

## ENVIRONMENTAL STATISTICS

### Annual data for 2019

The National Statistical Institute presents the results of annual surveys in the field of environmental statistics for 2019. Detailed data on specific topics can be found in the section ‘Environment’ on the NSI website: <http://www.nsi.bg>.

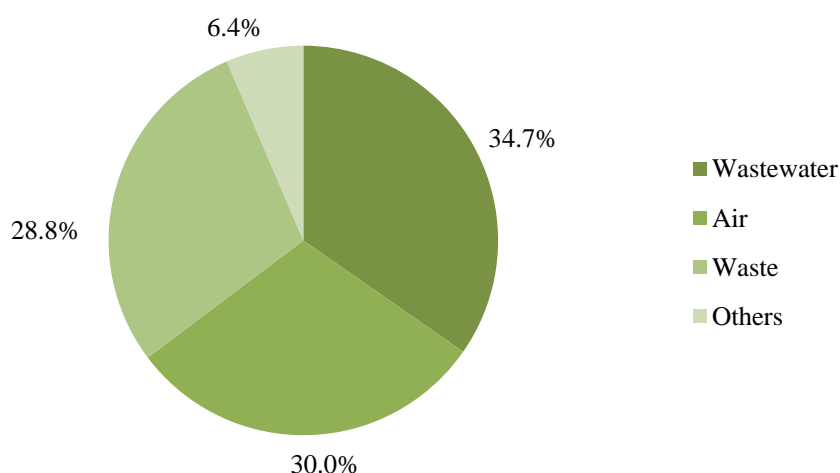
#### 1. Tangible fixed assets with ecological use

The tangible fixed assets with ecological use (TFA with ecological use) are a part of the total tangible fixed assets within the country. They are distributed by environmental domains - for wastewater, protection of ambient air, soil and ground water, biodiversity and protected areas and sites, hunting and fishing projects, waste treatment, noise and more.

In 2019, the share of TFA with ecological use at the end of the year by accounting value amounts to 4.8% of the total tangible fixed assets available in the country.

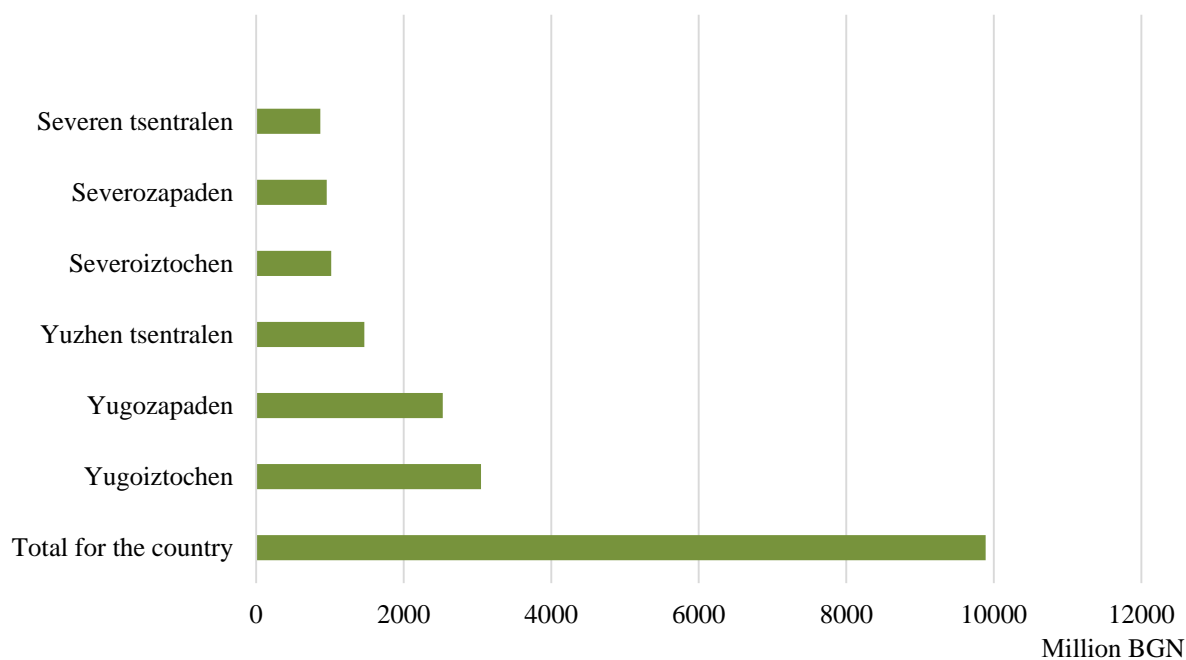
At the end of 2019, the total value of the TFA with ecological use amounted to 9 889.8 million BGN and is distributed by the main environmental domains as follows: for wastewater treatment (industrial and urban wastewater treatment plants, sewerage network, etc.) - 34.7%, followed by the facilities for air protection - 30.0% and for waste treatment - 28.8%. There is no significant change in the relative share of assets distributed by environmental domains compared to previous years.

**Figure 1.1. Availability of tangible fixed assets with ecological use by environmental domains as of 31 December 2019**



Regional data for the available TFA with ecological use at the end of 2019 show that the biggest amount is in the Yugoiztochen region of the country (accounting value - 3 048.7 million BGN) and the smallest amount is accounted in the Severen tsentralen region (870.1 million BGN).

**Figure 1.2. Availability of tangible fixed assets with ecological use by statistical regions as of 31 December 2019**



The total amount of the acquired tangible fixed assets with ecological use in 2019 is 351.8 million BGN. The prevailing part of them are related to wastewater discharge and treatment - 33.6%, waste treatment - 32.9%, air protection - 27.9%. In other environmental domains, fixed assets with ecological use acquired during the year amount to 19.8 million BGN (5.6%).

The breakdown of the data by economic activity for 2019 shows that significant part of TFA with ecological use are concentrated in the industry sector: 5789.3 million BGN (58.5%) of those available at the end of the year and 204.9 million BGN (58.2%) of those acquired in the country. The majority of the acquired tangible fixed assets with ecological use are accounted in the economic sectors mining and quarrying and manufacturing - 54.6%, sewerage, energy production, water supply - 29.8% and waste management and remediation activities (specialized producers of EP services) - 15.7%.

In the category other activities (services sector, including general government sector), the TFA with EU available at the end of the year are estimated to 4052.2 million BGN (41.0%) and brought into operation (acquired during the year) - 130.5 million BGN (37.1%).

## Methodological notes

The purpose of this statistical survey is to obtain information about the availability and movement of the tangible fixed assets with ecological use (TFA-EU). The tangible fixed assets with ecological use include:

- facilities, installations and equipment necessary for environmental protection and recovery by use (water resources, air, soil, waste disposal, protection from noise);
- monitoring and control equipment.

The tangible fixed assets with ecological use do not include the equipment for preserving air quality, and noise and vibration reduction in the working premises, i.e. labour protection activities.

The tangible fixed assets with ecological use are a part of the total tangible fixed assets within the country.

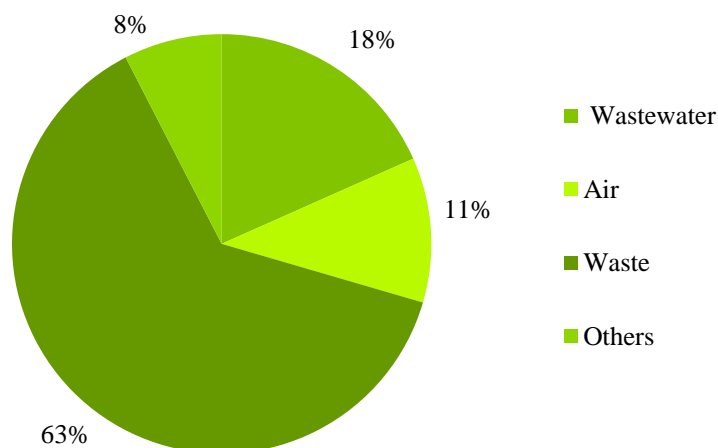
## 2. Expenditure for protection and restoration of the environment

Environmental protection and damage repair requires additional resources. The amount of funds is a key indicator of the measures taken by society and the state to reduce the negative impact of socio-economic processes on the environment.

The expenditure of environmental protection and restoration are part of the total expenditure of tangible and intangible fixed assets. In 2019, the share of expenditure available at the end of the year for acquisition of tangible and intangible fixed assets with ecological purpose amounts to 2.4% of the total expenditure for acquisition of tangible and intangible fixed assets in the country.

The incurred environmental expenditure (investments and current expenditure) are estimated at 2 308 million BGN and are allocated to environmental areas - wastewater (18%), air protection (11%), waste treatment (63%) and others (8%). Current expenditure have a predominant share in the total environmental expenditure (80.3%). Most of the total expenditure were incurred for air protection, waste collection, treatment and disposal and wastewater treatment and discharge.

**Figure 2.1. Structures of Environmental protection and recovery expenditures in 2019 by use**



The share of the expenditures for environmental protection and restore from the produced gross domestic product (GDP) is 1.9% and is a main criteria of measures taken by society and the state to reduce environmental pressure.

**Figure 2.2. Share of environmental protection and recovery expenditures of GDP**



### Methodological notes

The methodology was developed in 2014, in accordance with the requirements of the European Economic Accounts for the Environment (Regulation EU No. 691/2011), and in accordance with the Law on Accountancy and the National Chart of Accounts in Bulgaria.

There are two types of expenditures on the acquisition of tangible fixed assets (FTA) under EU Structural Business Statistics (SBS) Regulation 295/2008:

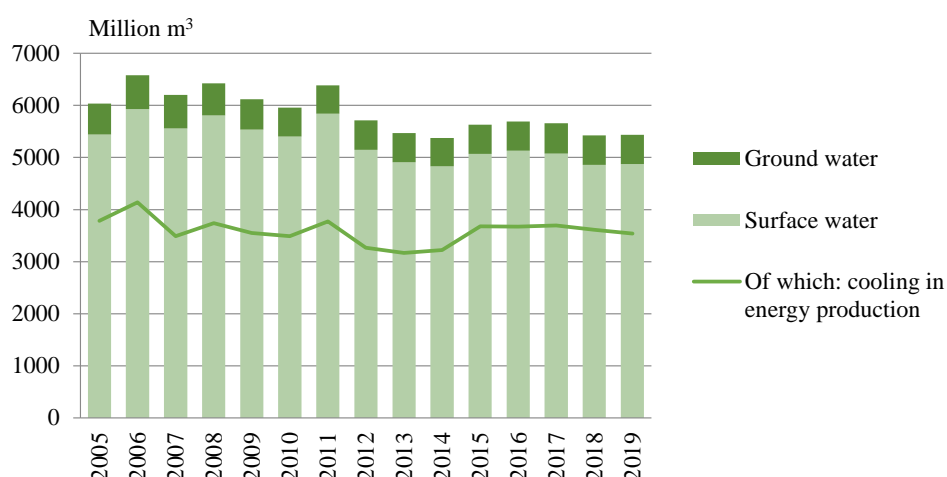
- specialized end-of-pipe facilities - facilities that do not participate in the production process and serve only to reduce pollution from production;
- integrated technologies - elements of the production process/technology that result in less environmental pollution than other similar ones. Often the equipment is fully integrated into the production process and cannot be identified as a separate component. In this case, only the estimated share of the total investment related to the choice of environmentally friendly technology is taken into account.

### 3. Water statistic

#### Water abstraction

In year 2019 5 435 million cubic meters of fresh water are abstracted in the country, which is 0.2% more than in 2018. Surface water abstracted have been increased with 0.3%, which accounts for about 90% of freshwater abstracted. Water abstraction for has increased for the Agriculture, Forestry and Fisheries sector with 12.2% - 812 million cubic meters. Water abstraction for cooling processes in the energy sector has decreased with 2.1% to 3 756 million cubic meters. They are 65.2% from abstracted fresh water. Decrease was reported in the abstracted water from groundwater sources - by 0.8% compared to 2018. 80.4% from groundwater abstracted are for the purposes of public water supply (PWS).

**Figure 3.1. Fresh water abstraction (excluding water for hydropower generation)**



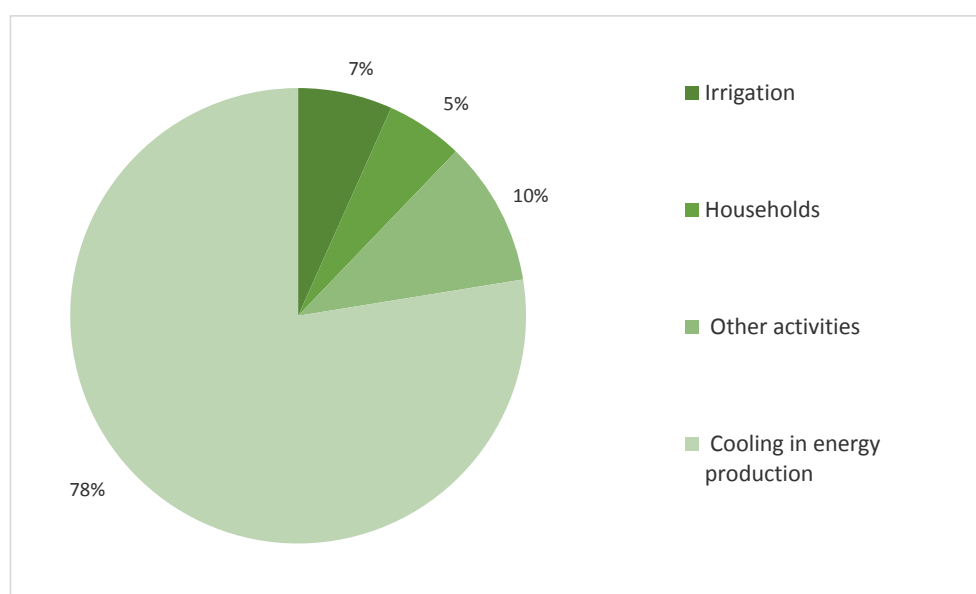
The structure of water abstraction on national level is relatively stable. In 2019, the most significant share of water is in the industry sector - 69.1% of freshwater, followed by the Public water supply (15.5%) and Agriculture, forestry and fisheries (14.9%).

Part of abstracted water is delivered to the end users and the rest is water losses (leakages, evaporation, unauthorized consumption, measurement errors etc.).

## Water used

Water is provided through public water supply, irrigation systems, self-supply or others. The total use of freshwater and non-freshwater in the country in 2019 is estimated at 4.58 billion m<sup>3</sup> which is a decrease with 1.5% compare to the previous year. The energy sector cooling water comprises the main share of the total water usage in the country - 77.5%, and compared with level of the previous year decreases by 2.1%. These waters are provided mainly by own supply and after usage they are usually returned back to the source. The quantity of water used for irrigation increase in 2019 with 5.5% to 307 millions m<sup>3</sup>, compared with 2018. Water used by the households in 2019 is 250.5 millions m<sup>3</sup> remains the close to the level in previous year.

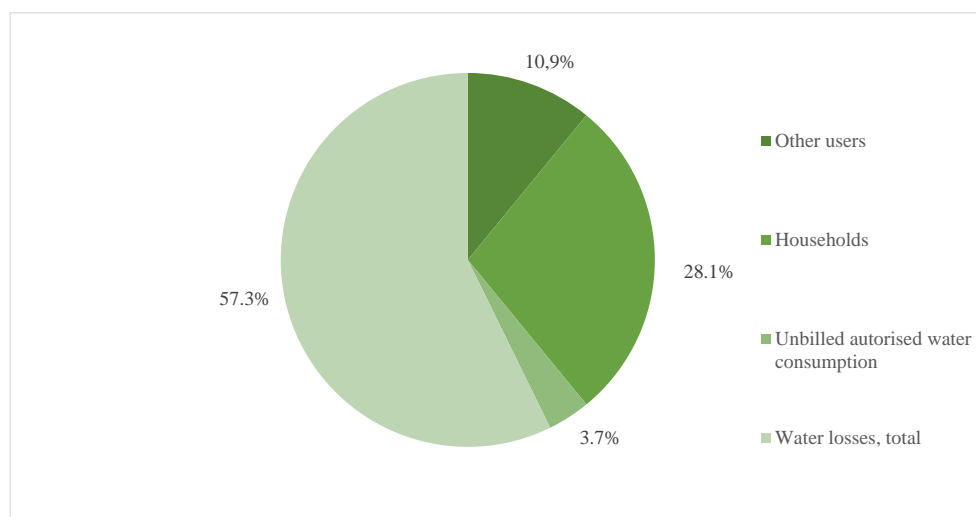
**Figure 3.2. Structure of water used by purpose 2019**



## Public water supply (PWS)

The amount of water supplied by PWS in 2019 is 890.5 million m<sup>3</sup>, which is an increase with 0.6% compared with previous year. The delivered water to end users (billed) in 2019 amounts for 39.1% of the supplied water and the unbilled water delivered - 3.7% (for technological, fireproof and other purposes). The total water losses in 2019 are estimated at 509.9 million m<sup>3</sup> or 57.3% of the supplied water (56.4% for 2018). The main part of the losses is in the water transport (real losses) which in 2019 are estimated at 434.7 million cubic meters.

**Figure 3.3. Water supplied from public water supply in 2019**



99.4% of the population in the country is connected to the public water supply. Household water consumption in 2019 is estimated to 99 liters per day on average per person.

In 2019, 6.0% of the population was in a water supply regime due to water shortages, mostly seasonal.

The total length of the water supply network (operated by PWS) in 2019 is 75 038 km, from which the newly built - 60 km and reconstructed/replaced - 616 km.

### **Wastewater treatment and discharge**

In 2019, about 418 million m<sup>3</sup> of wastewater generated originated from point sources (economy sectors and households) and 3 484 million m<sup>3</sup> are processed water from cooling processes - in total.

The largest share has the wastewater generated is in the domestic sector - 64.3% of the total amount (excluding processed water from cooling processes). Most of them are discharged into urban wastewater collecting system and urban wastewater treatment plants (UWWTP). The industry sector generated 98.8 million m<sup>3</sup> of wastewater in 2019, 83.2% of which was discharged into water bodies. The share of treated water constitutes 62.8% of the industrial wastewater discharged into water bodies.

In 2019 the total volume of wastewater discharged into water bodies from economic activities, households and public sewerage (including water from non-point sources - stormwater, etc.) is estimated to be 715 million m<sup>3</sup> (without cooling), of which 74.6% are treated in urban and industrial wastewater treatment plants.

In 2019 173 operating UWWTP were registered, 109 of which with a capacity of over 2 000 population equivalent. Most of the stations have secondary and tertiary methods of treatment with nitrogen and phosphorus removal.

The total length of public sewage network (managed by PWC and municipalities operating UWWTP) at the end of the 2019 is 12 353 km including newly built sewage network - 65 km, and reconstructed/changed sewage network - 31 km.

### **Methodological notes**

Water statistic reflects different quantitative aspects of water abstraction, water supply and water use by economy and households, wastewater treatment and discharge into water bodies.

Information on water abstraction makes it possible to identify the main sources and to quantify the distribution of water use between different activities.

Quantities of generated wastewater are divided by main sources of anthropogenic activity. The observation of wastewater flows is from water source to water receiver. The total quantity of wastewater discharged into water bodies is divided by place of discharge and their treatment in urban and other wastewater treatment plants, as well as independent treatment of wastewater from the population. Data on urban wastewater treatment plants (UWWTP) according to the available treatment technology - primary, secondary and tertiary are presented.