



## ENVIRONMENTAL STATISTICS

### Annual data for 2016

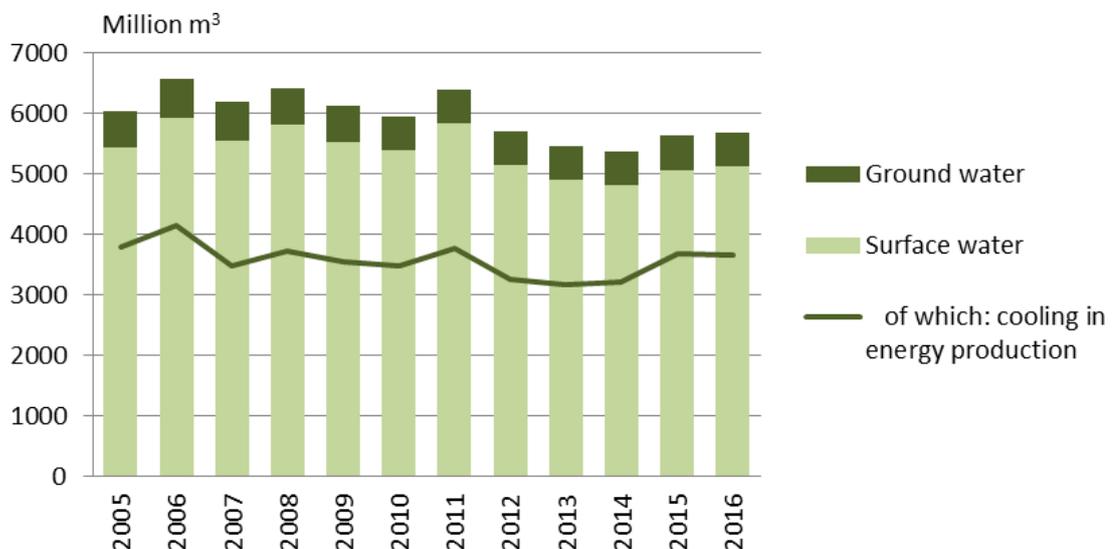
The National Statistical Institute presents to the users results from annual surveys in the domain of environmental statistics for 2016. More detailed data on specific topics can be found in the heading 'Environment' on the NSI web site: <http://www.nsi.bg>.

#### 1. Water

##### Water abstraction

Compared with the previous year in 2016 significant changes are not recorded in the volume of water abstracted at the national level. In 2016, abstracted freshwaters for the economy is estimated to 5 689 million m<sup>3</sup> or by about 1.1% more compared to 2015. This increase is formed mainly by abstraction from surface sources, while the abstraction of water from groundwater sources remained stable. Decline in abstraction from artificial reservoirs by 8.3% compared to 2015 to 2 222 million m<sup>3</sup> are registered whereas water abstraction from Danube river increased.

**Figure 1.1. Fresh water abstraction (excluding water for hydropower generation)**



In 2016 structure of water abstracted on national level is relatively stable 15.4% from fresh water are abstracted from Public water supply, for Agriculture, forestry and fishing - 16.0%, Energy cooling - 64.6% , Other - 4.0%.

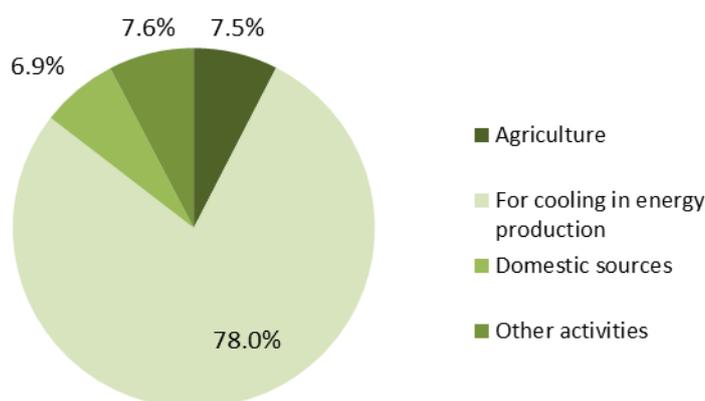


Most of the water abstracted in the Yugozapaden (79.8%) and the Severen tsentralen region (59.4%) is for public supply, whereas in the Severozapaden and Yugoiztochen region the main part of the necessary water is provided by self and other supply (irrigation systems).

### Water used

Water is provided through public water supply, irrigation systems or self-supply. The total use of freshwater and non-freshwater for economy in 2016 is estimated at 4 721 million m<sup>3</sup> compared stable with the previous year. The main factor have water for cooling processes in the energy sector, as it accounts for 78% of the water used in the country and there is no change in comparison to year 2015. Water used for irrigation in the agricultural sector declined - by 3.3% compared to 2015 to 306 million m<sup>3</sup>. Water consumption in the service sector also decreased, while water use from households remains the same. There are no significant changes in the structure of water-use activities compared to 2015.

**Figure 1.2. Structure of water used by purpose in 2016**



The greatest water quantities of water in 2016 are used in the Severozapaden and Yugoiztochen regions (mainly for industrial activities) in the Yuzhen tsentralen (mainly for irrigation).

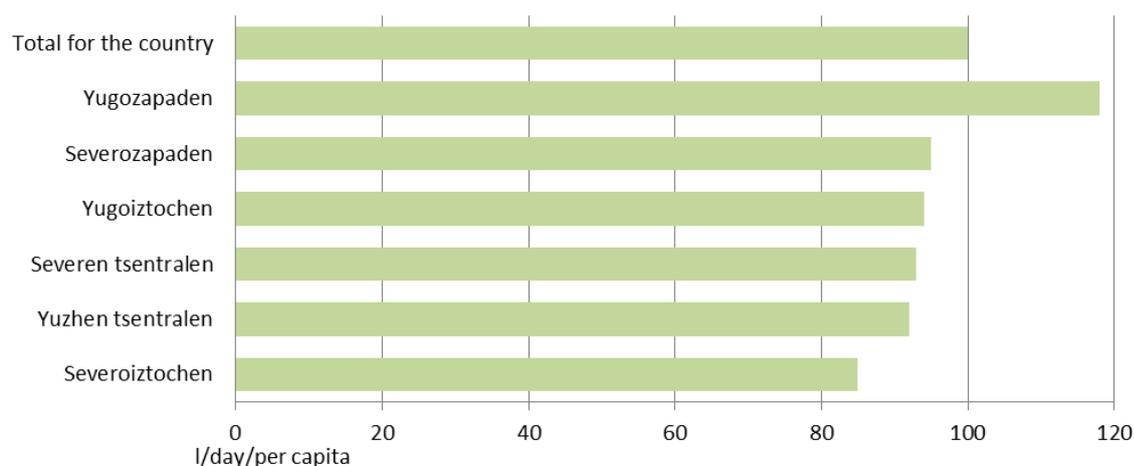
### Public water supply

About 8.3 % of the water used in the country is provided by the public water supply (PWS). The amount of water supplied in 2016 is 911 million m<sup>3</sup> or by 0.8% more than in 2015. The reported water consumption (billed or unbilled) increased by 3.3% compared to 2015 and reached 394 million m<sup>3</sup>. The majority is for water supply to households - 65.4%, for services - 11.1%, and 13.8% for industry. The unbilled water (for technological, fireproof and other purposes) accounts for 8.6% of total water consumption.



99.3 % of the population in the country is connected with the public water supply. Household water consumption in 2016 is estimated to 100 liters per day on average per person (2015 - 99 l/day/per capita). Above the average for the country is the household water consumption in the Yugozapaden region (118 l/day/per capita).

**Figure 1.3. Drinking water consumption by households connected to public water supply in 2016, on average per capita (l/day)**



The total water losses in the public water supply sector in 2016 is estimated to be about 517 million m<sup>3</sup> or 56.8% of the supplied water (57.9% in 2015), which are mainly formed on the water-supply network (real losses). The length of the newly built and rebuilt / replaced water supply network in 2016 is 603 km and the total for the period 2010 - 2016 - 3 637 km. Most of the incoming and distribution pipelines were built before 1990 (86.5%), mainly from eternit and steel pipes (according to PWS data, 2015).

### Wastewater

In 2016, about 420 million m<sup>3</sup> of wastewater generated from point sources and 3 628 million m<sup>3</sup> of processed water from cooling processes were formed by the economy - in total, they account for 85.7% of the water used.

The total volume of wastewater discharged into water bodies from economic activities, households and public sewerage in 2016 is estimated to be 803 million m<sup>3</sup> (without cooling), of which 75.1% were treated in urban and industrial wastewater treatment plants (72% for 2015).

The relative share of industrial wastewater was treated on site before discharge into water bodies increased - from 64.6% in 2015 to 70.2% in 2016. In recent years, many urban wastewater treatment plants (UWTPs) have been built and modernized.



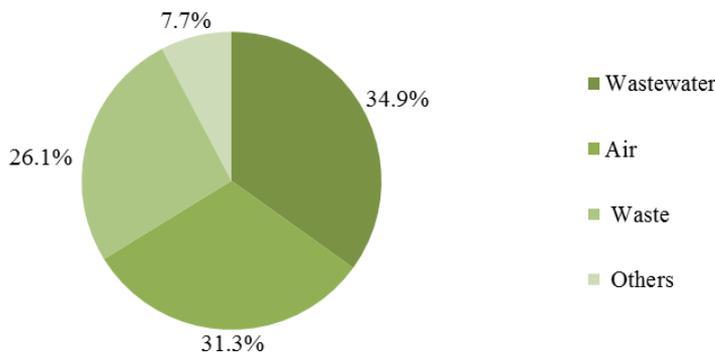
In the year 2016 there were registered 174 operating urban wastewater treatment plants, of which 109 were with a capacity of over 2 000 population equivalent. In 2016 4 new treatment plants with a capacity of over 2 000 population equivalent with secondary after-treatment (removal of nitrogen and / or phosphorus) have been put into operation.

The relative share of the population with wastewater discharge services in the public sewer system in 2016 is estimated at 75.7%. 63.1% of population (62.3% - 2015) is connected to urban wastewater treatment plants, with prevailing secondary methods of treatment and methods for additional treatment.

## 2. Tangible fixed assets with ecological use

At the end of 2016, the total value of the tangible fixed assets with ecological use is evaluated to 9 045 million BGN. As in the previous years in 2016 the largest share of tangible fixed assets is for wastewater treatment (wastewater treatment plants, sewerage network, etc.) - 34.9%, followed by the facilities for air protection - 31.3% and for waste treatment - 26.1%.

**Figure 2. Availability of tangible fixed assets with ecological use by environmental domains as of 31 December 2016**

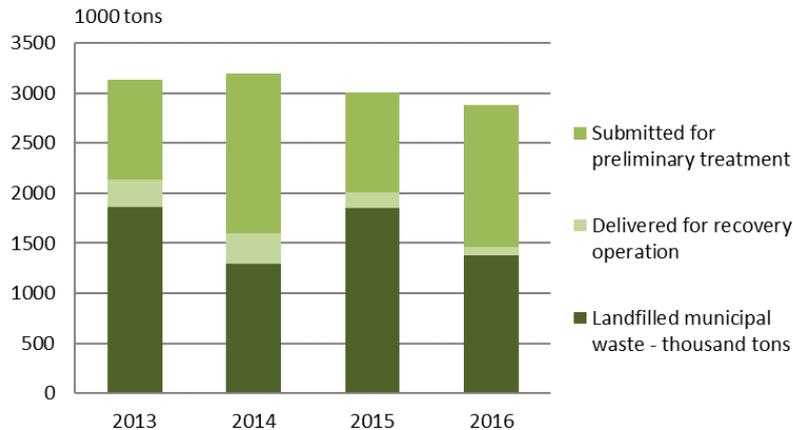


## 3. Municipal waste

The trend of decreasing of the generated municipal waste continues and in 2016 the quantity drops to 2881 thousand tons or by 4.3% less compared to 2015. Registered a reduction of the relative share of municipal waste disposed of for landfill was - from 61.6% in 2015 to 48.0% in 2016. At the same time, the share of municipal waste handed over for pre-treatment - from 33.3% (2015) to 49.2% (2016).



**Figure 3.1. Municipal waste generated and treated**



Regional waste management systems continue to be built. While closed constructed in the past landfills that do not meet environmental requirements. The total number of registered landfills in operation in the year 2016 is 125, some of them being facilities from the regional waste management systems.

Because of the introduction of organized waste management systems in new settlements, the relative share of the population covered by organized waste collection and transportation systems increased and in 2016 it reached 99.7% of the total population of the country.

Waste generated an average per capita shows the pressure on the environment. By this indicator, Bulgaria is below the average rate for Europe (480 kg /capita /year). In 2016, the amount of waste generated in the country is estimated on average 406 kg/per capita or 13 kg. less than year 2015.

Regional data show that in 2016 lead in generated municipal waste per capita was the Yugozapaden region of the country (478 kg/capita/Year) and last - Severozapaden region (282 kg /capita/Year).



**Figure 3.2. Municipal waste generated on average per capita by statistical regions in 2016**

