

ENVIRONMENTAL STATISTICS

ANNUAL DATA FOR 2022

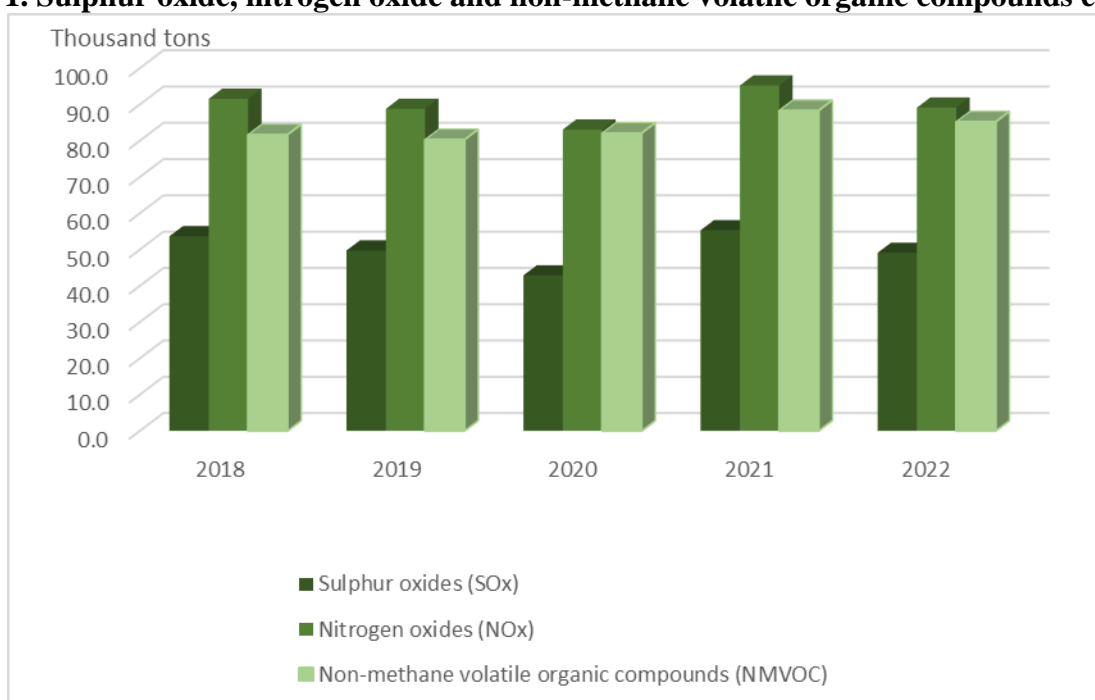
1. EMISSIONS IN THE ATMOSPHERE

In 2022, emissions of sulphur and nitrogen oxides, non-methane volatile organic compounds, methane, carbon monoxide, carbon dioxide, nitrous oxide and ammonia decrease compared to 2021. The biggest reduction is in the emissions of sulphur oxides - 11%, compared to 2021.

In 2022, emissions of sulphur oxides are 49 thousand tons, of nitrogen oxides - 89 thousand tons, and of non-methane volatile hydrocarbons - 85 thousand tons.

Fuel combustion processes for energy production are the main contributors to carbon dioxide emissions (64%) and sulphur oxides (74%). Production processes are the predominant contributor to emissions of non-methane volatile organic compounds (42%). The main contributor to the emissions of ammonia (96%), carbon monoxide (88%), nitrous oxide (94%), methane (80%) and non-methane volatile organic compounds (57%) and nitrogen oxides (68%) is the group 'Other sources', which includes agriculture, transport, and household fuel burning, waste, and wastewater treatment activities.

Figure 1. Sulphur oxide, nitrogen oxide and non-methane volatile organic compounds emissions



2. WATER STATISTICS

In 2022, 99.5% from country population is connected with public water supply.

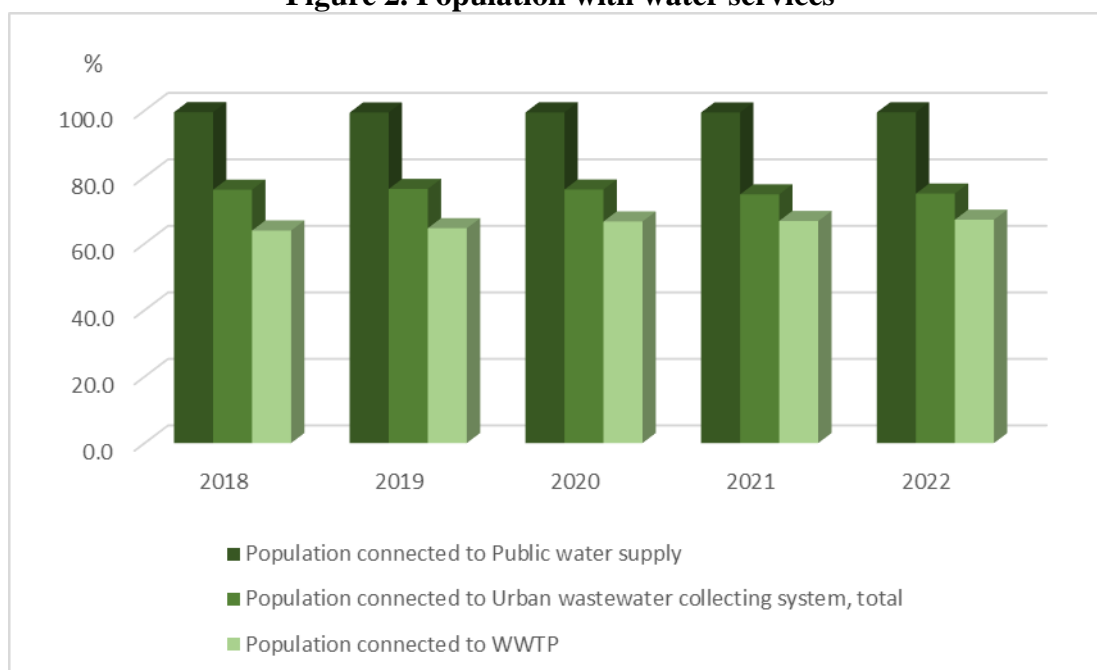
Water delivered to the households is 251.19 mill. m³ which is with 1.8% less than 2021.

In 2022, 2.8% from country population is with water supply regime (due to drought) and from them 2.4% - seasonal (below 180 days), and 0.4% - all year (over 180 days). The most affected by the water supply regime (due to drought) were the districts of Lovech - 24.9%, Targovishte - 19.0%, Blagoevgrad - 14.8%, and Pernik - 12.9%.

In 2022, 75% of Bulgarian population is connected with urban wastewater collecting system, from them 67.2% connected to wastewater treatment plants (WWTP).

For 2022 are reported 179 active urban wastewater treatment plants, 77 525 km public water supply network and public sewage network 13166 km.

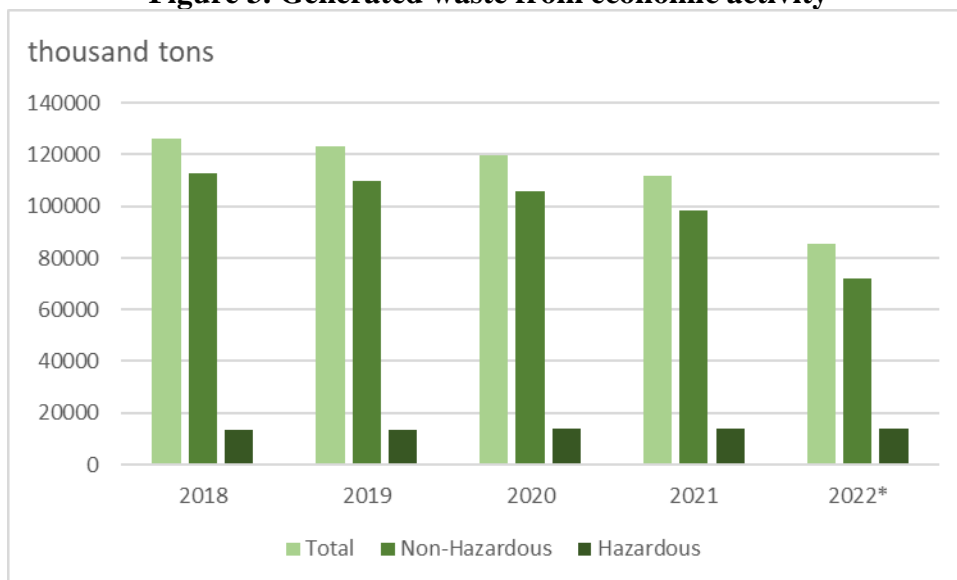
Figure 2. Population with water services



3. WASTE FROM ECONOMIC ACTIVITY

According to preliminary data, a total of 85673 thousand tons of waste from economic activity were generated in 2022, which decreased by 23% compared to 2021. Non-hazardous waste is 71905 thousand tons with a 27% decrease, and hazardous waste is 13768 thousand tons, which has increased by 1% compared to the previous year. The waste submitted for recovery decreased by 31% and the waste submitted for disposal decreased by 3%.

Figure 3. Generated waste from economic activity

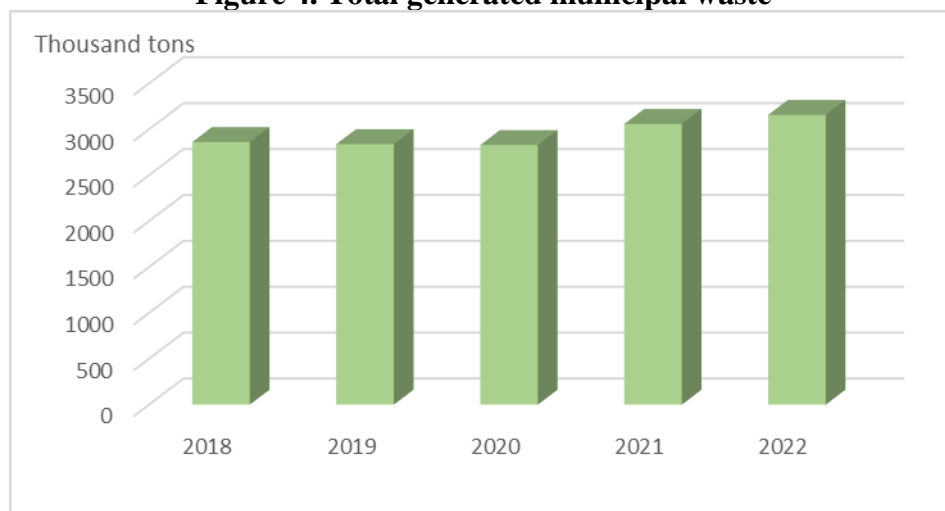


4. MUNICIPAL WASTE

Generated municipal waste in 2022 is 3 157 thousand tons. Compared to 2021, there is an increase by 3.2%.

Generated waste per capita for 2022 are 475 kg, with 30 kg more than the amount per capita for 2021. The share of population served by municipal waste collection systems is 99.93%. Compared to 2021 it's increased by 0.06 percentage points.

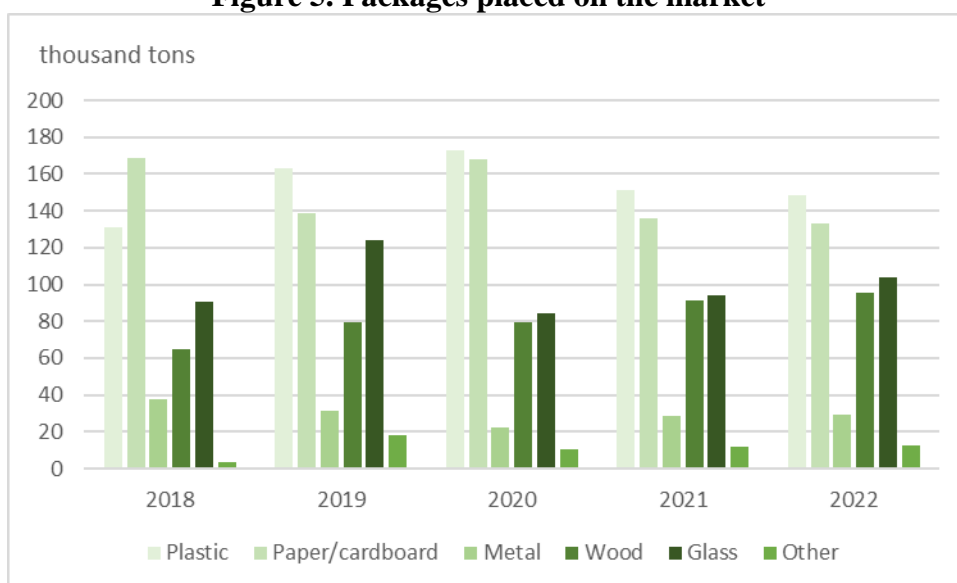
Figure 4. Total generated municipal waste



5. PACKAGES PLACED ON THE MARKET

In 2022, 523 thousand tons of packages placed on the market, and their increase, compared to 2021, was 1.97%. Plastic packaging is 148 thousand tons and a decrease of 1.92%, compared to 2021, was recorded. Glass packaging saw an increase of 10.6% compared to the previous year, with their total amount in 2022 to 104 thousand tons.

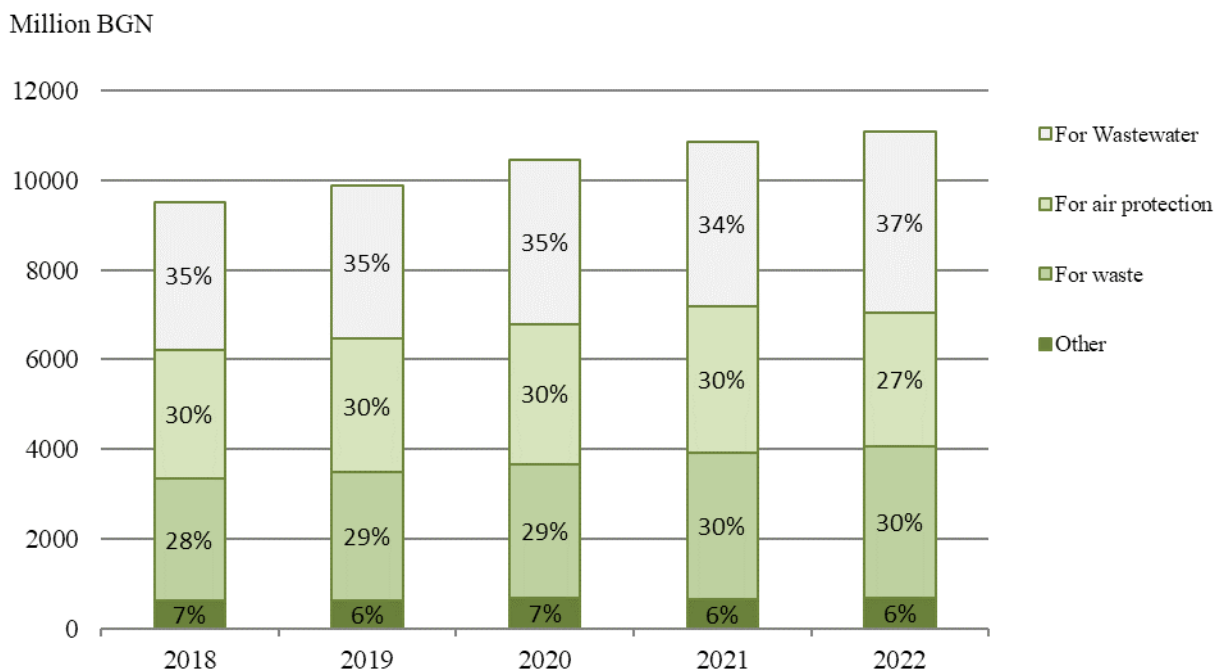
Figure 5. Packages placed on the market



6. TANGIBLE FIXED ASSETS WITH ECOLOGICAL USE

The availability of the tangible fixed assets with ecological use by accounting value at the end of the 2022 is at 11 092 million BGN. Compared to 2021, there is an increase of 2.0% (10 873 million BGN). At the end of the accounting year, the largest share of assets for wastewater treatment and discharge is 37%, followed by non-hazardous and hazardous waste treatment facilities - 30%, and ambient air protection - 27%. For 2021, the share in these directions is 34%, 30% and 30%, respectively.

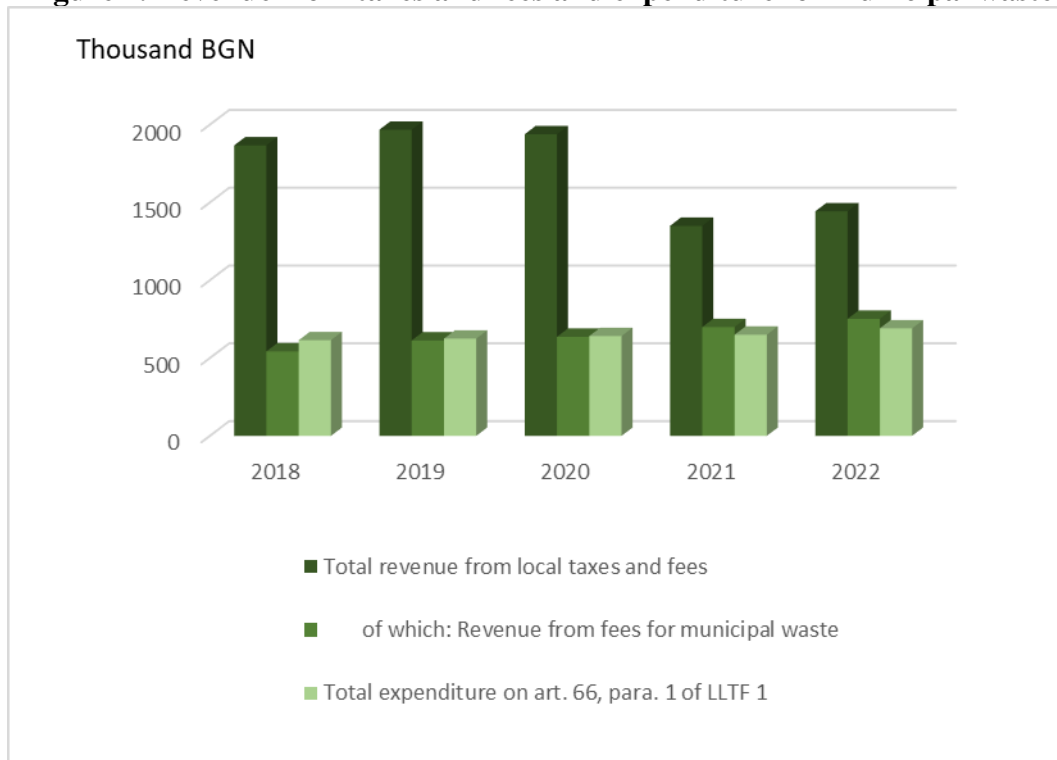
Figure 6. Availability of tangible fixed assets with ecological use by main environmental domains



7. REVENUE FROM TAXES AND FEES AND EXPENDITURE FOR MUNICIPAL WASTE TOTAL FOR THE COUNTRY

The value of the revenues of the municipal administrations in 2022 is 1443 million BGN. Compared to 2021, they are increasing by 6.9%. Part of these revenues are the taxes and fees for municipal waste, the value of which in 2022 is 752 million BGN and their level compared to 2021 increases by 7.6%. The value of the expenditures for municipal waste of the municipal administrations in 2022 is 691 million BGN and compared to the previous year they are increased by 6.3%.

Figure 7. Revenue from taxes and fees and expenditure for municipal waste



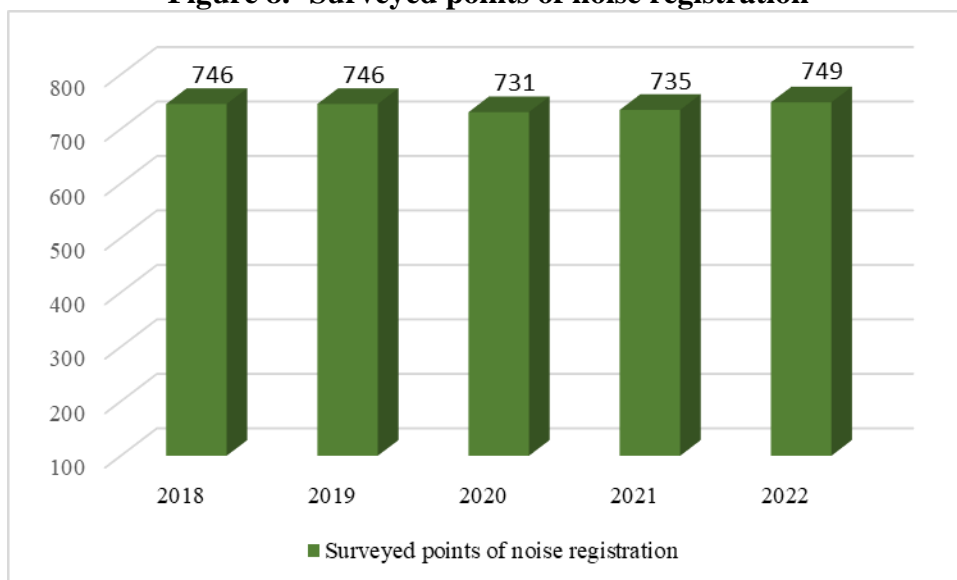
8. RECORDED NOISE LEVELS

749 points of noise level measurement have been surveyed in 2022, located in 36 settlements, and levels above the permissible norms were measured in 514 points. The cities with the highest exceeding noise limits in 2022 are Sofia (stolitsa), Plovdiv, Veliko Tarnovo, Kyustendil, Stara Zagora and others.

In 47.08% of the points are measured levels above the limit value, they are located in territories and zones subject to enhanced noise protection.

In recent years has been observe an increase in the number of measured points with noise levels in the lowest range, below 58 dB(A). A quarter of the controlled areas fall here.

Figure 8. Surveyed points of noise registration

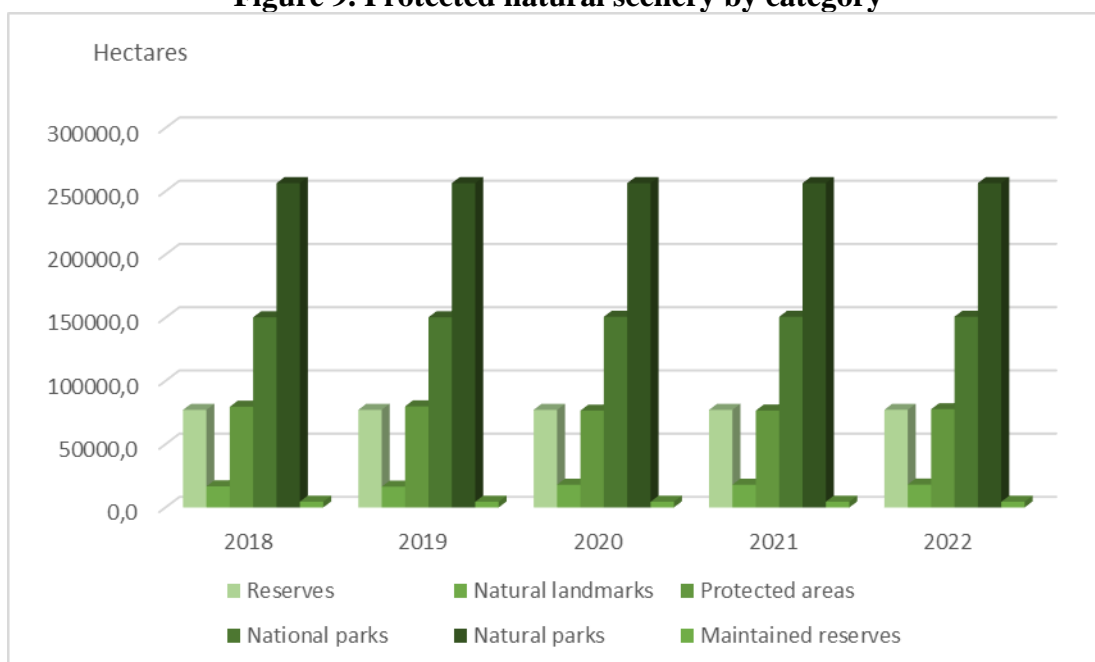


9. PROTECTED NATURAL SCENERY

In 2022, the area of protected natural scenery in Bulgaria amounts to 584 836 ha or 5.3% of the country's territory and compared to 2021, an increase by 1 210 ha is registered. At the end of 2022, in Bulgaria 1 039 protected natural areas exist. The biggest relative share are natural parks - 43.8% (11), followed by national parks - 25.8% (3), reserves - 13.2% (55), protected areas - 13.3% (583), natural landmarks - 3.1% (352). The smallest share is of maintained reserves - 0.8% (35).

The protected plant species of Bulgarian flora in 2022 are 574, and protected animal species - 483. The number of protected venerable trees in 2022 amounts to 1 390, which is by 29 more in comparison with the previous year.

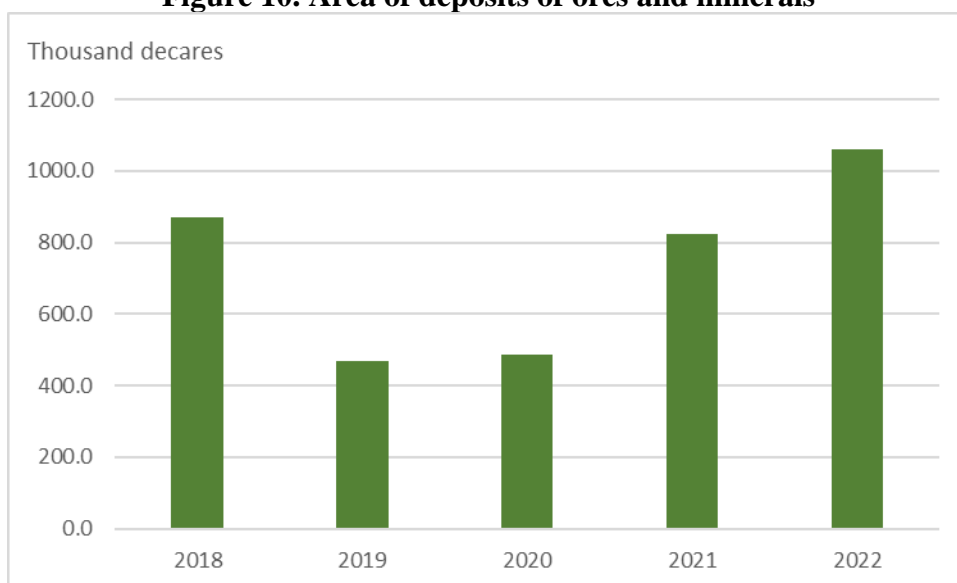
Figure 9. Protected natural scenery by category



10. UNDERGROUND RESERVOIRS

In 2022, the area of deposits for underground reserves increased by 29% and is total 1056 thousand decares. The number of people employed in underground mining sites increased by 1.56% and amounted to 15232 people. The proven reserves of brown coal decreased by 3.94% - 9249.6 thousand tons compared to 2021. Probable reserves of lead-zinc ores have registered an increase of 7.95% compared to the previous year, 5866.3 thousand tons. The production of copper ores increased by 15.44%, and amounting to 34671.6 thousand tons.

Figure 10. Area of deposits of ores and minerals





METHODOLOGICAL NOTES

1. EMISSIONS IN THE ATMOSPHERE

Data on the emissions of harmful substances into the atmosphere are provided through a specialized statistical study, in combination with administrative data from the Executive Agency for the Environment.

The statistical survey covers enterprises from all economic sectors related to the formation of emissions, and an integral part of whose activity are energy production processes (covered by consumed fuels) and processes in the production of other production (covered by consumed raw materials and materials, manufactured products etc.).

2. WATER STATISTICS

Source of data are the annual statistical studies that include surveys:

- Survey on water services, sewage and wastewater treatment - exhaustive. Data are collected from public water supply companies (PWS partnerships), providers of water through irrigation systems and operators of urban wastewater treatment plants.

- Water use - partial statistical survey focused on the larger water users. Criterion for coverage is the usage by enterprises of more than 36 thousand m³ of water annually for their activity. Enterprises below this criterion submit data on a voluntary basis. The survey of enterprises for hydroelectricity generation is exhaustive.

Water statistics focus on the quantitative aspects of water use, water supply, the use of water resources by the economy and households, treatment and discharge of wastewater back into water bodies.

3. WASTE FROM ECONOMIC ACTIVITY

Data on waste from economic activity is provided through a specialized statistical survey covering all economic sectors, combined with administrative data from the Environmental Executive Agency.

‘Waste’ is a substance, object or part of an object that the holder disposes of or intends to dispose of or is required to dispose of and falls into at least one of the categories listed in the Waste Management Act. Waste from own activity, recovered at the place of their generation, is not included in the amount of generated waste.

‘Hazardous waste’ is the waste whose composition, quantity and properties create a risk for human health and the environment, possess one or more properties that define it as dangerous, and/or contain components that make it dangerous and/or are defined as such according to the Basel Convention on the Control of the Transboundary Movement of Hazardous Wastes and their Disposal.

The data on indicators and definitions of waste from economic activity correspond to the Law on Waste Management.

4. MUNICIPAL WASTE

The household waste information is provided by a specialized statistical survey, covering exhaustively the municipal administrations in combination with administrative data (ExEA). Data on waste generated by households not covered by organized waste collection systems is a result of statistical assessment.





‘Municipal waste’ are waste, mainly produced by households as well as similar waste from administrative buildings, commercial sites, schools and other public places.

The data for the indicators and definitions of household waste comply with the Waste Management Act.

5. PACKAGES PLACED ON THE MARKET

Data on packages placed on the market is provided through a combination of comprehensive statistical survey and statistical evaluation. The scope of the monitoring includes all members of packaging waste recovery organizations and other enterprises related to the production/use/marketing of packaging.

Business entities that produce and import packaged goods are investigated; carry out packaging of goods for a fee; package goods for own sale; produce disposable packaging and utensils.

‘Packaging’ means all products made of material of any nature used to contain, store, transport, deliver and present goods - from raw materials to processed goods - from the producer to the user or consumer. Items that are ‘non-returnable’ and used for the same purposes are also considered packaging.

The abbreviation and code identifying the material from which a given package is made are in accordance with Annex 2 of the Ordinance on packaging and packaging waste.

6. TANGIBLE FIXED ASSETS WITH ECOLOGICAL USE

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

The tangible fixed assets with ecological use include (1) facilities, installations and equipment necessary for environmental protection allocated by environmental domains (wastewater, air protection, soil, surface and groundwater, transportation and disposal of waste, noise abatement) and (2) monitoring and control equipment.

Tangible fixed assets (TFA) with ecological use do not include equipment for preserving air purity, and noise and vibration reduction in the working premises, i.e. labor protection.

7. REVENUE FROM TAXES AND FEES AND EXPENDITURE FOR MUNICIPAL WASTE TOTAL FOR THE COUNTRY

The data on the total revenues from taxes and fees and incurred expenses for municipal waste in general for the country are provided through an exhaustively specialized statistical survey covering the municipal administrations.

The total revenues from taxes and fees and expenses incurred for municipal waste are according to the Law on Accounting, the National Chart of Accounts and the Law on Local Taxes and Fees.

8. RECORDED NOISE LEVELS

The recorded noise level information is provided by a comprehensive research with an administrative data source, the National Center for Public Health and Analysis.

The Noise levels are observed in different territories and development zones in and outside urban areas.

9. PROTECTED NATURAL SCENERY

Information on protected natural scenery is provided through a comprehensive statistical study with the administrative source of the data - the Ministry of Environment and Water. Protected areas in Bulgaria





is a generalized concept covering all parks, reserves, landmarks and protected areas. Many such territories have been declared in Bulgaria over the years.

Due to difficulties related to formation of the administrative-territorial borders within the country data are presented at national level only.

10. UNDERGROUND RESERVOIRS

The source of the data is the comprehensive statistical survey covering the economic entities that have been granted concessions for the extraction of underground resources and those that have reported income from the extractive industry for the previous reporting year.

Data are provided on the reserves and resources of underground natural resources, which are mineral accumulations in the earth's bowels or on the earth's surface with a certain geological study and economic interest.

