

20 March 2015 | 1100 hrs | 055/2015

From 2005 to 2013 water use has increased by 34.2 per cent.

World Water Day 2015: Water and Sustainable Development

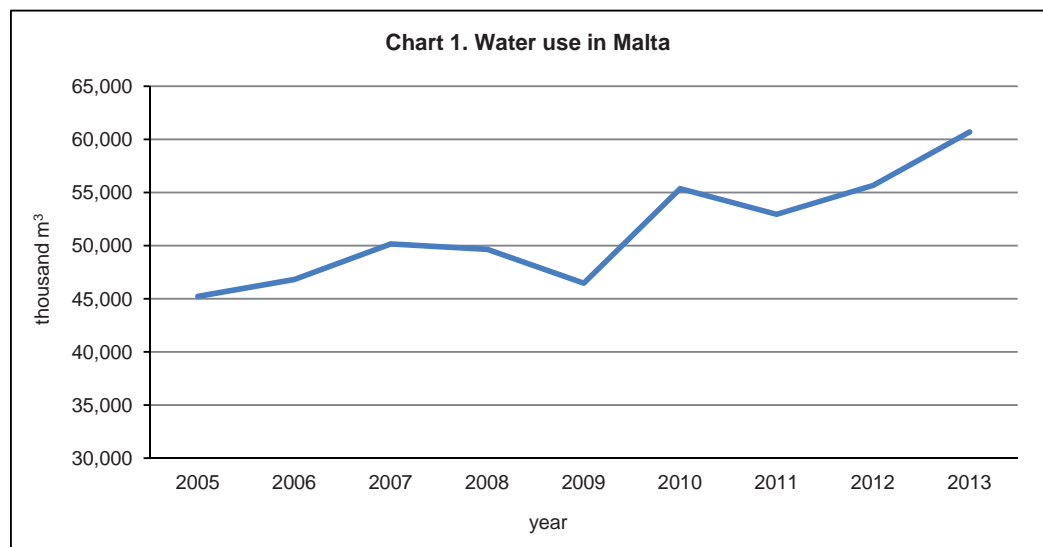
This year World Water Day focuses on the key role that water resources play in the quality of life of present and future generations. The availability of good quality water resources is a necessary pre-requisite for poverty reduction, economic growth and environmental sustainability. In line with this theme this release focuses on the use of water resources in Malta.

An upward trend in the Water Exploitation Index (WEI) was observed between 2005 and 2014, from 34.7 to 46.5 per cent. This indicates a stressed to severely stressed country in terms of water resources (Table 1).

Malta's freshwater resources are totally dependent on precipitation, as no inflow or outflow of water resources from or to other countries take place. Since 2005, the WEI has shown an average annual increase of 4.0 per cent. This has occurred since groundwater abstraction went up by an average of 4.3 per cent per year, while freshwater resources, as calculated by the Long-Term Annual Average (LTAA), have edged up annually by an average of 0.3 per cent (Table 1).

Since 2005, the total yearly water production decreased by an average of 0.2 per cent per year, while on the other hand the consumption of public water has increased by an average of 1.3 per cent per year. This increase has been met with the same levels of production due to a reduction in the infrastructural leakages in the water distribution network, amounting to 3.54 million cubic metres or 49.8 per cent (Table 2).

The agriculture sector is the main user of all the water resources in Malta. From 2005 to 2013 the agricultural sector used 46.7 per cent of all the water which was made available for use, followed by households with a share of 36.2 per cent. Over the past nine years, water use has increased by 34.2 per cent from 45.2 million cubic metres in 2005 to 60.7 million cubic metres in 2013 (Table 3) ■



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The advance release calendar may be consulted at www.nso.gov.mt

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Table 1. Water resources and exploitation by year

thousand m³

Type of resources and exploitation	Computational notes	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Precipitation	1	159,795	170,628	196,058	158,204	214,992	162,133	186,767	164,083	151,540	159,371
Actual evapotranspiration	2	73,475	78,457	90,150	72,744	98,856	71,081	81,881	71,936	66,437	69,870
Total freshwater resources	3 = 1-2	86,319	92,171	105,908	85,460	116,136	91,052	104,886	92,147	85,103	89,501
LTAA total freshwater resources	4	93,010	91,689	94,077	93,062	94,701	94,407	95,197	95,860	96,312	95,460
Total groundwater abstraction	5 = 6+7+8+9+10	32,246	32,317	36,587	35,851	31,656	40,894	38,154	40,008	45,614	44,393
Public water supply	6	13,995	13,059	13,958	14,076	12,677	12,784	13,061	13,299	13,788	13,963
Agriculture (for irrigation)	7	15,908	16,953	20,298	19,250	16,545	25,653	22,551	24,055	29,020	27,526
Manufacturing industries	8	862	820	816	969	902	858	907	966	1,047	1,092
Services	9	468	470	495	529	497	561	591	635	695	746
Households	10	1,013	1,014	1,020	1,028	1,035	1,038	1,044	1,054	1,064	1,065
Water Exploitation Index (%)	11 = 5/4*100	34.7	35.2	38.9	38.5	33.4	43.3	40.1	41.7	47.4	46.5

Source: NSO, Water Services Corporation, Malta Airport Meteorological Office.

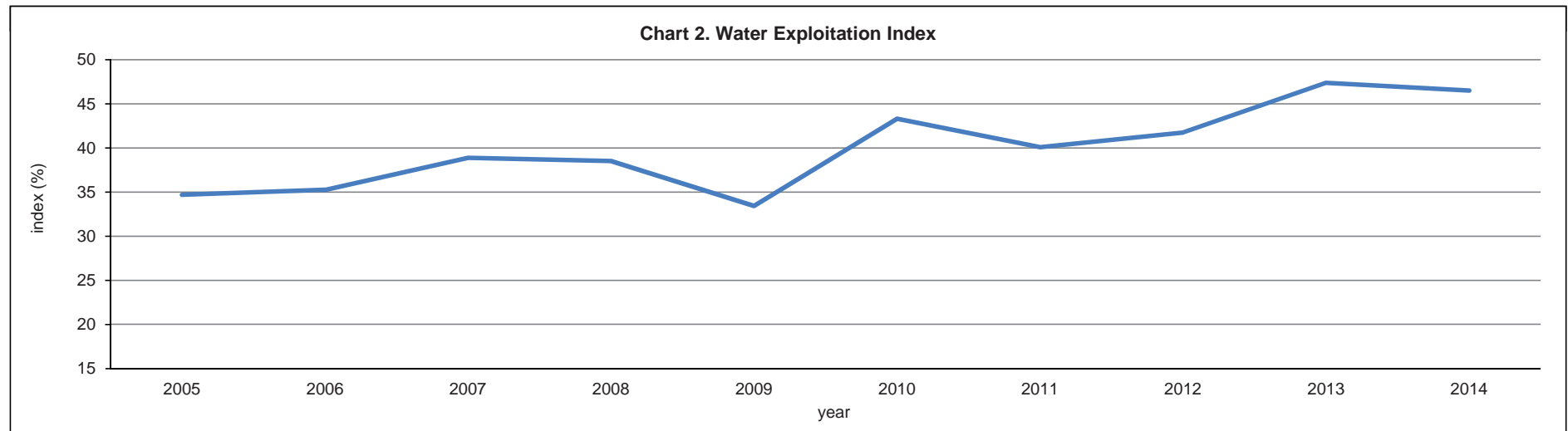


Table 2. Public water production and consumption by year

thousand m³

Production and consumption	Computational notes	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Groundwater abstraction	1	13,995	13,059	13,958	14,076	12,677	12,784	13,061	13,299	13,788	13,963
Reverse Osmosis production	2	17,049	17,469	17,007	16,872	16,654	16,109	16,722	17,647	16,792	16,509
Gozo polishing plant reject	3	0	0	150	138	141	131	133	116	97	104
Total public water production	4 = 1+2-3	31,044	30,528	30,815	30,810	29,189	28,762	29,650	30,830	30,484	30,368
Distribution network leakages	5	7,112	5,606	5,590	5,337	4,219	4,025	4,331	4,354	3,963	3,570
Public water consumption	6 = 4-5	23,932	24,923	25,225	25,472	24,970	24,738	25,319	26,476	26,521	26,799

Source: Water Services Corporation.

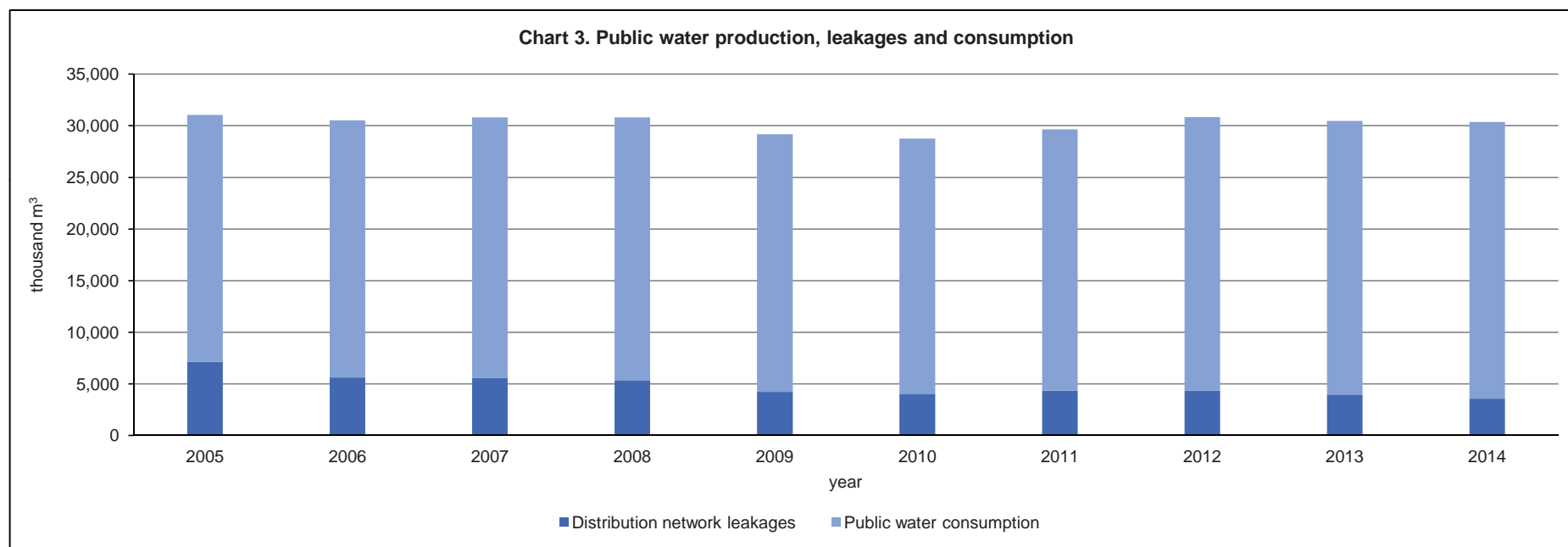
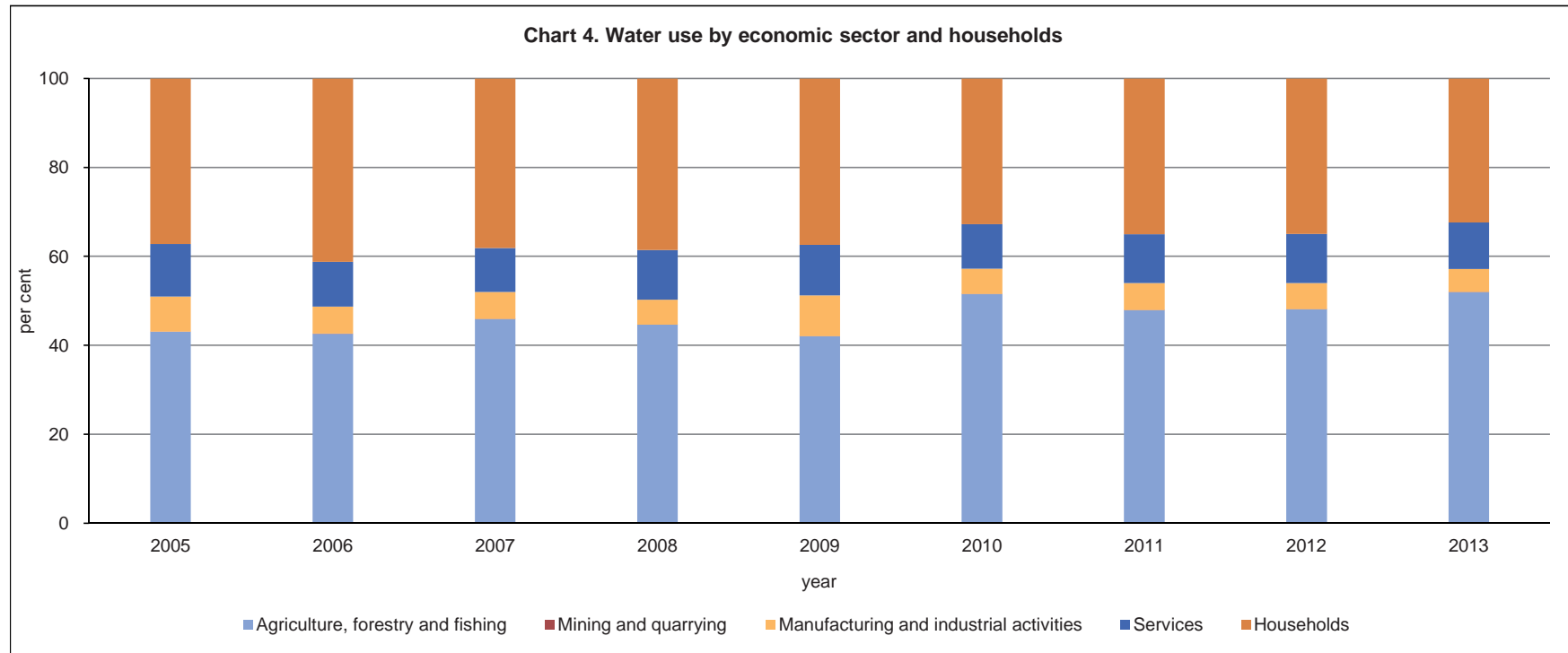


Table 3. Water use by economic sector and households by year

		thousand m ³								
Sector	NACE division	2005	2006	2007	2008	2009	2010	2011	2012	2013
Agriculture, forestry and fishing	01-03	19,467	19,941	23,039	22,160	19,533	28,541	25,374	26,781	31,571
Mining and quarrying	05-09	9	4	8	9	11	6	6	8	6
Manufacturing and industrial activities	10-43	3,572	2,838	3,027	2,796	4,256	3,122	3,225	3,272	3,126
Services	45-96	5,353	4,729	4,951	5,527	5,287	5,546	5,785	6,156	6,359
Households	-	16,830	19,305	19,146	19,171	17,387	18,154	18,562	19,458	19,648
Total		45,231	46,817	50,171	49,661	46,473	55,371	52,953	55,675	60,710

Source: NSO, Water Services Corporation, ARMS Ltd.



Methodological Notes

1. Figures for groundwater abstraction by manufacturing industries, services and households are estimated by the NSO on the basis of figures which were published in the Malta Water Resources Review (FAO, 2006).
2. The Gozo polishing plant is used to remove excessive levels of certain chemicals from abstracted groundwater, in order to achieve a good qualitative status for drinking water in Gozo according to EU directive 98/83/EC.
3. 2014 data for the public water consumption by NACE was still unavailable at time of publication.

4. Definitions:

- **Water Exploitation Index (WEI):** groundwater abstraction as a percentage of the Long Term Annual Average (LTAA) of freshwater resources. According to the European Environment Agency an index of more than 20 per cent indicates stressed water resources, while figures in excess of 40 per cent indicate severe water stress.
- **Precipitation:** the total annual precipitation as measured by the Malta Airport Meteorological Office multiplied by the land area of Malta (316 km²).
- **Actual evapotranspiration:** 63 per cent of the total precipitation less runoff. The amount of runoff depends upon the percentage of built-up land and is calculated as 6 per cent in unbuilt areas and 85 per cent in built-up areas.
- **Long Term Annual Average (LTAA):** the average values of the most recent consecutive 20 years.
- **Groundwater abstraction for the public water supply:** water that is produced by the Water Services Corporation from groundwater sources.
- **Groundwater abstraction by agriculture:** determined by the NSO by means of a model which takes into account the climatic conditions and the irrigated land area by type of crop. From the model, only the volume of water used for irrigation is estimated and it does not take into consideration the volume of water used for the animal husbandry.
- **Water use by agriculture, forestry, fishing:** the sum of public water consumption for NACE divisions 01 to 03 and estimates for irrigation water originating from wells and cisterns, groundwater abstraction for irrigation and irrigation water supplied by the Sant'Antnin Sewage Treatment Plant.
- **Water use by mining and quarrying:** public water consumption for NACE divisions 05 to 09.
- **Water use by industrial activities:** the sum of public water consumption for NACE divisions 10 to 43 and groundwater abstraction by manufacturing industries.
- **Water use by services:** the sum of public water consumption for NACE divisions 45 to 96 and groundwater abstraction by services.
- **Water use by households:** the sum of public water consumption by households and groundwater abstraction by households.