-57.8
2002	2,467.1	15.6	2.6	89.7	156.3	-57.8
2003	2,648.2	17.6	2.4	83.7	159.8	-58.9
2004	2,602.5	22.3	2.4	88.1	163.0	-60.1
2005	2,617.7	24.7	2.3	86.7	170.2	-59.0
2006	2,644.2	26.8	2.0	83.6	178.2	-60.8
2007	2,703.3	31.0	2.7	88.2	181.2	-60.8
2008	2,659.4	34.3	2.1	80.0	176.2	-60.8
Average	2,355.1	13.3	2.5	85.8	149.7	-58.4

Source: Malta Environment and Planning Authority.

Chart 2.1 Emissions by sub-categories of the energy sector



ENV 2.2: Air Quality

Definition:
The supply of air at an optimal quality is a key environmental issue since the development of healthy organisms, including humans, depends on it. Various atmospheric constituents classify as pollutants, and NO_2 is one of them. NO_2 is mainly generated by internal combustion engines, and by thermal power stations. The EU and the World Health Organisation have set the limit of long-term NO_2 exposure at 40 ug/m^3. NO_2 is also a precursor to tropospheric ozone which is another dangerous pollutant.

From 2003 to 2008, NO_2 emissions on a national scale have shown an average percentage increase of 5.3 per cent per annum. The highest increase, which amounted to 12.9 per cent, was recorded in 2007, while the biggest decrease, amounting to 7.6 per cent, occurred in 2004.

Besides the national average, Table 2.2 also presents the results of NO_2 emissions recorded in stations located in heavily urbanised areas (Floriana, Sliema, Ħamrun) and stations located in predominantly rural areas (Dingli, Marsalforn, Xlendi).

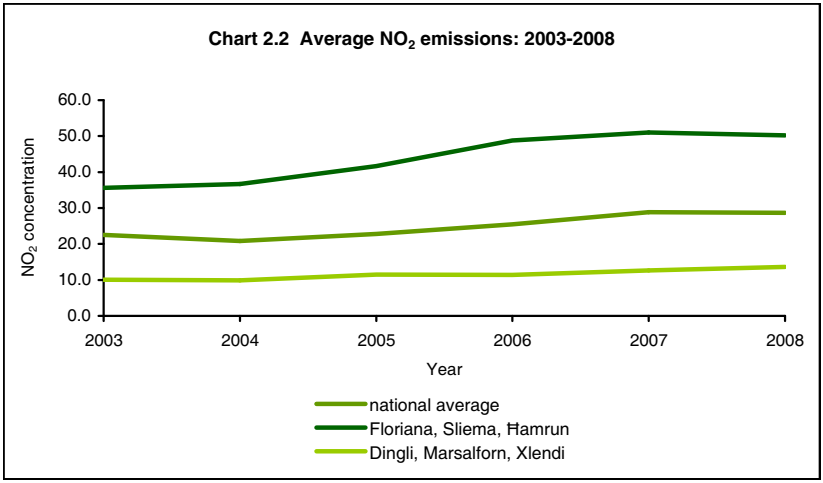
During the period under review the urban localities experienced an average increase of NO_2 emissions amounting to 7.3 per cent per annum. Conversely, the rural localities experienced a lower average increase which amounted to 6.4 per cent per annum. While the rural localities had NO_2 emissions which are well below the EU limit of long-term NO_2 exposure, this limit was exceeded annually from 2005 onwards in the urban localities.

2.2 Average NO_2 emissions as measured across Malta and Gozo

ug/m^3

Year	National average	Floriana, Sliema, Ħamrun	Dingli, Marsalforn, Xlendi
2003	22.5	35.6	10.1
2004	20.8	36.7	9.9
2005	22.8	41.7	11.5
2006	25.5	48.8	11.4
2007	28.8	51.0	12.6
2008	28.7	50.2	13.6

Source: Malta Environment and Planning Authority.



ENV 2.3: Nature and Biodiversity

Definition:
Biodiversity refers to the diversity of life forms present within Earth's various ecosystems. These life forms supply a variety of resources to mankind, including food, energy, chemicals, wood and air. Since our quality of life is dependent upon these resources, one of the main commitments of the EU is to halt biodiversity loss. Site designation under the Habitats Directive and the Birds Directive (referred to collectively as Natura 2000 sites) is an important tool in achieving this target. The EU's sufficiency index, so far compiled only for the Habitats Directive, indicates the degree of implementation of the Natura 2000 network.

In Malta the land area covered by Special Areas of Conservation (SACs), which are in line with the Habitats Directive, has increased by 4.5 per cent from 2004 to 2008. According to the sufficiency index, by 2008 Malta had afforded protection to 93 per cent of its candidate Natura 2000 sites.

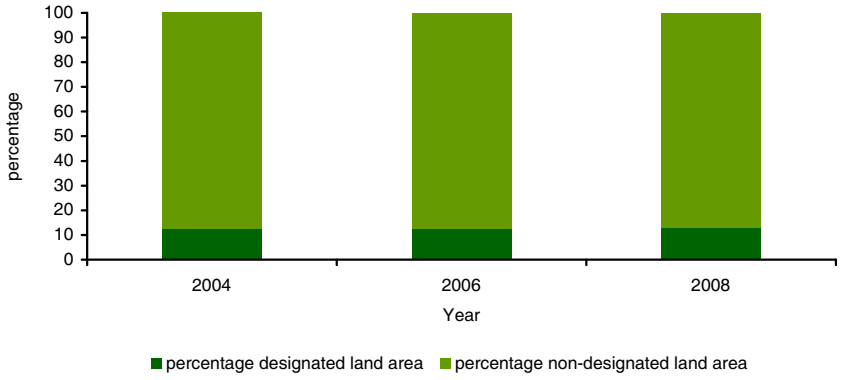
Special Protection Areas (SPAs) are designated in accordance with the Birds Directive. From 2004 to 2008 the land area covered by these sites increased by 114.2 per cent. It should be noted that the area of SAC and SPA sites overlap.

EU legislation on nature and biodiversity includes:

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Chart 2.3.1 Proportion of land area designated under the EU's Habitats Directive: 2004-2008



2.3.1 Coverage of special areas of conservation (Habitats Directive)

Date of submission	Special areas of conservation - terrestrial (sq. km)	Percentage of designated land area	Percentage of non-designated land area
2004	39.4	12.5	87.5
2006	39.7	12.6	87.4
2008	41.1	13.0	87.0

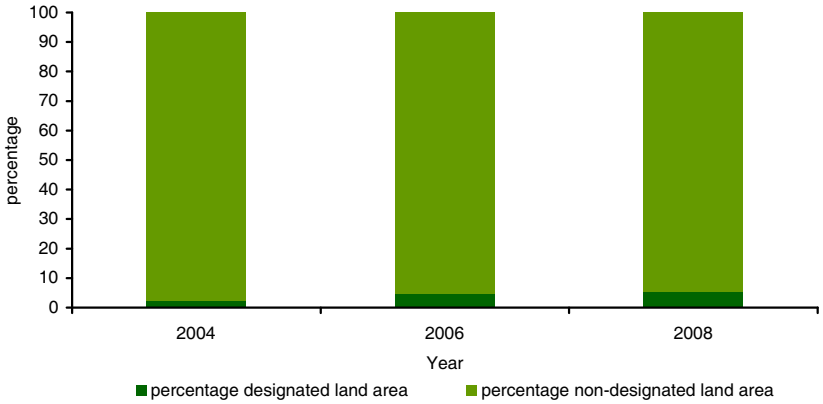
Source: Malta Environment and Planning Authority.

2.3.2 Coverage of special protection areas (Birds Directive)

Date of submission	Special protection areas - terrestrial (sq. km)	Percentage of designated land area	Percentage of non-designated land area
2004	7.6	2.4	97.6
2006	14.3	4.5	95.5
2008	16.3	5.2	94.8

Source: Malta Environment and Planning Authority.

Chart 2.3.2 Proportion of land area designated under the EU's Birds Directive: 2004-2008



ENV 2.4: Groundwater

Definition:
Groundwater is the only renewable freshwater resource in Malta. Water extracted from this source is used for household, agricultural and industrial uses. The groundwater exploitation rate is calculated by expressing groundwater extraction as a percentage of the recharge into the aquifers.

The workings of this indicator are mostly based on formulae, many of which are derived from scientific studies. The only actual measurements available are those on groundwater extraction by the Water Services Corporation (WSC). Furthermore, there is a complete lack of data about private groundwater abstraction by domestic, industrial and commercial entities. With regard to agriculture, a value of 19.1 million m^3 was assumed for all the years under review. This value, which actually varies from one year to another, was estimated by the NSO for the agricultural year 2008/2009. As a consequence, this indicator is only meant to give a rough estimate of the level of pressure being exerted on the groundwater resource.

The groundwater exploitation rate in Malta has shown a fluctuating trend from 2000 to 2008. This occurrence was the result of varying precipitation amounts, coupled with a diminishing artificial recharge. It can be noted that throughout the period under review the highest exploitation rate occurred when precipitation was at its lowest in 2001. On the other hand, when precipitation was at its highest in 2003, the lowest rate was registered. During this period the reliance upon rainfall for replenishing the aquifer became more pronounced as the artificial recharge diminished by 53.8 per cent due to leakage control from the public water supply mains.

During the period under review, groundwater abstraction experienced an average percentage decrease of 1.5 per cent per annum, owing to cutbacks in abstraction by the WSC.

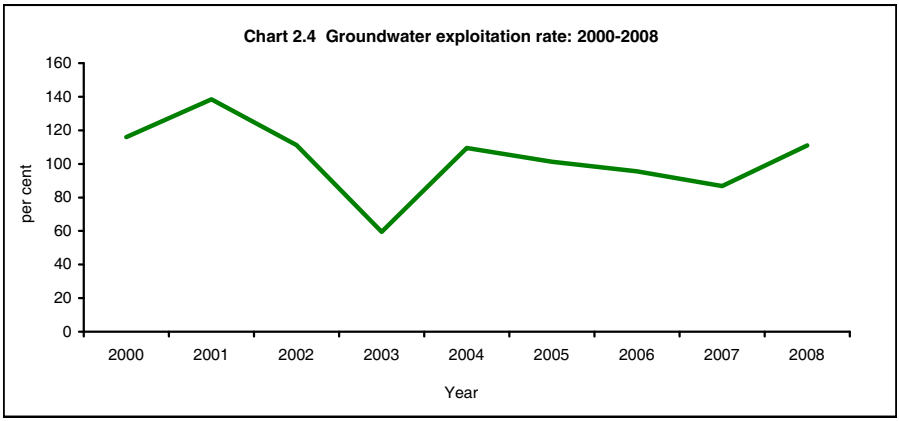
2.4 Groundwater exploitation rate

million m^3

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Precipitation	142.75	107.87	143.51	286.84	145.82	159.79	170.63	196.06	150.43
Evapotranspiration	68.69	51.91	69.06	138.03	70.17	76.90	82.11	94.35	72.39
Runoff	33.71	25.47	33.89	67.74	34.44	37.74	40.30	46.30	35.53
Subsurface Discharge from MSL Aquifer	19.46	15.26	19.11	34.53	18.63	19.60	20.19	22.87	17.94
Artificial Recharge	11.55	10.21	10.39	11.02	8.47	7.11	5.61	5.59	5.34
Effective Recharge	32.43	25.44	31.84	57.55	31.05	32.67	33.64	38.12	29.91
Groundwater abstraction	37.60	35.22	35.41	34.30	33.99	33.09	32.16	33.06	33.18
Groundwater Exploitation Rate (%)	115.91	138.45	111.21	59.59	109.45	101.30	95.59	86.71	110.93

Sources: WSC, MRA, NSO.

Notes:
Evapotranspiration = 63 per cent of precipitation less runoff
Runoff = 6 per cent of precipitation in unbuilt areas; 85 per cent of precipitation in built-up areas
Subsurface Discharge = 50 per cent of recharge into the Mean Sea Level (MSL) Aquifer
Artificial Recharge = Leakage from the public water supply distribution network
Effective Recharge = Precipitation - Evapotranspiration - Runoff - Subsurface discharge + Artificial recharge



ENV 2.5: Seawater

Definition:
In Malta seawater is tested for quality parameters at various sites during the bathing season. The criteria for these parameters are set by the Bathing Water Directive of the EU and by the Barcelona Convention, of which Malta is a contracting party. The Barcelona Convention, which was signed in 1976, aims to alleviate pollution arising out of ships, aircraft and land-based sources in the Mediterranean Sea. Since 1996 the local water quality classification scheme has classified seawater into three classes which are based on faecal coliform counts. Class 1 and Class 2 sites both comply with the Barcelona criteria, with the best water quality being enjoyed in Class 1 sites. Class 3 sites do not comply with the Barcelona criteria.

From 2000 to 2008, the vast majority of sites complied with the Barcelona criteria. The only non-compliant sites were two in 2000 and another two in 2007. The best year overall was 2002, when 97.7 per cent of sites were classified as Class 1. This was followed by 2001, 2003 and 2004 when over 80 per cent of all sites were classified as Class 1.

From 2005 to 2007 a departure from the results which were registered from 2001 to 2004 can be noted. During 2005 and 2006, Class 1 sites did not exceed the 50 per cent mark, while in 2007, two sites were classified as Class 3. The situation saw an amelioration in 2008 when all sites were once again classified as compliant, and the percentage of Class 1 sites rose to 62.1 per cent.

EU legislation on seawater includes:

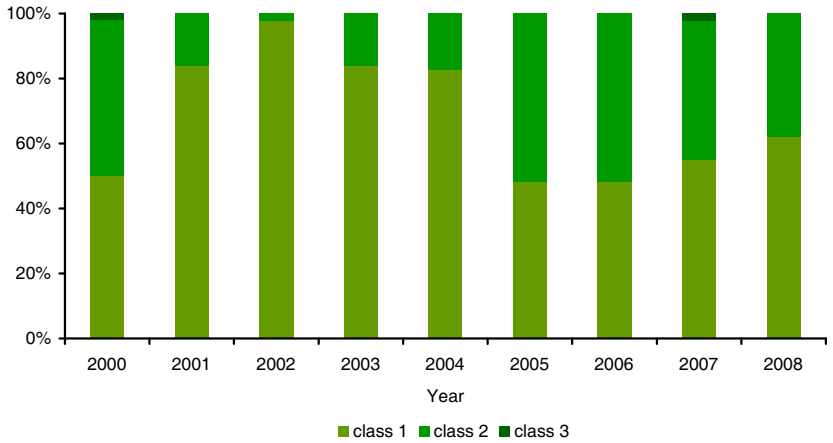
Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC.

2.5 Classification of bathing sites according to the Barcelona Convention criteria

Year	Class 1	Class 2	Class 3	Total
2000	48	46	2	96
2001	73	14	0	87
2002	85	2	0	87
2003	73	14	0	87
2004	72	15	0	87
2005	42	45	0	87
2006	42	45	0	87
2007	48	37	2	87
2008	54	33	0	87

Source: Department for Environmental Health.

Chart 2.5 Bathing sites compliance with the Barcelona Convention



ENV 2.6: WASTE

Definition:
Waste, which is a by-product of production and consumption processes, represents a loss of resources and energy. In order to conserve natural resources, the EU's Sustainable Development Strategy employs the three R's strategy – Reduce, Reuse, Recycle. The monitoring of generated and managed waste amounts is thus essential for gauging the effectiveness of this approach. In Malta a wider range of waste management options has become available over the years. This can be mainly attributed to the adoption of new regulations which came into effect following Malta's accession to the EU in 2004.

From 2000 to 2008 the major change which can be noted is the shift in waste amounts from landfills to inert waste management sites which occurred during 2003 and 2004. In fact, during these years, the recorded percentage decreases in landfilled waste amounted to 47.2 and 65.8 per cent respectively. Waste disposed in landfills continued to decrease in subsequent years; however percentage increases of 12.7 and 3.2 per cent were noted in 2007 and 2008. This was mainly the result of a diversion of certain non-hazardous waste streams from recovery to landfill, owing to the refurbishment of the Sant' Antnin waste treatment plant.

From 2003 onwards the waste managed in inert waste management sites fluctuated widely, with the most notable increase of 248.8 per cent occurring in 2004 and the biggest decrease of 25.1 per cent taking place in 2008. With regard to the waste amounts which were sent for recovery, the lowest amounts were noted in 2002, owing to problems in the operations of the Sant'Antnin waste treatment plant. In the following year, amounts went up by 50.6 per cent and continued to increase until 2007, when a drop of 19.5 per cent was registered. It should be noted that not all waste which is sent for recovery is actually recovered since rejects are produced during the recycling process, and these must be disposed of by other means.

In the case of waste exports the NSO and MEPA agreed to use MEPA's green list and hazardous waste registers for the compilation of these data from 2006 onwards. Since MEPA's data collection exercise was still in its inception in 2004 and 2005, very low amounts were recorded during these years. However by 2007, the data coverage was at an optimal level. In 2008 a reduction of 15.9 per cent in the amount of exported waste was registered. This occurrence may be attributable to the crash in prices for secondary materials on international markets.

2.6 Waste management in Malta (tonnes)

	Official waste landfills	Inert waste managed outside official landfills	Recovery	Incineration	Waste exports
2000	1,485,821	0	31,381	0	25,203
2001	1,233,000	0	32,103	0	26,197
2002	1,591,669	0	16,419	0	30,504
2003	839,814	797,233	24,734	0	58,295
2004	287,471	2,780,419	52,273	0	23,511
2005	250,326	2,335,323	56,926	0	12,088
2006	247,099	2,488,475	76,639	0	26,404
2007	278,537	2,311,972	61,696	0	69,651
2008	287,540	1,732,108	42,746	5,683	58,575

Sources: WasteServ Malta Ltd.; Malta Environment and Planning Authority; National Statistics Office.

Notes:
From July 2003 onwards inert waste was no longer accepted in official waste landfills. In 2004 the disposal of hazardous waste in landfills was likewise stopped.

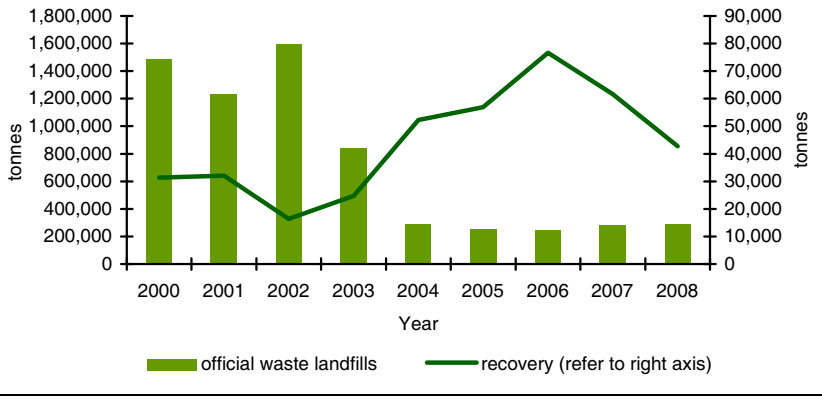
Inert waste is either disposed of at sea or is disposed or recovered in disused quarries managed by WasteServ Malta Ltd. or by the private sector. Disposal operations constitute the bulk of the total amount managed.

From 2000 to 2004 data on inert waste managed outside official landfills (in privately managed quarries) are missing. In 2007 to 2008 these data are incomplete.

Incineration data refer to the new Marsa Thermal Treatment Plant which started operations in 2008.

From 2000 to 2005 waste exports are derived from the NSO's international trade data. From 2006 onwards the data were extracted from the green list and hazardous waste registers, which are compiled by MEPA.

Chart 2.6 Waste landfilled and sent for recovery: 2000-2008



ENV 2.7: Transport

Definition:
The EU targets for a dynamic economy and cohesive society hinge upon the efficient and quick movement of people. Various transport systems are becoming congested due to the demand for increased mobility. A greater reliance on private vehicles may be seen as detrimental to the environment, human health and the economy. As a result, a shift to environment-friendly and public transportation means is being actively encouraged at an EU level.

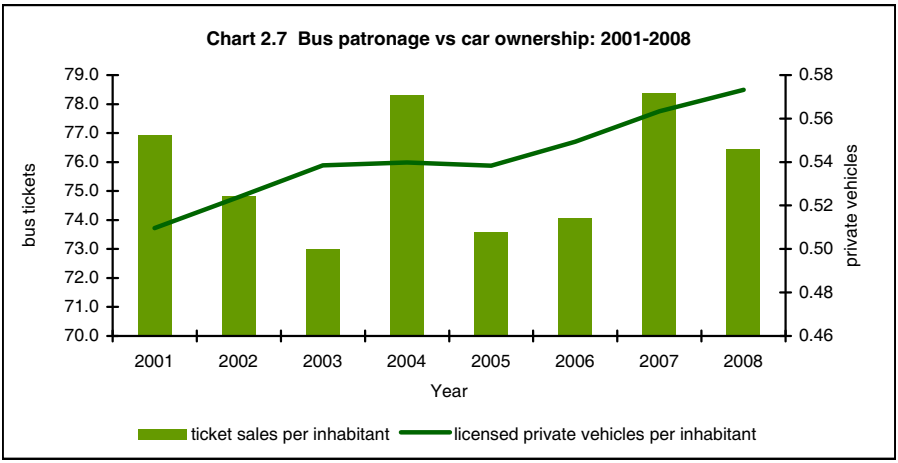
In Malta, from 2001 to 2008, commuters using public transport (represented by ticket sales) averaged 30.6 million per annum. Strong growths of 7.3 per cent and 5.8 per cent occurred in 2004 and 2007. However, these were offset by decreases, particularly in 2005 when ticket sales per inhabitant dropped by 6 per cent when compared to the previous year.

In contrast, private vehicle ownership per inhabitant has been continually on the rise, except in 2005 when a drop of 0.3 per cent was registered. Throughout this period an average annual increase of 1.7 per cent in the number of private vehicles per inhabitant can be discerned.

2.7 Public transport ticket sales and licensed private vehicles per inhabitant

Year	Ticket sales per inhabitant	Licensed private vehicles per inhabitant
2001	76.9	0.51
2002	74.8	0.52
2003	73.0	0.54
2004	78.3	0.54
2005	73.6	0.54
2006	74.0	0.55
2007	78.4	0.56
2008	76.4	0.57

Source: Transport Malta.



ENV 2.8: Land

Definition:
This indicator shows the rate of land development that occurred in Malta from 1990 to 2005 by expressing the area affected by development as a percentage of the total land area. 1990 is taken as the base year to which the area of all the approved development applications in subsequent years is added. This indicator is not based on actual measurements (see notes to Table 2.8) of the built-up area, and therefore should be considered as indicative. Since new development may encroach on agricultural and natural land, this indicator is especially relevant for assessing the pressure which is being exerted on the country's natural resources.

From 1990 to 2005 the total area affected by development grew by 29.1 per cent. In Outside Development Zones (ODZ) developed land increased from 4.9 per cent to 9.5 per cent of the total land area. On the other hand, land taken up by quarries and landfills remained relatively constant throughout the 1990-2005 time span. In 2005, 34.4 per cent of all development was concentrated in ODZs, an increase over 22.6 per cent in 1990.

From 1990 to 2000 the total area affected by development in the EU grew by approximately 5.4 per cent. This is lower than Malta where the increase amounted to 14.8 per cent. On an annual basis, the average increase in development during this period amounted to 1.5 per cent. In the subsequent period - 2000 to 2005 - the rate of increase in development slowed down to an average of 1.2 per cent per annum.

2.8 Built-up area in Malta

	1990		2000		2005	
	km^2	% total area	km^2	% total area	km^2	% total area
Built-up within development zones	48.8	15.5	52.2	16.6	53.8	17.0
Built-up in outside development zones	15.3	4.9	22.0	7.0	30.0	9.5
Landfills	0.9	0.3	0.9	0.3	0.9	0.3
Quarries	2.7	0.9	2.7	0.9	2.7	0.9
Total area affected by development	67.7	21.5	77.8	24.7	87.4	27.7

Source: Malta Environment and Planning Authority.

Notes:

The development applications which occurred between 1988 (1990) and 1993 have not been considered due to the lack of reliable data.

Land which has been issued with an approved permit for development is assumed to have been built-up immediately after the permit has been issued.

Changes in the areas occupied by landfills and quarries have been negligible and thus these figures have been kept constant throughout.

3. Social Indicators

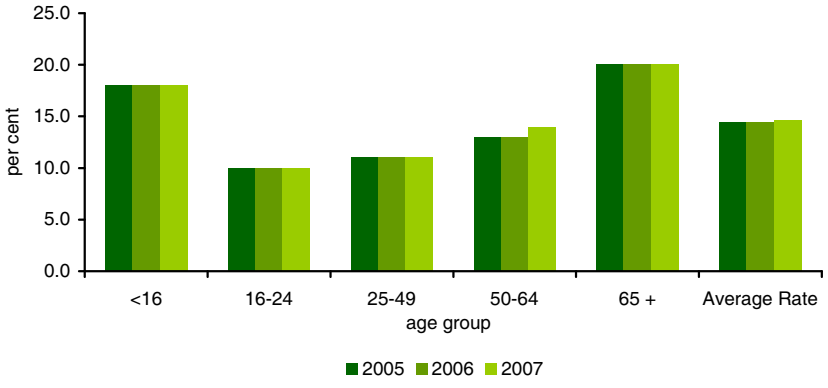
SOC 3.1: Poverty Reduction

Definition:
The 'at-risk-of-poverty' rate is the share of population having an equivalised disposable income below 60 per cent of the national median income. Even though poverty is a multi-dimensional concept, income is considered to be a major factor in determining an individual's social standing. This indicator is also worked out at an EU level since it is a useful tool for assessing the success of the EU's target aimed at reducing the proportion of people at-risk-of-poverty and social exclusion.

Between 2005 and 2007 the at-risk-of-poverty rate in Malta was highest among the elderly (65+) and children (<16), with the risk of poverty affecting 20 per cent and 18 per cent of these age groups respectively. On the other hand, the 16-24 age group experienced the lowest rate, which stood at 10 per cent. From 2005 to 2007 the only change which occurred was an increase in the rate among the 50-64 age group, from 13 per cent in 2006 to 14 per cent in 2007. As a consequence, the average rate rose by 0.2 percentage points. At the EU level, the at-risk-of-poverty rate stood at 16 per cent throughout the same period.

From a gender perspective, the difference in the average rate between males and females in Malta was of one percentage point. During 2005 and 2006 the average rate for males and females was constant at 13 and 14 per cent respectively. In 2007 the rate for males increased to 14 per cent while that for females rose to 15 per cent. On an EU level, the rate among males was 15 per cent while the corresponding value among females stood at 17 per cent.

Chart 3.1.1 At-risk-of-poverty rate by age group: 2005-2007



3.1.1 At-risk-of-poverty rate by age group

Age Group	2005	2006	2007
<16	18.0	18.0	18.0
16-24	10.0	10.0	10.0
25-49	11.0	11.0	11.0
50-64	13.0	13.0	14.0
65 +	20.0	20.0	20.0
Average Rate	14.4	14.4	14.6

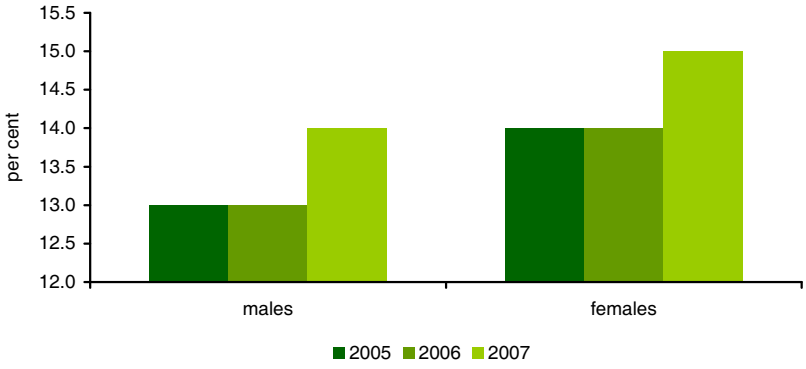
Source: National Statistics Office.

3.1.2 At-risk-of-poverty rate by sex

Sex	2005	2006	2007
Males	13.0	13.0	14.0
Females	14.0	14.0	15.0

Source: National Statistics Office.

Chart 3.1.2 At-risk-of-poverty rate by sex: 2005-2007



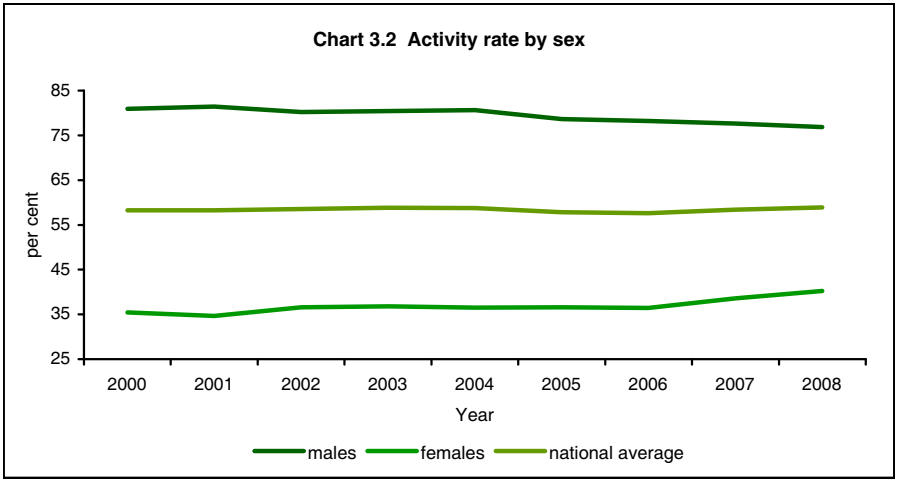
SOC 3.2: Proportion of Women in the Labour Force

Definition:
The activity rate represents the labour force (15-64) as a percentage of the population of working age (15-64). The labour force comprises employed and unemployed persons.

From 2000 to 2008 the overall activity rate saw an average percentage increase of 0.1 per cent. A drop in the male activity rate was compensated by a rise in the female rate.

In this time span, the activity rate of males in Malta decreased by an average of 0.6 per cent per annum. The highest percentage decrease, of 2.5 per cent, was recorded in 2005. Since the latter year, the male activity rate has been in continuous decline so that by 2008, the rate was 4.1 percentage points less than in 2000.

The activity rate of females experienced an average annual percentage increase of 1.6 per cent per annum. The strongest percentage increases were registered in 2002 and 2007 when the rate rose by 5.6 and 5.8 per cent respectively. By 2008 the rate was 4.8 percentage points higher than in 2000.



3.2 Activity rate (15-64 years old)

	Males	Females	National average
		%	
2000	80.9	35.4	58.2
2001	81.4	34.6	58.2
2002	80.2	36.6	58.5
2003	80.4	36.8	58.8
2004	80.7	36.5	58.7
2005	78.6	36.6	57.8
2006	78.2	36.5	57.6
2007	77.6	38.6	58.4
2008	76.9	40.2	58.9

Note: For definitions refer to Table 1.2.

SOC 3.3: Health

Definition:
Health is a complex issue which cannot be covered by any single indicator. However certain lifestyle indicators may illustrate the level of health enjoyed by the population. In this regard various studies show that a high or excessively low Body Mass Index (BMI) increases the likelihood of various diseases and conditions. The BMI is an objective scientific measure of body fat based on height and weight that applies to both adult men and women. The BMI is calculated by dividing a person's weight in kilograms by the square of his/her height in metres.

In 2007 persons aged 18 and over having a normal weight decreased by 6.9 per cent when compared to 2003. This was compensated for by increases in all other categories, the most significant of which occurred in the underweight category, which experienced a percentage increase of 13.0 per cent. However, in absolute terms, a notable increase occurred in the overweight category, with an addition of 12,026 persons from 2003 to 2007.

In 2003 the distribution of men who were overweight and obese exceeded that of females by 12.2 and 6.0 percentage points respectively. By 2007 the difference between the distributions of overweight males and females had risen to 15.8 percentage points. On the other hand, the difference between the distributions of obese males and females had decreased to 2.9 percentage points.

While males are more likely to be overweight and obese, females are more likely to be underweight. In fact the distribution of underweight females in 2003 and 2007 exceeded that of males by 3.0 and 2.5 percentage points respectively.

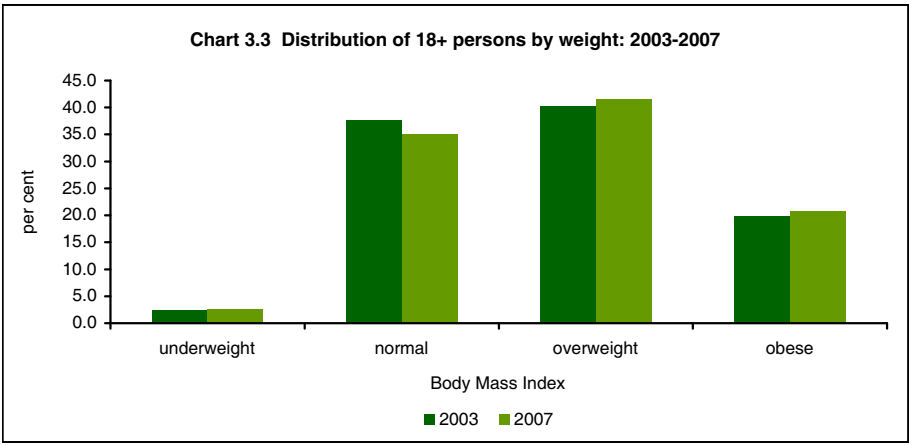
3.3 Distribution of persons aged 18 and over by weight and sex

percentage

Body Mass Index	Males		Females		Total	
	2003	2007	2003	2007	2003	2007
Underweight	0.7	1.3	3.7	3.8	2.3	2.6
Normal	29.9	26.8	45.1	43.0	37.7	35.1
Overweight	46.5	49.7	34.3	33.9	40.3	41.6
Obese	22.9	22.2	16.9	19.3	19.8	20.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: National Statistics Office, Lifestyle Survey 2003; 2007.

Chart 3.3 Distribution of 18+ persons by weight: 2003-2007



SOC 3.4: Education

Definition:
The percentage of early school leavers is defined as the proportion of the population aged 18-24 having attained at most a secondary level of education and not in further education or training. The EU's Sustainable Development Strategy acknowledges that a higher educational attainment increases the chances of finding employment, better wages and career progression. A key target in this regard aims to reduce the proportion of early school leavers at an EU level to 10 per cent by 2010.

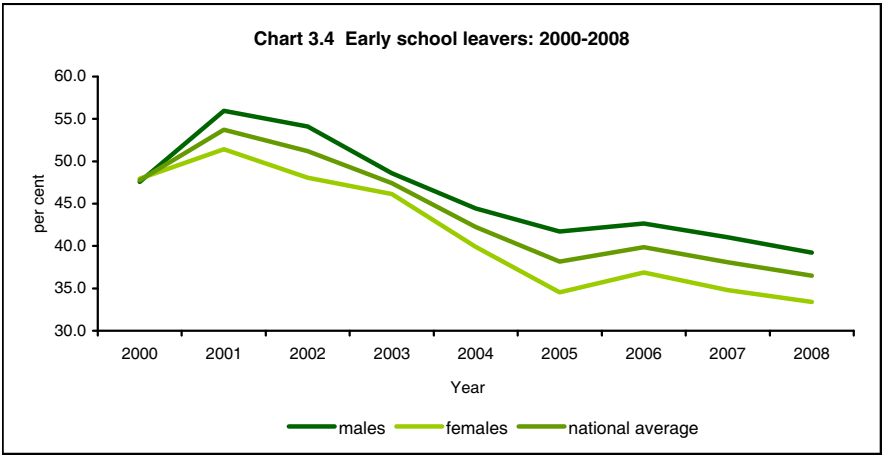
In Malta an average percentage decrease amounting to 3 percentage points per annum among early school leavers was recorded from 2000 to 2008. Since 2001, there was a tendency for the rates to decrease to an average of 5.3 per cent annually. The most notable decrease occurred between 2001, when the percentage stood at a high of 53.7 per cent, and 2005, when this had gone down to 38.2 per cent. Percentage increases amounting to 12.5 and 4.4 per cent were only recorded in 2001 and 2006 respectively.

On a gender basis, the results show that the percentage of early school leavers has gone down for both sexes. Among males the average percentage decrease amounted to 2.1 per cent per annum, while for females the corresponding proportion was almost twice as much at 4.1 per cent. From 2001 onwards a higher proportion of early school leavers has always been recorded among males. By 2008 the difference between the male and female percentage of early school leavers amounted to 5.8 percentage points.

3.4 Percentage of early school leavers (18-24 years old)

Year	Males	Females	National Average
2000	47.6	48.0	47.8
2001	55.9	51.4	53.7
2002	54.1	48.1	51.2
2003	48.6	46.1	47.4
2004	44.4	39.9	42.3
2005	41.7	34.5	38.2
2006	42.7	36.9	39.8
2007	41.0	34.8	38.1
2008	39.2	33.4	36.5

Source: National Statistics Office, Labour Force Survey annualised data.



APPENDIX

ECONOMIC		
Reference	**Theme**	**Indicator**
ECN 1	Economic Growth	Economic growth growth in GDP and GDP per capita
ECN 2	Employment Rate	Employment ratio
ECN 3	Competitiveness	Real value added per person in employment in the private and public sectors
ECN 4	Public Finance sustainability	Government budget balance
ECN 5	Energy	Energy intensity of the economy
ENVIRONMENTAL		
ENV 1	Climate Change	GHG emissions by sector (tonnes of CO_2 equivalent per annum)
ENV 2	Air Quality	Emissions of air pollutants (ambient levels of nitrogen oxides)
ENV 3	Nature and Biodiversity	Proportion of surface area protected and managed in designated areas, to the total surface area of the Maltese Islands
ENV 4	Water	Goundwater exploitation index
ENV 5	Sea Water	Bathing water quality standards
ENV 6	Waste	Waste by type and treatment method
ENV 7	Transport	Rates of car ownership and public transport usage
ENV 8	Land	Relative contribution of land-cover categories to uptake by urban and other artificial land development
SOCIAL		
SOC 1	Poverty reduction	Income distribution
SOC 2	Labour Force Participation of women	Proportion of women in the labour force
SOC 3	Health	Overweight population
SOC 4	Education	Early school leavers