

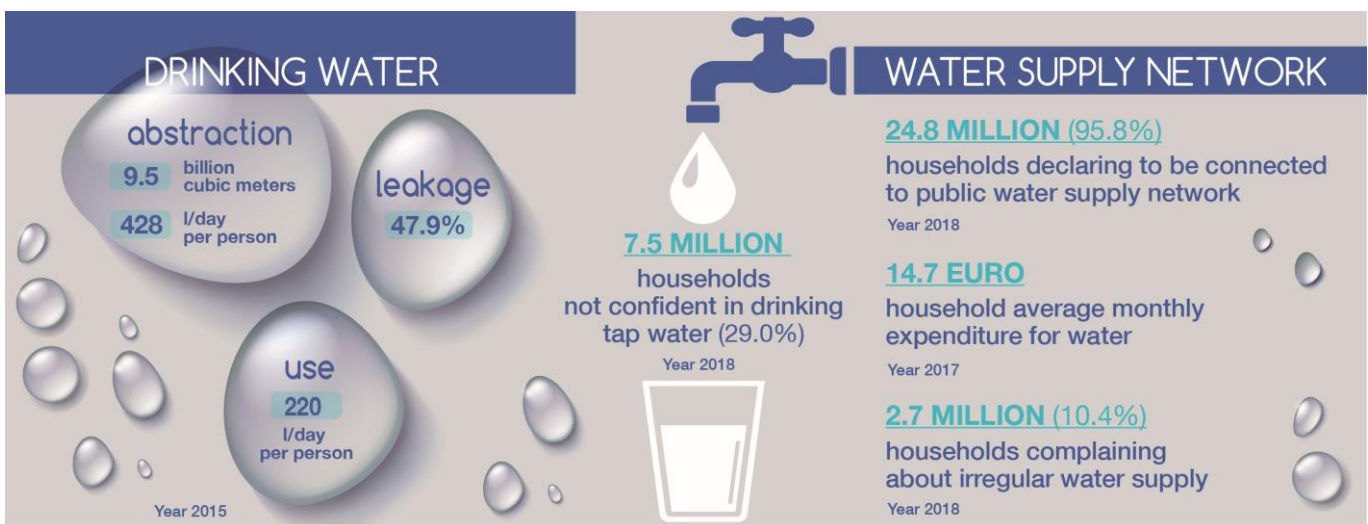
ISTAT WATER STATISTICS | Years 2015-2018

Italy ranks first in the EU for water abstraction for public water supply: 428 litres per person per day

In 2015, just under half the water abstracted from sources (47.9%) did not reach end users, due to **leakages** in supply system.

In 2017, **rationing measures** in the public water supply were adopted in 11 provincial or metropolitan capital cities, mostly in the South and Islands area.

In 2017 marine-coastal bathing waters of **poor quality** were just **0.8% of the monitored coast**. Urban wastewater discharges were the main cause of bathing bans.



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Water and services provided are at the basis of economic growth, people's wellbeing and environmental sustainability. Constant and timely monitoring and interventions are essential to develop adequate resource management strategies, as promoted in the 17 UN Sustainable Development Goals (SDGs), in particular Goals 6 ("Ensure access to water and sanitation for all") and 14 ("Conserve and sustainably use the oceans, seas and marine resources").

On the occasion of the World Water Day, established by the United Nations and celebrated on 22 March, Istat provides an annual focus that, through a multi-source approach, presents the results of its several surveys and elaborations, thus offering an integrated reading of the phenomenon with reference to the aspects linked both to the territory and to the population.

Italy ranks first in the EU for water abstraction for public water supply

In 2015, the total volume of water abstracted for public water supply on the Italian territory amounted to 9.49 billion cubic meters, 428 litres per person per day. It is the highest value in the European Union. However, just under half the water abstracted from sources (47.9%) did not reach end users, due to leakages in the supply system.

Daily water supply was of 220 litres per person, 21 litres less than in 2012.

Medium-high level of satisfaction with water services for 8 out of 10 households

In 2018, 24.8 million households (95.8% of the total) claimed to be connected to public water supply network, with the highest percentage in the North-east and the minimum in the Islands.

4.2% of households declared, instead, to use water from self and other supply, different from the public one.

84.6% of households connected to public water supply declared themselves very or fairly satisfied with water services in their houses (21.3% and 63.3%, respectively) (Figure 1).

In the North the highest levels of satisfaction with water supply in houses

83.1% of households declared to be very or fairly satisfied with the water pressure level.

Regarding the smell, taste and clarity of water, 72.3% of households declared high levels of satisfaction.

Regarding the absence of interruptions to water supply, 87.4% declared to be very or fairly satisfied.

On the meter reading frequency, seven out of ten households claimed to be very or fairly satisfied.

WATER: KEY NUMBERS

YEARS	Households claiming irregularities in water supply in their houses	Household average monthly expenditure for water services	Household average monthly expenditure for mineral water	Households not trusting to drink tap water	Irrigated area on utilised agricultural area	Natural mineral water withdrawals	Marine-coastal bathing waters of excellent quality
2016	9.4%	13.59 euro	10.75 euro	29.9%	20.3%	16.2 million m ³	94.4%
2017	10.1%	14.69 euro	11.94 euro	29.1%	–	–	93.1%
2018	10.4%	–	–	29.0%	–	–	–

Regarding water billing frequency, 78.2% of households was very or fairly satisfied.

The level of households' satisfaction generally lowered when it came to comprehensibility of water bills: only six in ten households (61.2%) claimed to be very or fairly satisfied.

At the regional level, households living in Northern regions showed, in general, the highest levels of satisfaction, which declined in other geographical areas, reaching the minimum in the Islands.

Households still complained about irregularities in water supply in their houses

In 2018 one in ten households (10.4%) complained about irregular water supply in their houses, a percentage which remained stable compared to 2017.

This problem affected at different levels the whole of the Italian territory, involving 2.7 million households, mostly in the South and Islands.

39.2% of households complaining about irregularities declared that they occurred throughout the year, in 33.8% of cases in summer period, and just sporadically in the remaining 22.0%.

With regard to water bill expenditure, 49.0% of households assumed that it was adequate; while 43.1% of households, mostly in the Southern regions, considered it high.

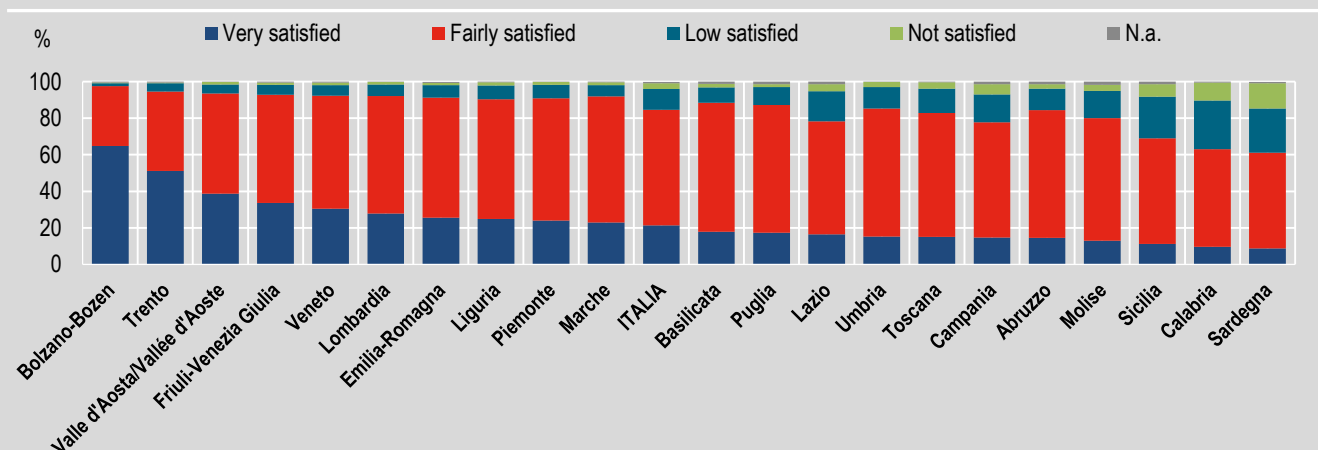
Still low confidence in drinking tap water

Almost one in three households do not trust to drink tap water, despite the gradual and fluctuating improvement over the last fifteen years: from 40.1% in 2002 to 29.0% in 2018 (it was 29.1% in 2017). This distrust is shared by 7.5 million households and shows a marked regional variability, with the highest values in the South and Islands.

Increasing household monthly expenditure on mineral water and water services

In 2017, in 63.0% of households at least one member used to drink more than one litre of mineral water a day. Considering all Italian households, the average monthly expenditure on mineral water consumption was 11.94 Euro, +11.1% compared to 2016. For water supply in the home, each household spent on average 14.69 Euro (13.59 Euro in 2016).

FIGURE 1. HOUSEHOLDS CONNECTED TO PUBLIC WATER SUPPLY BY LEVEL OF SATISFACTION WITH WATER SERVICES BY REGION. Year 2018, percentage composition



Source: Istat, Survey "Aspects of daily life"

Slight improvement in water rationing in provincial capitals in the South and Islands

Water rationing measures in public water supply were adopted in 2017 in 11 provincial or metropolitan capital cities, mostly in the South and Islands, with the exception of Latina. The situation was generally slightly better than in 2016.

Irrigation on a fifth of the utilised agricultural area in Italian farms

The agricultural sector is the largest user of water: irrigation accounts for more than 50% of total water use in Italy.

The irrigated area can vary considerably, from year to year and across the territory, due to meteorological conditions or the choice of crop. In the 2015-2016 agricultural year, irrigation was practised by 42.9% of farms; almost 491 thousand agricultural holdings irrigated an area of 2,553 thousand hectares.

Compared to 1982, if on the one hand the irrigated area showed a slight increase by 1.7%, on the other hand the number of farms which practiced irrigation reduced by 20.9%. The cause was probably the increase in the average size of holdings.

The irrigation trend, given by the share of irrigated areas in utilised agricultural area, was equal to 20.3% in 2016.

Higher irrigation trend in the Mediterranean EU countries

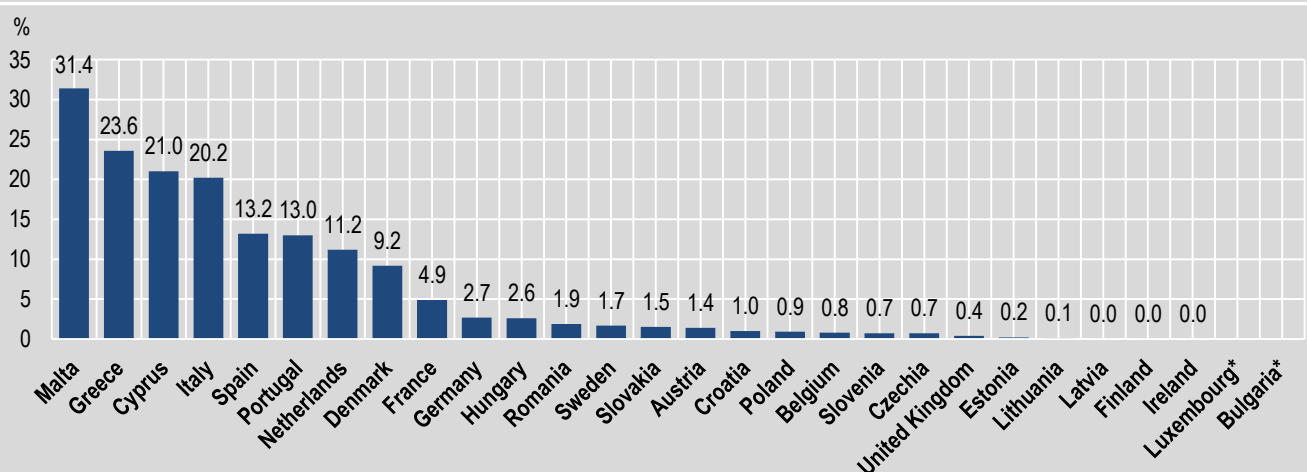
At the European level, the spread and importance of irrigation practices are significantly greater in Southern Member States, particularly in the Mediterranean area (Figure 2).

In 2016, the irrigation trend in EU countries varies from zero to over 30%. Malta (31.4%), Greece (23.6%), Cyprus (21.0%) and Italy (20.3%) are the countries with the highest values. Here, in fact, more than 20% of the utilised agricultural area was subject to irrigation.

In 2016, 18.6% of the irrigated area in Italy was cultivated with grain maize; followed by herbaceous plants and other alternate forage crops (17.3%), fruits and citrus fruits (12.0%) and outdoor vegetable crops (9.6%).

FIGURE 2. IRRIGATED AREA IN THE EU28 COUNTRIES

Year 2016 or last available year, percentage on total utilised agricultural area



Source: Istat elaborations on Eurostat data. * Luxembourg referred to 2007; Bulgaria not available.

Not all crops required complete irrigation. The amount of water used for irrigation depends, in general, on various factors, such as climate, weather conditions, type of crop, soil characteristics, water quality, cultivation practices and selected irrigation techniques. Rice was the only type of cultivation requiring a fully irrigated surface; a substantial water supply was also necessary for outdoor vegetable crops, grain maize (over 70% of the cultivated area) and for fruit and citrus fruits (60%). On the other hand, permanent meadows and pastures, cereals for the production of grain (with the exception of rice and maize) and industrial crops were less water-demanding.

Over two thirds of the Italian coastline subject to bathing water monitoring

In 2017 over two thirds (67.8%) of the Italian coastline (over 9,000 km in total) were monitored to evaluate the quality of bathing water set out by the EU Bathing Water Directive; the remaining 32.2% was subjected to permanent bathing prohibition as located in areas reserved for specific activities excluding bathing, or presenting safety risks due to hygienic-sanitary reasons.

93.1% of marine-coastal bathing waters of excellent quality

In 2017, bathing waters of excellent quality were 93.1% of the monitored Italian coastline. This value, despite the constant increase in recent years, recorded a slight decrease compared to the previous year. Puglia and Friuli-Venezia Giulia are the regions with the highest share of water with excellent quality (99.8% and 99.3%).

Urban wastewater discharges primary cause of bathing bans

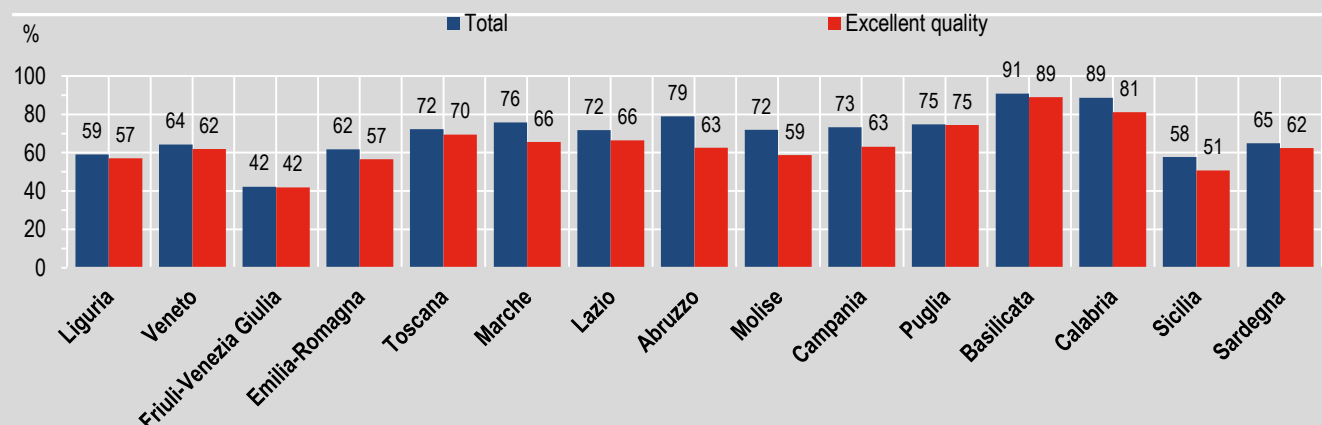
In 2017, marine-coastal bathing waters of 'poor' water quality were 0.8% of the total length of the monitored areas, on the decrease compared to previous years. This figure represented an excellent result for Italy, considering both the high proportion of bathing waters present in Italy (about a quarter of the European total) and the growing human activities on coasts, increasing their exposure to pollution.

Taking into account waters temporarily banned for the entire bathing season, due to contaminants levels beyond the health risk thresholds, the indicator of bathing coastlines was calculated as the ratio of the length of the bathing coast on the total length of the coastal line: 66.9% of Italian coasts was bathing, therefore 0.9% of the monitored coast was never opened during the entire 2017 bathing season (Figure 3).

At the regional level, in Sicilia, Campania and Calabria, more than 2% of the monitored coastline was banned to swimmers, especially due to the presence of urban wastewater discharges causing serious pollution.

FIGURE 3. LENGTH OF MARINE BATHING WATERS BY COASTAL REGION.

Year 2017, percentage values on the total length of coastline



Source: Istat elaborations on data from Ministry of Health and European Environment Agency

Natural mineral water withdrawals especially in Northern regions

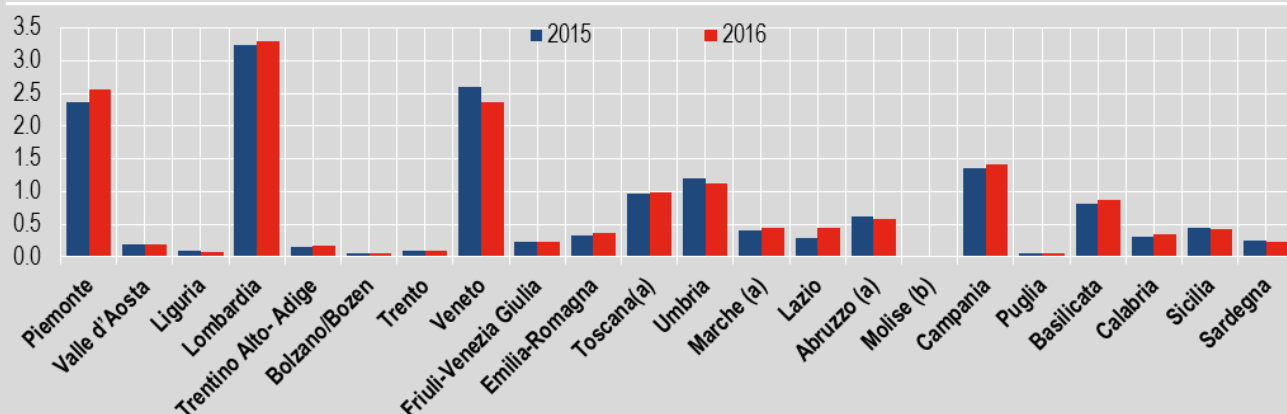
In 2016, natural mineral water withdrawals used for production purposes amounted to 16.2 million cubic meters (+1.2% compared with 2015). Lombardia (3.3 million cubic meters), Piemonte (2.5) and Veneto (2.4) were the most involved regions; 57% of the total amount came from the North area (Figure 4).

In the North-west, Centre and South withdrawals increased compared to 2015 (+3.9% in the North-west, +4.2% in the Centre, +2.7% in the South), whereas in the North-east and in the Islands withdrawals decreased (-6.2% and -4.6%, respectively).

124 companies operated in licensed extraction sites (42.7% in the North and 30.6% in the Centre).

The "Extraction Intensity" (EI) indicator (ratio between the quantities extracted and the related land area) measured a mean value of 54 cubic meters of mineral water per square km at national level, with the maximum in North-west (106 cubic meters per square km).

FIGURE 4. WITHDRAWALS OF NATURAL MINERAL WATER USED FOR PRODUCTION PURPOSES BY REGION.
Years 2015 and 2016, values in million of cubic meters



Source: Istat, Anthropic Pressure and Natural Risks. Mining and Quarrying extraction activities

(a) Istat calculation on data provided by the Ministry of Economic Affairs and Finance (MEF-DT): Toscana (2015-2016), Marche and Abruzzo (2015). (b) data not available

Methodological notes

Water abstraction and use in public water supply

Since 1951 Istat has periodically collected information on water resources for domestic use with the Urban water census, aiming to describe the state of urban water services in Italy. The respondent units are all management companies operating in Italy in the urban water services.

The survey contents have been progressively updated by considering both the European directives on Water resources and the increasing request of information from public institutions and private stakeholders.

In the 2015 edition a web questionnaire with a customized compilation has been developed through an in-house software. This type of data-capture has limited the statistical burden on the respondents and provided a higher quality of data gathered.

The web questionnaire has been structured in five sections: (i) water abstraction for each sampling point managed, (ii) water transmission and water exchanges among management companies, (iii) public water supply network, (iv) public sewerage and (v) urban wastewater treatment plants.

For further information:

<https://www.istat.it/en/archivio/207505>

Evaluations and opinions of citizens towards water services

The sample survey "Aspects of daily life" is a part of an integrated system of social surveys - The Multipurpose Surveys on Households - and it collects fundamental information on individual and household daily life. From 1993 to 2003 the survey was conducted annually, with data collected during the month of November. In 2004 the survey did not take place and, starting from 2005, it was run every year in February. The survey, included in the National Statistic Programme, provides information on the citizens' habits and the problems they face in everyday life. In the questionnaires, thematic areas are on different social aspects permitting to realize which is the quality of individual life, the degree of satisfaction of their conditions, their economic situation, the area in which they live, the functioning of all public utility services; all topics useful to study the quality of life. School, work, family and social life, spare time, political and social participation, health, life style, access to the services are all investigated from a point of view in which behaviour objectivity, motivations, opinions contribute to define the social information.

For further information:

<https://www.istat.it/en/archivio/227545>

Household water expenditure

The Household Budget Survey (HBS) aims to measure and analyze expenditure behaviors of households residing in Italy, according to their main social, economic and territorial characteristics. The survey, carried out continuously with CAPI (Computer Assisted Personal Interview) technique on an annual theoretical national sample of about 28,000 households, is based on the harmonized international classification of expenditure voices (Classification of Individual COntsumption by Purpose – Coicop). Since 2014, the new HBS has replaced the old HBS (carried out between 1997 and 2013). The current survey design differs deeply from the previous one: in particular, expenditure reference periods have been enlarged and the most updated ECoicop has been adopted. As a consequence, it has been necessary to reconstruct the time series of the main expenditure aggregates since 1997. Time comparisons between 2014 estimates and previously disseminated estimates can be made only using reconstructed data.

For further information:

<https://www.istat.it/it/archivio/71980>

Water rationing

The survey "Urban environmental data" is carried out annually by Istat in order to collect environmental information relating to the capitals cities of all Italian provinces and metropolitan areas. Present in the National Statistical Program (IST-00907), it aims to provide useful indicators to compose an information framework to support the monitoring of the state of the urban environment and of the activities carried out by the administrations to ensure the good quality of the environment in the cities.

The survey is divided into 7 survey questionnaires: Air, Eco management (which includes water rationing for civil use, previously in the Water module), Energy, Mobility, Waste, Noise and Urban Green.

For further information:

<https://www.istat.it/it/archivio/225505>

Irrigation

Farm structure survey is a sample survey. The sample is composed of 34.485 agricultural holdings drawn from: the register of agricultural holdings. The survey, carried out in compliance with Reg. (EC) No. 1166/2008 of the European Parliament and of the Council, is part of the National Statistical Program with code IST-02346. The survey aims to provide useful elements for monitoring the evolution of the structure of agricultural units among the ten-year censuses.

For further information:

<https://www.istat.it/it/archivio/8366>

Bathing waters

The purpose of Directive 2000/60 is to preserve, protect and improve the quality of the environment and to protect human health.

Istat, thanks to the contribution of Regions and ARPA, has defined and updated a homogeneous coastline on which bathing areas and sample points have been reported. The coastline produced by Istat consists of the external line of the census sections of Italian coastal municipalities, updated with the information received by the Regions, ortophotos of 2011, 2013 and 2014 and the coastline produced by ISPRA. This line indicates a coastal development of the Italian peninsula higher than 9,000 km, including also anthropic infrastructures such as port facilities, erosion barriers, docks, configuration of natural ports. This coastline is used only for statistical purposes.

For further information:

<http://www.eea.europa.eu/publications/european-bathing-water-quality-2015>

<http://www.portaleacque.salute.gov.it/PortaleAcquePubblico/>

Mineral waters

In 2015 the survey "Anthropic Pressure and Natural Risks. Mining and Quarrying extraction activities", included in the National Statistical Program (IST-02559), was carried out for the first time with the aim to analyse extracting mineral resources from quarries and mines at regional level, and also to highlight aspects related to the pressures exerted on the natural environment and in the territory. The second edition was in 2017-2018 and data collected were referred to years 2015 and 2016.

Extending the field of observation, data on mineral and thermal water withdrawals per region were collected for the first time. Extraction of energy-producing minerals is not included in the survey.

The microdata are acquired from the administrative archives of the local public institutions responsible for the extraction of minerals that do not produce energy (also involving the Statistical Offices of the Regions) through the Technical Offices of the sector located in Regions, Provinces, Autonomous Provinces of Trento and Bolzano, Sicily Mining Districts.

For further information:

<https://www.istat.it/en/archivio/226301>

For more details, please refer to the Italian version