# "UNDERGROUND RESERVES" STATISTICAL SURVEY METHODOLOGY

The statistical survey is conducted annually by the Environmental and Energy Accounts Department, Macroeconomic Statistics Directorate, of the National Statistical Institute, on the basis of mandatory participation, according to the National Statistical Program.

According to Art. 20 of the Statistics Act, respondents are obliged to provide the National Statistical Institute with reliable data on surveys included in the National Statistical Program, which are intended to be conducted on the basis of mandatory participation.

According to Art. 25, para. 1 of the Statistics Act, individual data obtained and collected during statistical surveys are confidential and can only be used for statistical purposes.

#### GENERAL INFORMATION

# **OBJECTIVE**

The main purpose of the statistical survey is to provide information to all stakeholders and the public about data on reserves, production and economic indicators related to the exploitation of underground reserves.

### **ESSENCE**

The statistical survey "Underground reserves" was created to meet the needs of statistical data. Information is collected on the quantity of proven and probable reserves and resources, production and adjustments in reserves, metal content of metal ores, cost of reserves, production and adjustments in reserves, revenues, expenditures and tangible fixed assets related to the production.

## **PURPOSE**

The data serve to inform stakeholders and the public about data on reserves, production and economic indicators related to the exploitation of underground reserves.

The data are published annually, according to the Release Calendar, on the NSI website for public information. They are also provided to various institutions or organizations in the country for evaluations and analyses.

## STATISTICAL SURVEY

# SCOPE, STATISTICAL UNIT AND GENERAL POPULATION

The statistical survey covers enterprises that have been granted concessions for the extraction of underground resources and those that reported revenue from the mining industry for the previous reporting year.

The statistical unit is an enterprise, extracting underground resources.

The general population is consists of active statistical units (enterprises) that have been granted concessions for the extraction of underground resources, and those that reported revenue from the mining industry for the previous reporting year.

The statistical survey is comprehensive.

## **DATA SOURCES**

- Statistical research "Underground reserves".

Information from other statistical surveys (business statistics) is also used to define the population, verify the data and perform estimation.

FREQUENCY OF DATA COLLECTION AND PUBLICATION Annually.

# STATISTICAL STUDY

The statistical population consists of statistical units - enterprises included in the Statistical Business Register (SBR), whose economic activity (according to the NACE rev.2) is generally related to:

- Granted concessions for the extraction of underground resources;
- Reported revenues from mining industry for the previous reporting year

The population is updated annually before the start of the Campaign.

# **DATA COLLECTION**

Primary data are collected from respondents for the previous reporting year. The data are collected via Environmental Statistics Information System (ESIS), which includes automatic checks for completeness, valid values, and logical data control, according to the specifics of the survey. The nomenclatures used for its needs and instructions for the respondents are available in the system.

# PRIMARY DATA PROCESSING, DATABASE PREPARATION

## PRIMARY DATA PROCESSING

After the respondents have reported their data in ESIS, their processing begins. It is carried out in the system according to the survey program schedule and goes through several stages.

Data validation is carried out on the basis of clearly defined criteria regarding their completeness, correct classification, units of measure, comparability with previous years, logical control, etc.

All checks are done at the respondent level.

# DATABASE PREPARATION

After finalising the process of removing all identified errors and discrepancies in the data, actions on classifying and coding the data related to the statistical units or collected variables are also taken. The purpose of these encoding procedures is to obtain derived variables, numerical values, or aggregate values during the next processing stages. The coding process is carried out using code tables. When new versions of the used classifications and nomenclatures appear, recoding and reclassification of statistical units and variables is carried out.

After completing these actions, the methodologists prepare the primary database for further processing and calculation the statistical data.

## CALCULATION AND ANALYSIS OF STATISTICAL INDICATORS

## **DATA PREPARATION**

Data preparation is a set of processes through which the primary data are brought into a form suitable for the statistical data calculation, analysis and assessment of their quality and the subsequent presentation to users, incl. fulfillment of reporting obligations to Eurostat, according to the specified table formats.

## ASSESSMENT OF PRIMARY DATA RESPONSE RATE

Reports from all survey respondents should be collected within the Campaign. In case a 100% response rate is not achieved, the need for an estimates of the missing data is assessed and, if necessary, carried out.

# STATISTICAL DATA CALCULATION

The statistical data are calculated on the basis of the primary data collected through the survey and are aggregated according to the following indicators:

- Proven, probable reserves and resources by type (total for the country);
- Area of deposits of underground reserves (by economic activity);
- Extraction of underground resources in physical terms;
- Period of depletion on the reserves (by type of reserve);
- Number of employed persons in the deposits for extraction of underground reserves (by economic activity).

Specialised software – Excel, SPSS and/or R – is used to calculate the data.

# **CONFIDENTIALITY**

According to Regulation (EC) No. 223/2009 on European statistics and Statistics Act, the individual (primary) data of enterprises are confidential. In order to ensure their protection and the impossibility of being identified, the aggregated indicators are defined as confidential also when:

- Criterion A the indicator is formed by one or two enterprises;
- Criterion B one enterprise dominates the value of the indicator with a share equal to or greater than 85%.

## **QUALITY ASSURANCE**

The statistical survey follows the General model of the statistical production process in NSI. The quality ssurance is carried out in order to guarantee compliance with the requirements of the Statistics Act. Data quality is ensured by the application of the European Statistics Code of Practice principles and NSS Common Framework for Quality Management

To ensure the high quality of the data, their consistency with the data on industrial production (Nomenclature of industrial production - PRODPROM) is checked.

Efforts are being made to continuously improve the quality of the data, by improving the primary data collection system through the online-based ESIS, ensuring strict arithmetic and logical control of the input data, and by performing additional analyzes and verifications.

Quality report and metadata are also published on the NSI website together with the statistical data. They are updated annually and contain additional information related to the survey.

# STATISTICAL PRESENTATION

The statistical data on underground reserves are presented by:

- Proven, probable reserves and resources by type total for the country;
- Area of deposits of underground resources by economic activity;
- Mining of underground resources in physical terms;
- Estimation of the period of depletion on the reserves by type of reserve;
- Employed in the deposits for extraction of underground reserves by economic activity.

The data are published on the NSI website in the "Statistical data - Environment" section, as well as in the Infostat system. The data are used for the preparation of NSI publications Statistical Yearbook, Statistical Reference Book, brochure "Bulgaria", specialised electronic publication "Environment", as well as for providing information upon users' request.