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On 5 June each year, the United Nations observes World Environment Day. The NSO is releasing information on various environmental aspects to mark this event.

World Environment Day: 5 June 2015

This year's theme for World Environment Day is "Seven billion dreams. One planet. Consume with care." This theme highlights the effects of production and consumption patterns upon the Earth's natural resources and aims to promote a sustainable way of living within planetary boundaries.

Water

Malta's primary freshwater resource is based on groundwater abstraction. Over the past 11 years, total groundwater abstraction increased by 44.1 per cent, with the agricultural sector as the principal consumer. Effective recharge of aquifers has declined by 1.2 per cent every year on average, mainly as a result of increased runoff due to urbanisation. Effective recharge is concisely defined as the volume of water added to the aquifers from natural and other sources (see methodological notes). In the period 2004-2014, groundwater abstraction per person went up by 35.4 per cent, from 76.8 cubic metres in 2004 to 103.9 cubic metres in 2014 (Table 1).

Waste

Waste generation reflects society's production and consumption patterns and represents a loss of material and energy resources. Considering two points in time, 2013 and 2004, total generation of non-mineral waste increased by 15.9 per cent in the former year over the latter year. This was mainly due to a rise of 24.8 per cent in non-hazardous waste. Generation of hazardous waste dropped by 48.3 per cent (Table 2). A similar trend was observed in respect of waste generation per person. In 2013, a total of 0.9 tonnes of waste were generated per person of which the majority was classified as non-hazardous waste (Table 3).

Energy

Energy is an enabler of economic development and social progress, however its production and consumption has wide-ranging impacts on the environment. From 2009 to 2014, 55.8 per cent of gross fuel consumption was made up of fuel oil, primarily used for energy generation in power stations. Analysis of the available time series shows that up to 2012 gross consumption of fuel oil registered year-on-year increases; however, in 2013 a decrease of 18.4 per cent was observed, mainly as a result of changes in the set-up of power generation facilities (Table 4) ■

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Table 1. Groundwater abstraction by year

Groundwater	thousand cubic metres										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total abstraction	30,803	32,246	32,317	36,587	35,851	31,656	40,894	38,154	40,008	45,614	44,393
Public water supply	14,887	13,995	13,059	13,958	14,076	12,677	12,784	13,061	13,299	13,788	13,963
Agriculture (for irrigation)	13,506	15,908	16,953	20,298	19,250	16,545	25,653	22,551	24,055	29,020	27,526
Manufacturing industries	914	862	820	816	969	902	858	907	966	1,047	1,092
Services	489	468	470	495	529	497	561	591	635	695	746
Households	1,007	1,013	1,014	1,020	1,028	1,035	1,038	1,044	1,054	1,064	1,065
LTAA effective recharge	41,521	41,628	40,918	41,434	40,725	40,812	40,034	39,447	38,764	38,000	36,646
Groundwater abstraction per person in m³	76.8	79.8	79.7	89.9	87.6	76.7	98.6	91.6	95.4	107.7	103.9

Note: Groundwater abstraction per person for 2014 is provisional.

Sources: Water Services Corporation; National Statistics Office.

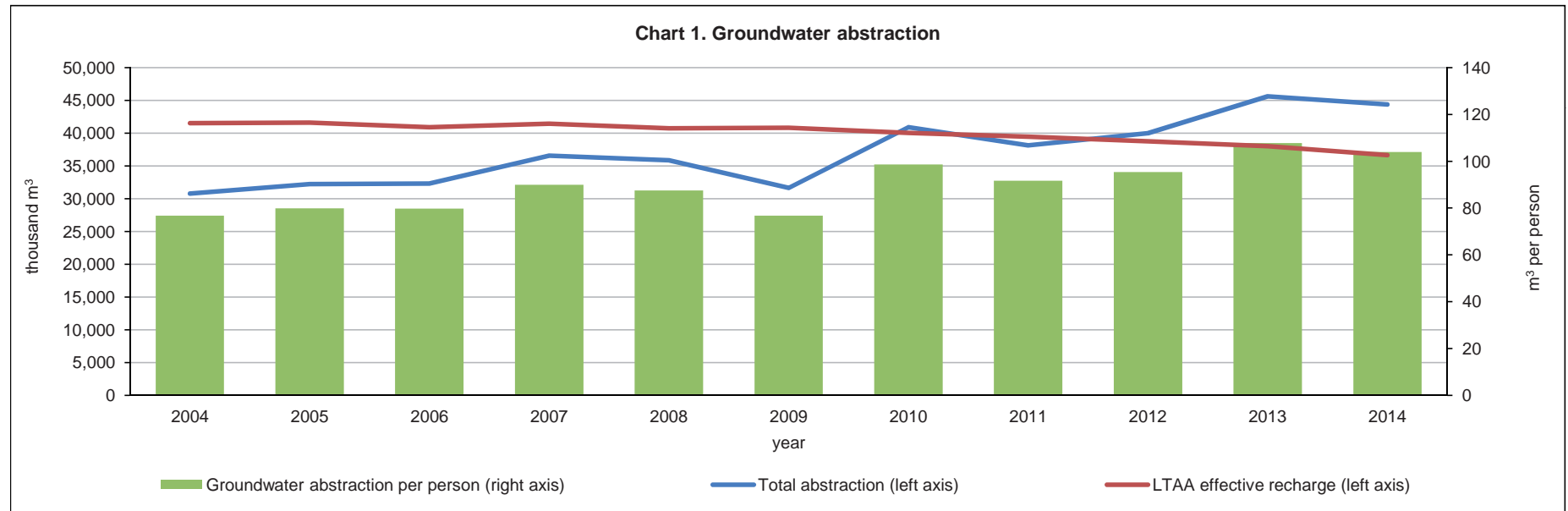


Table 2. Waste generation*

tonnes

Waste category												
EWC-Stat code	Description	Hazardous / Non-hazardous	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013 ^P
1.1, 1.2, 1.3	Spent solvents; acid, alkaline or saline wastes; used oils	HAZ	8,665	8,702	8,742	8,733	8,786	8,753	1,402	1,876	1,419	1,303
01.4, 02, 03.1	Chemical wastes	NHAZ	511	161	175	719	151	407	626	719	629	681
01.4, 02, 03.1	Chemical wastes	HAZ	20,158	19,582	29,502	43,832	33,949	21,336	13,792	9,312	10,067	4,688
3.2, 3.3	Industrial effluent sludges; Liquid waste from waste treatment	NHAZ	0	14	0	3	559	0	0	0	0	8
3.2, 3.3	Industrial effluent sludges; Liquid waste from waste treatment	HAZ	1,046	1,050	1,055	1,054	1,060	1,056	253	12	8	53
5	Health care and biological wastes	NHAZ	0	0	0	0	0	0	0	0	3	0
5	Health care and biological wastes	HAZ	362	363	365	365	367	365	232	288	307	314
6.1, 6.2, 6.3	Metallic wastes	NHAZ	1,124	3,161	23,494	66,224	32,244	25,383	29,818	29,626	30,170	38,500
7.1	Glass wastes	NHAZ	330	820	1,441	1,605	13,387	1,320	1,799	304	2,839	3,700
7.1	Glass wastes	HAZ	44	44	45	45	45	45	0	0	0	0
7.2	Paper and cardboard wastes	NHAZ	12,012	3,323	5,985	4,702	4,169	4,991	11,530	14,356	10,588	8,576
7.3	Rubber wastes	NHAZ	1,232	1,646	1,620	2,014	2,052	2,086	1,813	152	1,675	2,515
7.4	Plastic wastes	NHAZ	223	515	673	1,529	2,370	5,377	3,520	4,863	4,365	4,939
7.5	Wood wastes	NHAZ	753	512	729	247	154	604	8,172	11,809	13,309	15,135
7.5	Wood wastes	HAZ	276	277	279	278	280	279	0	0	0	0
7.6	Textile wastes	NHAZ	1,241	0	23	0	0	5	24	114	132	296
08 (excl. 08.1)	Discarded equipment; batteries and accumulators	NHAZ	0	0	13	0	1,304	785	441	0	387	737
08 (excl. 08.1)	Discarded equipment; batteries and accumulators	HAZ	3,279	3,293	3,309	3,305	3,325	3,313	2,593	2,187	2,487	2,785
8.1	Discarded vehicles	NHAZ	0	0	0	0	0	0	0	188	0	0
8.1	Discarded vehicles	HAZ	5,832	13,838	3,234	2,724	2,951	4,422	5,588	8,645	12,306	7,197
9.1, 9.2, 9.3	Animal and mixed food waste; vegetal wastes; animal faeces, urine and manure	NHAZ	9,453	13,066	12,325	11,480	15,108	21,537	15,758	14,494	16,349	17,107
10.1; 10.2	Household and similar wastes; mixed and undifferentiated materials	NHAZ	244,505	243,565	255,105	264,663	266,663	251,351	228,809	217,702	217,001	211,372
10.1; 10.2	Household and similar wastes; mixed and undifferentiated materials	HAZ	65	65	66	66	66	66	0	19	12	43
10.3	Sorting residues	NHAZ	17,956	15,982	14,363	7,258	7,446	10,174	8,493	40,583	49,670	50,223
11	Common sludges	NHAZ	213	0	9	0	146	1,045	1,537	5,176	10,806	9,045
12.4, 12.8, 13	Combustion wastes; mineral waste from waste treatment & stabilised waste	NHAZ	1,461	160	0	1	210	327	401	426	345	408
12.4, 12.8, 13	Combustion wastes; mineral waste from waste treatment & stabilised waste	HAZ	715	718	721	720	725	722	628	602	1,850	4,512
Total Non-hazardous			291,015	282,925	315,956	360,446	345,963	325,391	312,739	340,511	358,268	363,241
Total Hazardous			40,442	47,934	47,316	61,121	51,553	40,356	24,487	22,941	28,455	20,895
Total			331,456	330,859	363,272	421,567	397,516	365,747	337,227	363,452	386,723	384,136

^P Provisional

* Excludes major mineral waste streams such as construction

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

Table 3. Waste generation per person by year

	tonnes									
Non-mineral waste	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013^P
Non-hazardous	0.73	0.70	0.78	0.89	0.84	0.79	0.75	0.82	0.85	0.86
Hazardous	0.10	0.12	0.12	0.15	0.13	0.10	0.06	0.06	0.07	0.05
Total	0.83	0.82	0.90	1.04	0.97	0.89	0.81	0.87	0.92	0.91

^P Provisional

Source: National Statistics Office.

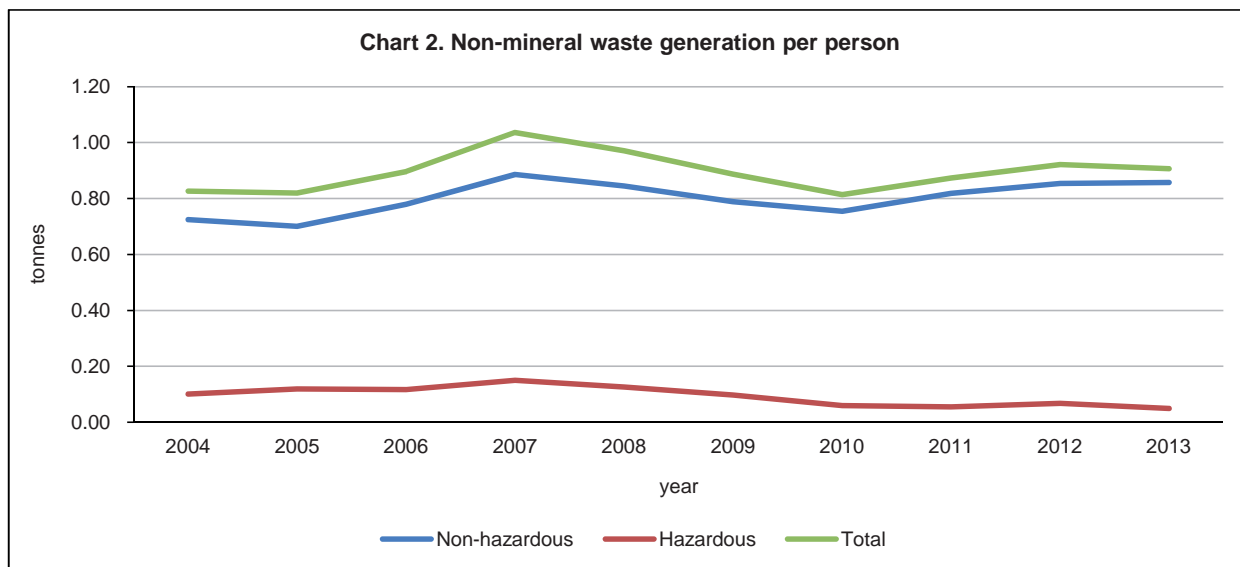


Table 4. Gross inland consumption by fuel type and year

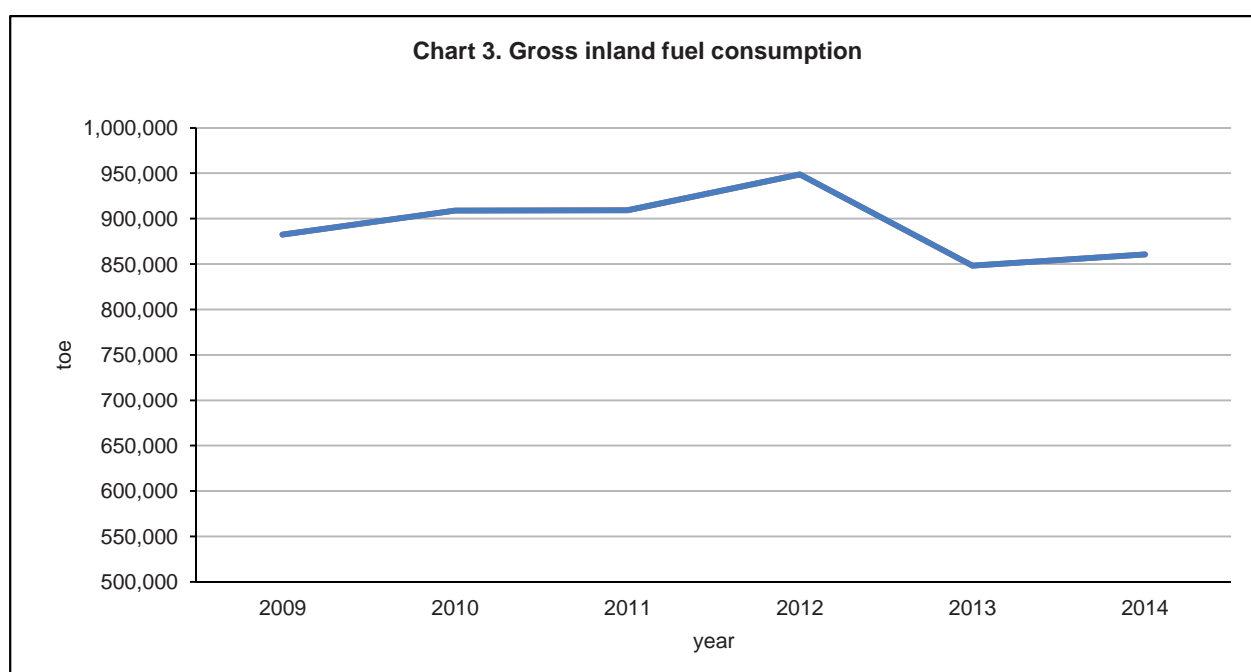
toe

Fuel type	2009	2010	2011	2012	2013	2014 ^P
Liquified petroleum gas	25,121	23,733	23,617	24,210	24,065	24,127
Motor gasoline	74,786	75,391	75,033	74,080	74,492	74,997
Kerosene type jet fuel	91,408	101,931	105,711	100,900	106,121	112,211
Diesel (including Biodiesel)	94,136	102,329	99,696	101,986	102,185	107,009
Gasoil	92,013	98,658	87,608	89,467	85,840	94,424
Fuel oil	504,947	506,854	517,549	558,085	455,451	447,995
Total	882,411	908,897	909,214	948,730	848,153	860,763

^P Provisional

Note: Toe stands for 'tonnes of oil equivalent'.

Source: Malta Resources Authority.



Methodological Notes

1. Groundwater abstraction by the Water Services Corporation forms part of the public water supply used by households and economic units. Abstraction by the agricultural sector, manufacturing and service industries and households refers to abstraction by users for own final use (self-supply).
2. Groundwater abstraction by the agricultural sector is determined by the NSO by means of a model which takes into account climatic conditions and irrigated land area by type of crop. From the model, an estimate of the volume of water used for irrigation is derived. The model does not consider water used for animal husbandry purposes.
3. Data on groundwater abstraction by the manufacturing and service industries and households are estimated by the NSO basing on figures published in the Malta Water Resources Review (FAO, 2006).
4. Waste generation is reported in dry weight. Tables 2 and 3 exclude major mineral waste streams such as construction since the latter quantities fluctuate widely from year to year and may introduce a distortive element in total waste generation. This approach is in line with Eurostat methodology. Pre-2010 data in Table 2 may differ from Eurostat-published data on account of revisions to the EWS-Stat classification in 2010.
5. 2014 data for non-mineral waste generation was still unavailable at time of publication.
6. **Definitions:**
 - **Groundwater abstraction:** Water taken from groundwater sources by means of boreholes and pumping stations.
 - **Long-Term Annual Average (LTAA):** Average values of the most recent consecutive 20 years.
 - **Effective recharge:** Total volume of water added to the zone of saturation of aquifers, net of losses that occur through sub-surface discharge from the mean sea level aquifers into the sea. Natural recharge refers to precipitation (rainfall) and artificial recharge refers to leakages from water mains.
 - **EWC-Stat:** Substance-oriented waste nomenclature which was adopted through Regulation (EC) No. 2150/2002 (Waste Statistics Regulation) in order to report waste generation and treatment data.
 - **Waste generation:** Includes both primary and secondary waste generation. Primary waste originates from consumption and production processes, and secondary waste from waste treatment operations.
 - **Gross inland consumption:** Total fuel demand of a country or a region. It represents the quantity of fuel necessary to satisfy inland consumption of the geographical entity under consideration. The data is collected in metric tonnes and the following coefficients are used to convert from metric tonnes to tonnes of oil equivalent (toe):

Liquified petroleum gas	1.099
Motor gasoline	1.027
Kerosene type jet fuel	1.027
Diesel	1.027
Biodiesel	0.884
Gasoil	1.027
Fuel oil	0.955