



GEOGRAPHY AND ECONOMICS

10TH GRADE

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МИНИСТЕРСТВО НА ОБРАЗОВАНИЕТО И НАУКАТА

НАЦИОНАЛНА ПРОГРАМА

„Разработване на учебни помагала за обучение по общообразователни учебни предмети на чужд език, оценяване и одобряване на проекти на учебни помагала за подпомагане на обучението, организирано в чужбина, на проекти на учебници и на проекти на учебни комплекти“

МОДУЛ

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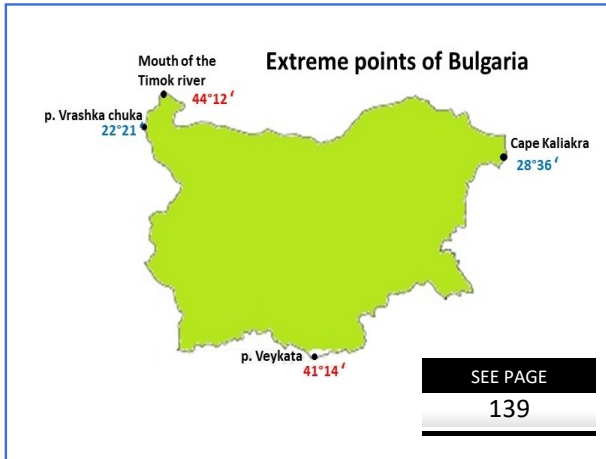
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GEOGRAPHICAL LOCATION AND BORDERS OF BULGARIA

1. GEOGRAPHICAL LOCATION AND TERRITORY OF BULGARIA

Geographical location

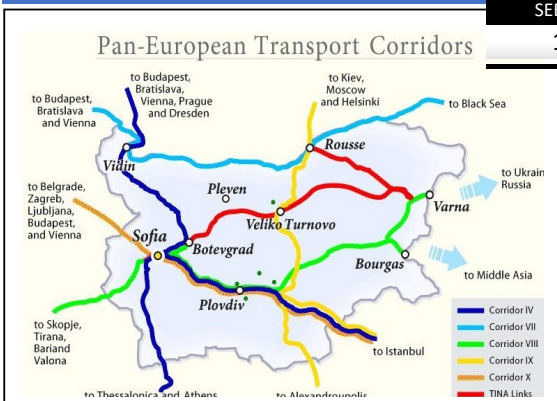


Bulgaria is a Balkan, Black Sea and Danube country located in Southeastern Europe. The outermost points of the country determine the *astronomical* geographical position of Bulgaria. It is perceived as **absolute** as it does not change over time and is defined by **the outermost points of Bulgaria**.

The *natural geographical location*, which is considered to be transitional, remains unchanging, as the territory of the country is crossed by the boundary between temperate and subtropical climate, the floristic and zoogeographical regions in Europe.

The geo-economic location is variable over time and is defined as a **relative** category. Most accurately, it is expressed by the *transport-geographical* and *commercial-geographical* position.

From a logistical point of view, Bulgaria has a cross-road location, as five out of ten **European transport corridors** pass through the territory of the country. The commercial advantages of the geographical position are the access to the Black Sea and the Danube and the fact that the territory of Bulgaria is crossed by the trade route between Europe and Asia. Bulgaria also benefits from its membership in the World Trade Organisation and the European Union.



The *geopolitical* situation has had a big impact on the historical fate of Bulgaria. The proximity to the Bosphorus and Dardanelles straits has predefined the enduring interest of the influential world states in the geographical area occupied by Bulgaria. Because of the geopolitical interests and processes, Bulgaria was a member of the Council for Mutual Economic Assistance and the Warsaw Pact after The Second World War. The change in the geopolitical location at the end of the last century allowed Bulgaria to apply for and gain membership in NATO and the European Union.

Territory of Bulgaria

The San Stefano Treaty (p. 140) is the first document indicating the territorial scope of the newly liberated Bulgarian state. The territory of the country was changed several times as a result of the Berlin Congress (p. 140), the Unification (p. 141), the London Treaty, the Bucharest Treaty (p.141), the Neuilly Treaty (p. 142). With the decisions of these treaties and agreements, Bulgaria lost a number of territories inhabited by ethnic Bulgarians.

Treaty	Treaty of San Stefano	The Congress of Berlin	The Unification of Bulgaria	Treaty of Bucharest	Treaty of Neuilly
Territory sq. km.	170 000	63 000	96 000	113 000	103 000

TRAINING SECTION

1. Read the text and answer the questions:

It will cost about \$30 billion to build the transport corridors of the Western Balkans – these are corridors number 4, 8 and 10. Corridor 8 is particularly important. First of all, it connects the Black Sea with the Adriatic Sea, crossing the territories of Bulgaria, North Macedonia and Albania. It will also connect two Balkan capitals – Sofia and Skopje. Today's Corridor No8 is an ancient Roman road that was brought back to life in 1990 when the question of the construction of an east-west corridor was raised. A corridor doesn't just mean road infrastructure. The corridor includes roads where the speed is at least 100 km/h, a parallel railway line, plus infrastructure for the transmission of electricity, gas and the Internet. Bulgaria has one of the fastest Internet connections and can be a safe Internet provider to neighboring countries. The country has a gas transmission network, but the Balkans are not gasified. The supply of transit natural gas is an opportunity and a challenge for Bulgaria. The countries of the region need electricity and have to import it. Through this corridor the Balkan countries can be supplied with enough electricity.

Source: regioni.bg

- Which countries does corridor № 8 pass through?
- What is the economic importance of the link between the Adriatic Sea and the Black Sea?
- List some economic benefits for Bulgaria from the construction of the corridor.

2. In the jumbled letters, you can find the outermost points of Bulgaria. Unjumble them and write the letter next to the corresponding latitude or longitude.

vepkaykaeta A

sahapeclab B

kacusarhkavh C

hemtuktisomhot' D

41° 14'

22° 21'

44° 12'

28° 36'

3. Look at the map and write down which transport corridor you should choose if:

- you take part in a student exchange in the Netherlands
- you take part in a cruise trip to the following capitals: Belgrade, Budapest and Vienna
- you plan a summer family holiday on Chalkidiki Peninsula
- your dance ensemble has been invited to a festival in St. Petersburg
- you travel to Berat in Albania, which is considered a city of Bulgarian origin.

4. Compare the maps of Bulgaria after the Treaty of San Stefano (p. 140) and Bulgaria after the Treaty of Neully (p. 142). On the second card, write down which territories were lost.



5. Taking into account the peculiarities of the geographical location of Bulgaria, come up with an idea about how the Bulgarian state should invest in order to ensure the diversification of energy supplies and profit from their transit. Explain how the state can guarantee Bulgaria's energy independence by diversification.

.....

.....

.....

.....

2. BORDERS OF BULGARIA

Northern border of Bulgaria



LEGEND



Border crossing point



Bridge

Ruse – Giurgiu
Vidin - Calafat



Ferry

Oryahovo – Beckett
Nikopol – Turnu Magurele
Svishtov – Zimnich
Silistra - Calarash

SEE PAGE

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Northern border. The northern border has river and land sections. It is part of corridor 7 and the Rhine-Main-Danube Canal. It is intersected by corridors 4 and 9. It provides a number of economic opportunities for the development of transport, trade, industry.



Eastern border of Bulgaria

Legend



Border crossing point



Ferry

Varna – Chernomorsk
Varna – Poti/Batumi
Burgas – Novorosiisk
Burgas - Batumi

SEE PAGE

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Eastern border. The eastern border is entirely maritime. It extends into the sea, including 12 miles of territorial waters. It provides great economic potential. The convenient gulfs of Varna and Burgas are the most utilised. Ferries depart from Varna and Burgas to Ukraine, Russia and Georgia. The most developed branches of industry are tourism, trade and transport. Large industrial enterprises have been built in Devnya and Burgas.



Southern border of Bulgaria

Southern border. To the south, Bulgaria borders Greece and Turkey. The border crosses a number of mountains and river valleys. The section bordering with Turkey stretches from the mouth of the River Rezovska to Kapitan Andreevo. The border with Greece, which ends at Mount Tumba in the Belasitsa Mountains, continues to the west. The interstate contacts and economic relations are facilitated by numerous border links. The borders are crossed by power lines and pipelines.



Western border of Bulgaria

Western border. To the west, the border connects Bulgaria with North Macedonia and Serbia. The border follows a series of mountains and ends at the mouth of the Timok River. A relatively large number of interstate connections have been established, but the border is not well utilised. The road between Europe and Asia is of the greatest importance. The international corridor connecting the Adriatic Sea with the Black Sea also holds good perspectives.

TRAINING SECTION

1. There are eight errors in the text. Find them and write the correct facts on the numbered lines provided:

The border with Turkey starts at the mouth of the Veleka River and follows Strandzha, the Derventski Heights and Sakar. It ends at Svilengrad, where the border with Greece begins. To the west, it follows the Rhodope Ridges of Stramni Rid and Gyumurdzinski Snezhnik. To the south of Gotze Delchev Valley, the border is crossed by the Arda River. Then it follows the slopes of South Pirin and reaches the Struma River. It climbs the Belasitsa Mountain and ends at its highest point, Mount Radomir. The total length of the border is 609 kilometers.

1.
2.
3.
4.
5.
6.
7.
8.

2. Using the atlas, describe the natural formations through which the western border of Bulgaria passes (alternative to the first one):

3. Look at the map and insert the letter code for each of the characteristics:



- A ferry connection to the Port of Bechet
- A border crossing point on the way to Thessaloniki and Athens
- It serves the most direct route to Western Europe
- It serves the railway line to Ukraine and Russia ...
- A border crossing point on the oldest bridge over the Danube
- A border link to the Adriatic
- A busy border post on the way to Istanbul

4. Fill in the logical combinations:

	Ruse-Giurgiu Bridge	Danube border		Burgas	Black Sea border
Corridor №10		Western border	Corridor № 9	Makaza	

5. Compare the Danube and the Black Sea borders. Write down four advantages in the table. Draw a justified conclusion as to which of the borders is of greater economic importance.

The Black Sea border	The Danube border

6. The European Parliament recently voted on a resolution on the rapid acceptance of Bulgaria and Romania to the Schengen area. The country's inclusion in the Schengen agreement will affect our borders with Romania and Greece. Present your idea of which industries can accelerate their development after the restrictions on the border with Greece are lifted. Choose those economic activities that will bring the greatest economic benefits to Bulgaria. Justify your choice.

3. RELIEF

Origins of relief

The relief of Bulgaria was formed *following* a long geological history in the interaction of internal and external earth forces. The processes of the Neozoic Era are of the greatest importance for its contemporary appearance.

GEOLOGICAL TIME SCALE

Era	Million years	Period	Events	
Neozoic	1	Quaternary	icing of Rila and Pirin	
	70	tertiary	Neogene	rising of the Danube plain
			Paleogene	Balkan mountain is formed
Mesozoic	70	Cretaceous	shaping of Srednogorie	
	60	Jurassic	dismemberment of the Rhodope massif	
	40	Triassic	begins folding in the Balkanids	
Paleozoic	55	Permian		
	70	Carboniferous		
	60	Devonian		
	30	Silurian		
	60	Ordovician		
	70	Cambrian		
Precambrian	3000		formation of two large blocks – Thracian and Moesian formation of primary earth's crust	

Relief-forming processes

The appearance of contemporary land relief was created under the influence of endogenous and exogenous processes. The first group includes volcanoes, earthquakes and tectonic movements. Their participation in the formation of relief is indicated by the extinguished Kozhuh volcano in the Sandanski-Petrich valley, the periodic strong earthquakes, the constant elevations or sinkings of the Earth's crust in different parts of the country. The exogenous (p. 144) processes are more numerous, and the forms they created are easily distinguishable in contemporary relief.

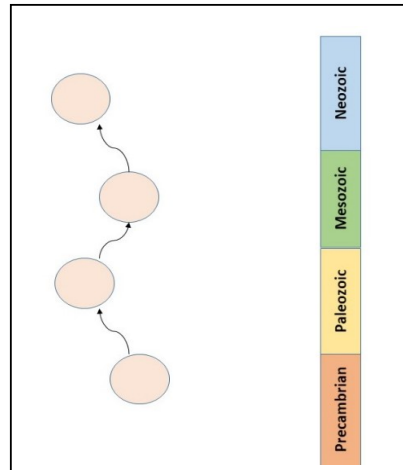
Geomorphological areas

Due to its specific features, the relief of Bulgaria is divided into four geomorphological regions (p. 145). The relief in the Danube plain is the lowest. Low and medium mountainous relief is typical of the Balkan Mountains (Stara Planina) region. The transitional mountain-valley region includes low mountains, vast lowlands, and valleys. The mountainous relief also dominates in the Rila-Rhodopes region.

The transitional mountain-valley region is the largest in scope among the geomorphological regions in the country., which separate the Balkan Mountains range and Sredna Gora, are located in its northernmost part. The highest mountain in the area,, is in the western part and it reaches an altitude of 2290 m. To the south, the region extends to the Rhodope Mountains and the low mountains of,extend to the state border of Bulgaria. The most extensive part of the Transitional area is that of Valley.

2. Arrange the events chronologically by placing the numeric code in the corresponding circle:

- 1. Folding of Sredna Gora
- 2. Exaration of Rila Mountain
- 3. The Rhodope Mountains were formed
- 4. The formation of the Balkan Mountains was completed



3. Place the corresponding location code from the map below the photo. Write the same numeric code next to the process that led to the creation of the form:

Cape Maslen	Dunes	Big Kazan	Iskar Gorge	The Magura Cave	Stobski Pyramids



- Formed by exaration
- Shaped by weathering.....
- Formed by abrasion.....
- Carved by karst processes.....
- Cut by erosion
- Accumulated by deflation

4. Fill in the table by writing four natural landmarks formed through the specified processes.

<i>Erosion</i>	<i>Exaration</i>	<i>Karst</i>	<i>Weathering</i>

5. Compare the Balkan Mountains (A) and the Rila-Rhodopes (B) geomorphological areas. For each of the characteristics, insert a letter from the brackets.

<i>Built mostly of sedimentary rocks</i>	
<i>Composed of multiple folds</i>	
<i>The relief was transformed by glacial activity</i>	
<i>Formed on the Balkanids</i>	
<i>Broken by faults</i>	
<i>Higher altitude</i>	

6. Krushuna waterfalls are among the most beautiful waterfalls in the country. They are visited by many tourists. Unfortunately, a few years ago, a collapsed section of the rocks caused the deaths of some visitors. What should the local authority do to preserve the interest in the waterfalls and the livelihoods of the local population, but also to ensure the safety of tourists?

.....

.....

4. ENERGY AND MINERAL RESOURCES

Energy and mineral resources are essential for the development of the economy. They are important natural resources possessing various qualities and are found in different quantities. They have formed in the depths of the Earth as a result of geological processes. In Bulgaria, deposits of depleted non-renewable raw materials (fossil fuels, metallic and non-metallic resources) have been found, but they are in small quantities and of low quality.

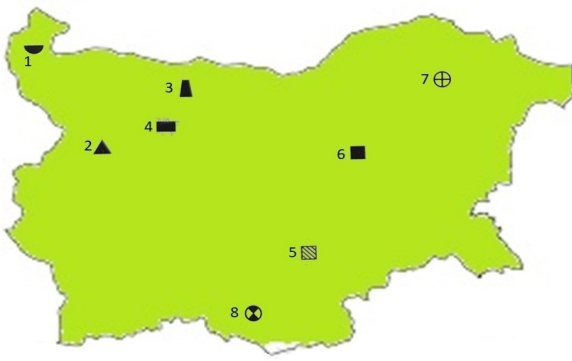
Coal is of the greatest importance to Bulgaria's economy of all the fossil fuels (p. 145). Coal is the main energy source of the country. Different types of coal are characterised by a certain calorific value, moisture, and ash content. Bulgaria's major reserves are of lignite coal, but they are of the lowest quality. Brown coal has a higher calorific value, but the deposits are limited. There are deposits of black coal in the central part of The Balkan Mountains and Dobrudzha. Anthracite coal is the most calorific but with the smallest reserves in the country.

The reserves of **oil** near Dolni Dabnik and **natural gas** near Devetaki are limited, which necessitates their imports. Deposits in the shelf area of the Black Sea have also been discovered.

Metallic resources (p. 146) are an important prerequisite for the development of metallurgy. They are divided into ferrous metals (iron, manganese, chromium ores) and non-ferrous metal ores (copper, lead-zinc ores, etc.). Iron ores are of low quality and have limited deposits. The deposits of manganese ores in Bulgaria are larger, but those of chromium ores are negligible. Copper ore deposits are concentrated in the Balkan Mountains, Sredna Gora and Burgas, and lead-zinc ores in the Rhodope Mountains (about 60%) and Osogovska Mountain. Gold is mined near Chelopech, Tran, and in the Rhodope Mountains.

Bulgaria is characterised by a wide variety (about 60 types) of **non-metallic resources**. The deposits of the greatest significance are those of gypsum, kaolin, rock salt, limestone, marble – in Pirin, the Rhodope Mountains, Strandzha, etc.

The extraction of metallic and non-metallic resources affects the natural environment in a negative way through air, soil, and water pollution. This requires land reclamation of the disturbed terrains.

	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 8.
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2. Read and answer the questions:

In Bulgaria, there are deposits of copper ores in Etropole, in the regions of Panagyurishte, Burgas and Vratsa. They have a low metal content (about 0.5% to 2%). Their main deposits are located in the Balkan Mountains – Elatsite, next to Etropole; Plakalnitsa mine (Vratsa region) and in Chiprovtsi; in the Srednogorie region – Medet, Assarel, Radka mine, Tsar Asen deposit. Smaller quantities of copper ore have been mined in the region of Burgas – Rosen, Varli Bryag, Meden Rid, Malko Tarnovo. The main resources of copper ore and concentrate are within a 30 km radius from Pirdop. In this region, more than 27 million tonnes of ore are mined annually. The mining of ore began in 1964. Elatsite Mine is one of the largest open-air mines in Bulgaria and the largest local producer of copper-gold concentrate. Ore mining began in 1983 and the mine is scheduled for operation by 2021.


National mining strategy, 2016

- A. What is the quality of Bulgarian ores?.....
- B. Which Bulgarian city has become the centre of a copper mining district?.....
- C. During which year and from which deposit did copper production begin?.....

3. Write at least two applications of the raw materials in the following table:

Type	Applications
Kaolin	
Copper ore	
Natural gas	
Gypsum	
Lead and zink	

4. Using your knowledge about minerals and raw materials, explain the location of these large plants.

 <p>Pirdop, copper</p> <p>Plovdiv, lead and zinc</p> <p>Radnevo, thermoelectric energy</p> <p>Isperih, faience</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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5. The green project is an ambitious EC project aimed at ending carbon emissions in the union countries by the middle of the century. This project will have an extremely strong impact on coal mining in Bulgaria. More than 13,000 people are employed in the two largest coal districts, Maritsa Iztok and Bobov dol. Closing the deal means losing their jobs. Make a suggestion about the actions and measures the country needs to take in order to strike a balance between the EU requirements and people's jobs.

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5. CLIMATE

The climate is an important component of the natural environment, and a major resource for the development of certain economic sectors such as agriculture, transport, tourism and others.

Climate formation depends on a number of factors. The **geographical location** determines the amount of solar radiation and atmospheric circulation. The climate of Bulgaria is determined by **air masses** of temperate latitudes (oceanic and continental), as well as tropical and Arctic air masses. The Icelandic minimum and the Azores maximum influence the climate all year round, while the Mediterranean cyclones and the Eastern European anticyclones have a seasonal effect.

The **high mountains** are barriers and change or stop the movement of air masses. As the altitude increases, the climatic elements change. The influence of the Black Sea is limited over a narrow strip along the coast. The **anthropogenic activity** has a significant impact on the climate and causes environmental problems.

Climate factors in Bulgaria

Factor	How the factor influences climate:
Geographical location	Transitional location between temperate and subtropical climate near The Black Sea, The Mediterranean Sea
Solar radiation	Sunshine duration – theoretically 4500 hours, practically 2000 hours in the mountains and 2500 hours in the low southern regions
Relief	The Balkan Mountains and the Rila-Rhodopes Massif stop the air masses from the north and south, the mountains affect temperatures and rainfall
Atmospheric circulation	The climate is determined by temperate air masses all year-round – Arctic masses in winter, tropical masses in summer The Icelandic and Mediterranean cyclones determine the rainfall maximums in summer and winter The Azores and Eastern European anticyclones bring dry weather
Human activity	The atmospheric pollution leads to an increase in temperatures

Climatic elements

Air temperature

The maximum temperature is in July, and the minimum in January. The average annual air temperature (p. 146) in Bulgaria is 10.5°C. The lowest average annual temperature in the country was measured at Musala Peak (-3°C) and the highest – in the region of Sandanski (13.9°C). Temperature inversions are common in winter in closed hollows. Under these conditions, in 1947, the lowest temperature in Bulgaria (-38.3°C) was measured in Tran. In 1916 the absolute maximum for the country of 45,2 °C was recorded in Sadovo.

Precipitation

The distribution of precipitation depends on the geographical location, seasons and relief. The average amount of precipitation (p. 147) in Bulgaria is about 670 mm, and in the high mountains it is over 1000 mm. In most of the country, the maximum rainfall is in May-June, and the minimum is in February. The southernmost parts of the country are characterised by a winter maximum (November-December) and a summer minimum (August).

Winds

The prevailing winds blow from the west and northwest, and those along the Black Sea coast and Dobrudzha – from the northeast. Their average annual speed is 1-2 m/s, with a maximum of 10 m/s in the high mountains. The typical local winds are the breezes along the Black Sea coast, the foehn, bora winds, mountain-valley winds.

The territory of Bulgaria is divided into five climatic areas (p. 148) – temperate continental, transitional continental, continental-Mediterranean, Black Sea, and mountainous.

TRAINING SECTION

1. Read the text and answer the questions:

Fogs, hail, frost, swirlstorms, sleet, etc. are defined as special or dangerous atmospheric phenomena.

Fogs are more characteristic of the cold half of the year but they can be observed all the year round in mountainous areas. The Danube Plain and the Upper Thracian Lowland experience the lowest number of foggy days, and the mountains have the most. Anthropogenic mists emerge in industrial centres. Hailstorms are typical of the warm half of the year. Some areas with particularly frequent and damaging hail are Northwestern Bulgaria, the western part of the Upper Thracian Lowland, the Valley of the Struma River, the Eastern Rhodopes.

Frost is associated with negative air temperature values. They occur both in early autumn and in late spring. The radiation type of frost is characteristic of depressions (gorges, valleys, etc.).

Sleet is observed at the beginning and end of winter, but it is most typical in the winter months. Sleet causes icing of the objects and does significant damage when a permanent snow cover accumulates on them.

A. Which climatic phenomena are called adverse?

B. What damage do they do?

C. How does human activity contribute to worsening adverse phenomena?

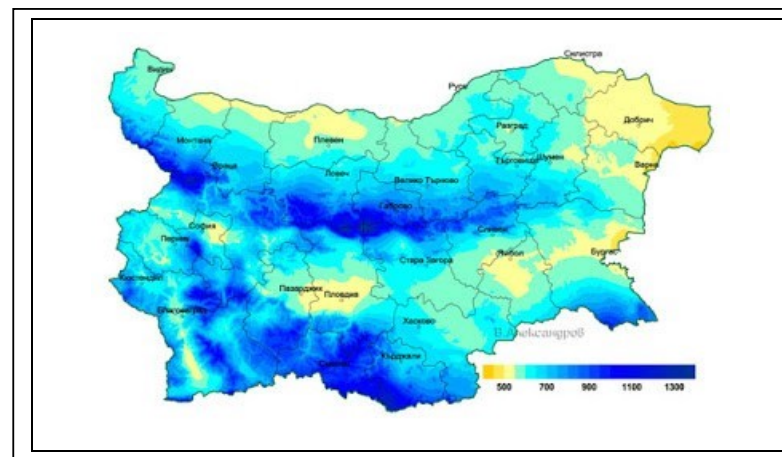
2. Look at the map and fill in the names of the climate station:



1								
2								
3								
4								
5								
6								

1. The station with the lowest annual temperature. 2. A station with an absolute minimum temperature.
 3. A station with the lowest rainfall. 4. A station with an absolute maximum temperature.
 5. A station with the highest annual temperature. 6. One of the windiest stations.

3. Look at the map and explain the small amounts of rainfall in the Upper Thracian Lowland.



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4. Compare the climate of the Northern and Southern Black Sea coasts. Fill in the table.

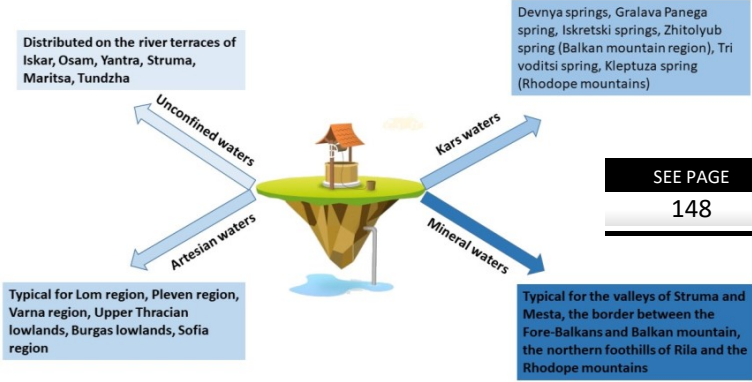
Similarities	Differences	

5. According to a scientific forecast, in 30 years the climate of Sofia will be close to today's conditions in Skopje. The average annual temperature will increase by nearly 3°C, the temperature in January will be positive, and in July, it will be 6°C higher. Consider how these changes will affect nature and living conditions. Present your ideas to prevent this drastic climate change.

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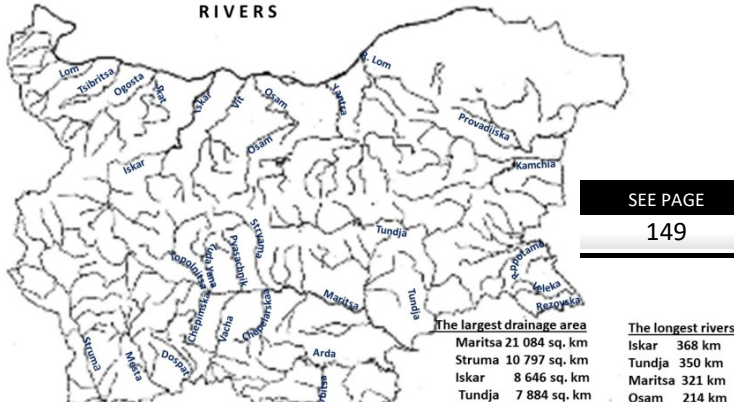
Bulgaria has all kinds of water on land but in a limited amount. They are unevenly distributed along the territory of the country. The most important factors for water formation are the relief, rock base, climate, soils, vegetation, as well as the anthropogenic activity.

GROUND WATERS IN BULGARIA



Groundwater (unconfined, artesian, karst). About 600 natural mineral water springs with a diverse chemical composition and temperature have been discovered in Bulgaria. The hottest mineral spring in Bulgaria (103 degrees) is located in Sapareva Banya.

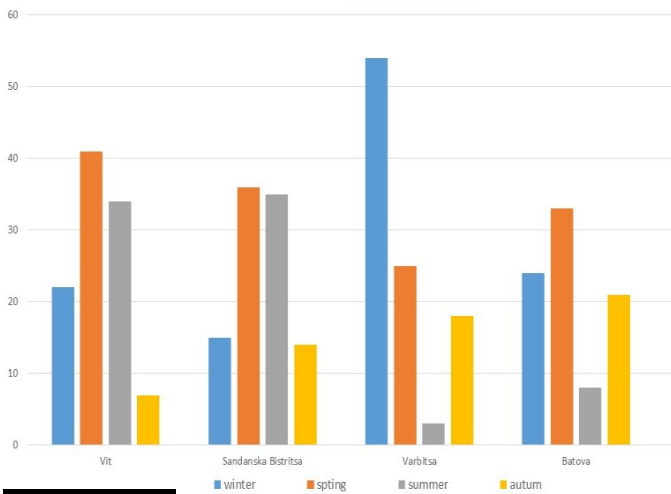
RIVERS



Surface waters include rivers, lakes and marshes.

The majority of rivers in Bulgaria are short. The main watershed divides the country into two drainage areas – those of the Black Sea and the Aegean Sea.

Regime of the rivers



Some of the rivers in the Black Sea region flow directly into the Black Sea, and others do that indirectly through the Danube. The Iskar River is the longest river in Bulgaria (368 km). The Maritsa River has the largest catchment area. Rivers and their tributaries which rise from the high parts of the mountains are characterised by a snowy-rainy regime, and those from the lower parts – with a rainy-snowy regime. These rivers have their highest flow in spring, and in the southernmost parts that happens in winter. The rivers are at their lowest in late summer and early autumn.

In Bulgaria there are over 400 lakes, which are small in area. About one-third of them are glacial lakes in Rila and Pirin. The other most common types are the tectonic lakes of Panichishte (Rila) and Rabishko (the Pre-Balkan), the karst lakes near Devetaki (the Pre-Balkan), the landslide lakes near Smolyan. The lakes along the Black Sea coast are larger in size – lagoons (Pomoriyska, Aleppo) and firths – Varna (the largest in volume) and Burgas (the largest by area). The largest riverside lake on the Danube – Srebarna, has been turned into a nature reserve.

Dams (artificial lakes) are built to regulate the river regime. More than 2,000 dams have been built in Bulgaria, the largest being Iskar, Kardzhali, Dospat, Batak, Koprinka, and others.

The marshes in Bulgaria occupy a negligible share of the country's waters and have no important economic significance.

TRAINING SECTION

1. Read the text and answer the questions:

It springs from picturesque lakes in the highest Bulgarian mountain. Before it leaves Rila, in its upper reaches it is clear and frothy with many rapids and waterfalls. One of the most beautiful waterfalls is formed on the Kostenetska River and it is praised in Ivan Vazov's travel narratives. Further down, it enters the picturesque Momina Klisura Gorge, which separates Rila from Ihtimanska Sredna Gora, and the Yadenitsa River, along which the boundary between Rila and the Rhodope Mountains passes, and flows into it in the town of Belovo.

In the Plovdiv-Pazardzhik Valley it is a peaceful river with a wide bed and a shallow bottom. Here, a number of Rhodope tributaries (the Vacha, Chepinska, Chepelarska) and Sredna Gora tributaries (the Topolnitsa, Luda Yana, Sazliyka) flow into it. It leaves Bulgaria at Kapitan Andreevo, and near Edirne collects the waters of Tundzha and Arda.

- A. Which river is described?
- B. Why does the river increase its volume in the Upper Thracian Lowland?
- C. Through which two large tributaries does it drain one-third of the territory of Bulgaria?

2. Identify the springs (2,3,4 – karst waters; 1,5,6,7,8 – mineral waters):



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.





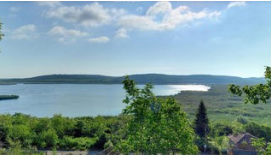
3. Write two applications for each of the types of groundwater:

Unconfined..... Artesian.....
 Karst..... Mineral.....

4. The Dospatska, Vacha, Arda, and Verbitsa rivers rise and run in the Rhodope Mountains. Write down the months when each of the rivers has its highest flow and explain the differences.

.....

5. Write down the type and location of each of the lakes.

				
Atanasovsko Lake	Rabishko Lake	Popovo Lake	Smolyan Lakes	Srebarna Lake

6. The Canadian gold mining company Dundee Precious Metals Inc. is going to invest in the development of the Ada Tepe gold mine near Krumovgrad. The local population is divided over the project. People are aware that the investment will bring jobs and revenue, but they fear that the water supply area will be contaminated. Put yourself in the mayor's position and write down what conditions you would impose on the investor and what promises you would make to the population.

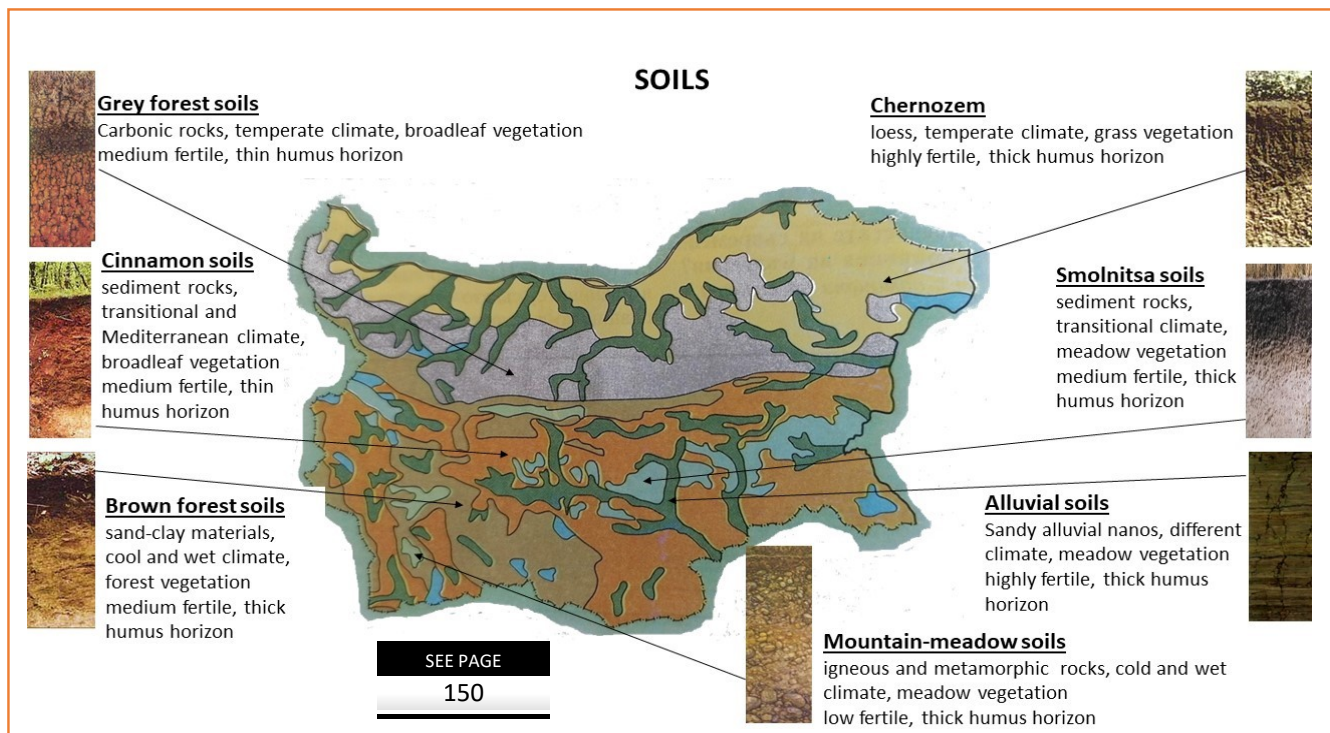
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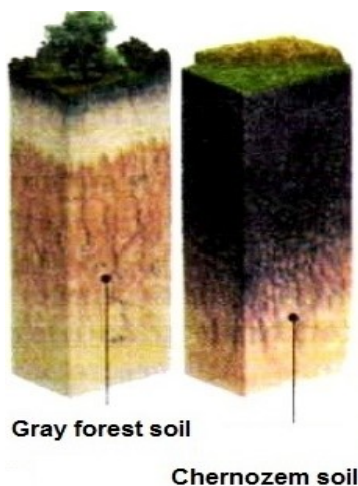
7. SOILS



Soil is the top loose layer of the Earth's crust. Fertility is one of its essential properties. Soil formation depends on rocks, relief, climate, water (abiotic factors), as well as plants, animal microorganisms (biotic factors). Human activity (an anthropogenic factor) can have both a positive and negative impact.

There is a great soil diversity in Bulgaria (17 types of soil). Six of them occupy almost 90% of the territory of the country. There are three soil areas – northern, southern and mountainous.

Chernozem and gray forest soils are common in Northern Bulgaria. Chernozem soils are suitable for growing cereals and Industrial crops. Vineyards, orchards, potatoes and others are grown on gray forest soils.



Cinnamon forest soils, smolnitsa soils and yellow earth soils are found in southern Bulgaria. Orchards, vines, vegetables, cereals and Industrial crops thrive on cinnamon forest soils and Smolnitsa soils. Yellow earth soils are found along the Veleka River Valley in Strandzha. They are covered with natural vegetation (oak, beech) and are not farmed.

The mountainous region stretches over 800 meters above sea level. It is dotted by brown forest soils, dark color soils, mountain-meadow soils. The most common azonal soil types are alluvial-meadow soils (along rivers), which are suitable for growing vegetables and rice; humus-carbonate soils (rendzina) in karst regions, on which cereals, industrial crops and orchards thrive.

It determines the humus content and soil fertility

.....

It affects the rate of decomposition of the organic constituents of the soil

.....

It exhausts, pollutes and degrades soil quality

.....

It determines the structure and mineral composition of soils

.....

It is a factor in the formation of the most common azonal soils

.....

2. Read the text and answer the questions:

The soil resources of Bulgaria generally have a high potential, but are subjected naturally and anthropogenically to degradation, which adversely affects the functioning of the ecosystems. Intensification in agricultural production can lead to an acceleration of degradation processes – erosion, salinisation, acidification, water pollution, reduction of biodiversity, to an extent that is unfavorable for agriculture and the environment. Soil damage is caused by its contamination by heavy metals, plant protection products (pesticides), persistent organic pollutants, including petroleum products; by unregulated dumping of waste on the soil surface, as well as by land and soil degradation caused by the extractive industry.

Source: Ministry of Environment and Water

What soil damage does human activity cause?







Which economic activities are major polluters?

What are the negative consequences of soil degradation?

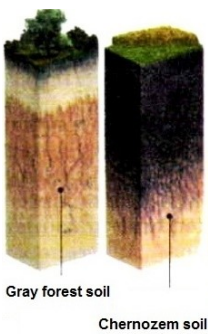
3. Write the numeric code in the table so that you get a true combination.

- 1 Chernozem
- 2 Broadleaf forests
- 3 Mountain climate
- 4 Cinnamon soils
- 5 Evergreen vegetation
- 6 Igneous rocks
- 7 Yellow-earth soils
- 8 Coniferous forests
- 9 loess
- 10 Brown forest soils
- 11 Steppe vegetation
- 12 Mediterranean climate

4. Write the soils suitable for the cultivation of each of these plants.

5. Look at the soil profiles and explain the greater fertility of the chernozem soil.

	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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6. In a medium-sized Bulgarian municipality, they encounter an unpleasant problem. The municipal landfill has almost reached full capacity. Through rainwater, contaminants have infiltrated into soils and reached the unconfined water. RIEW (Regional Inspectorate of Environment and Waters) measurements show that the concentration of poisonous and dangerous substances in water exceeds the permissible levels. Some of the farmland has already been affected. On behalf of the local administration, look for a solution that does not create a waste crisis, but also prevents the loss of fertile soils.

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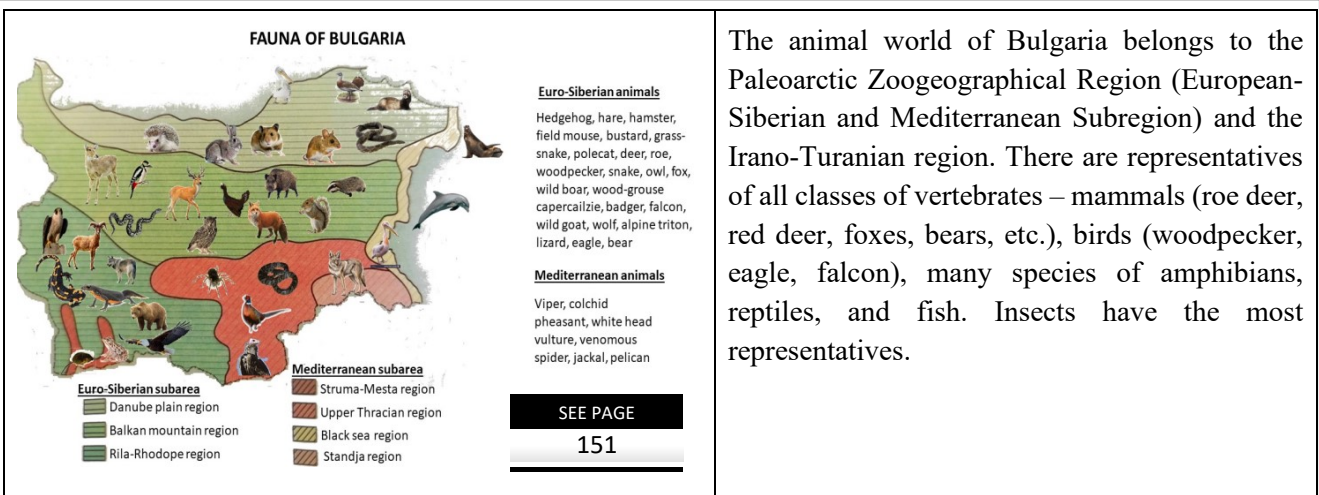
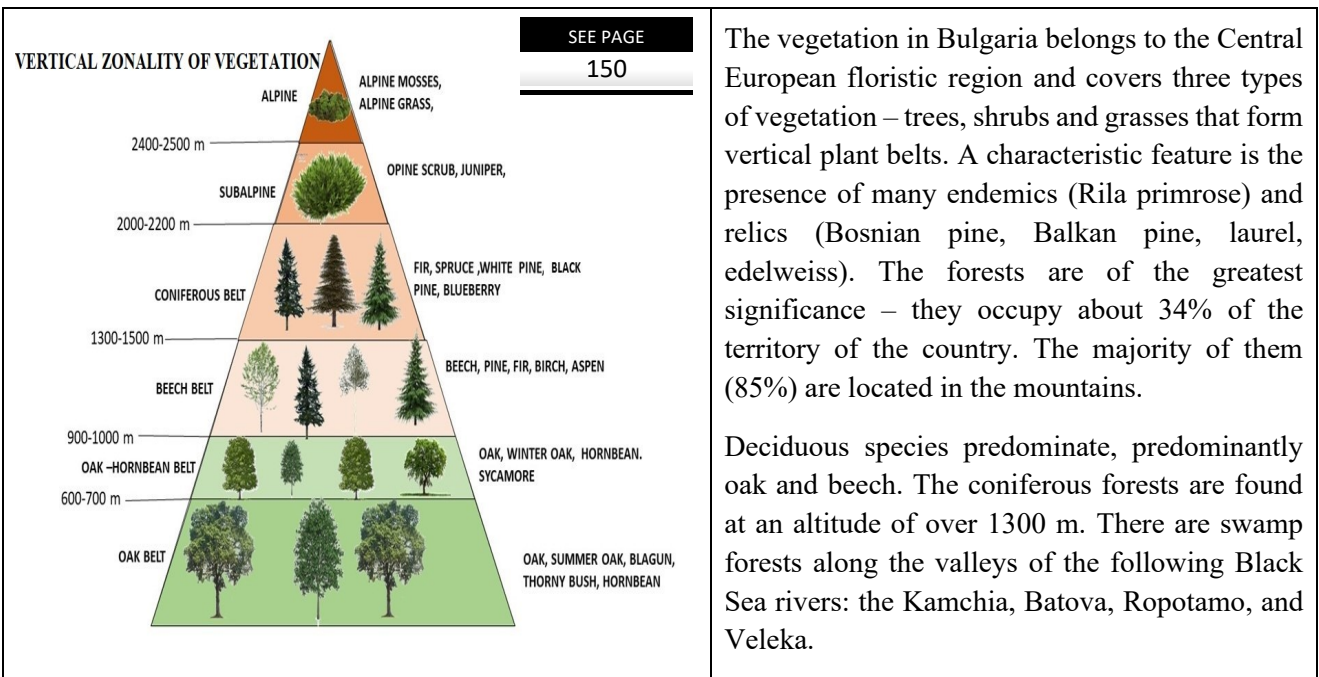
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8. VEGETATION AND ANIMAL WORLD

The plant and animal world in Bulgaria are very diverse. More than 12,000 species of plants and about 25,000 species of animals have been identified. They are an important bioresource. Their development and distribution depends on the geographical location, the peculiarities of natural components, as well as human impact.



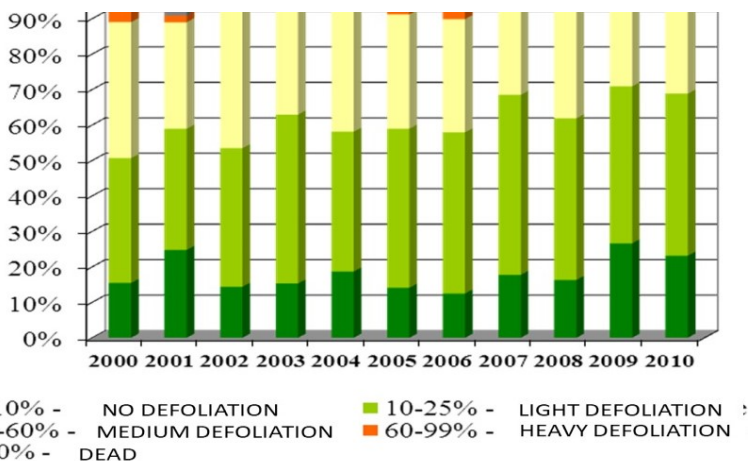
In order to protect the biodiversity in the country, three national parks, eleven nature parks and many reserves and protected areas have been set up. Plant and animal species that are threatened with extinction are recorded in the Red Data Book of Bulgaria.

The Kamchia forest resembles a deciduous jungle – dense, damp, almost impenetrable, multi-leveled, intertwined with climbing plants which sometimes reach a length of up to 50 m. The forest has developed on the damp lowland. It was formed after the filling of the Kamchia firth with river alluvium. Periodically, when the mouth of the Kamchia is filled with sand by strong breaking waves, by abundant snowmelt or torrential rains, the river water rises, goes back and inundates the forest – only the crowns of the trees remain sticking out above the water. There are about 40 tree species in the swamp forest – summer oak, alder, field maple, white poplar, white willow, ashtree and other light-loving species, but the Polish elm and the sharp-leafy ash predominate. Many trees are over 150 years old and reach up to 30-35 m in height. Lians form thick curtains in the wettest places. The most common liana types are Smilax, wild vine, Clematis, white and black mistletoe. One of the largest natural habitats of swamp snowdrop in our country is here. In some places, the rivers are covered with a carpet of water lilies.

196 bird species have been identified, of which 56 are rare and endangered species. Mallards, gray and white herons, and other rare and endangered species spend the winter in the Kamchia forest. Here is the only wintering ground of the red-crested pochard. nasamnatam.com

- A. How was the swamp forest formed?
- B. What is the high density and height of vegetation due to?
- C. Which other rivers have swamp forests?

2. Comment on the forest status diagram. What will the consequences be?



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Source: investor.bg

3. Each photo corresponds to a number on the card. Connect them and determine whether they are endemics or relics.

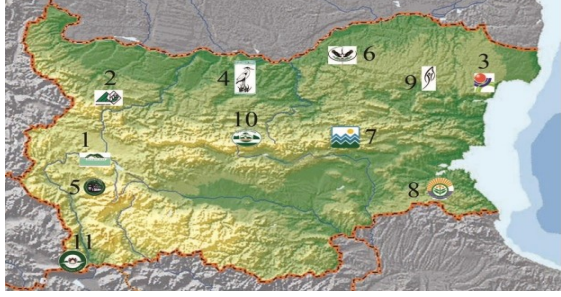
		
		

4. Order the territories of distribution to match the animal species found on them.

Rila
the Pre-Balkan
The Upper Thracian Lowland
Strandzha
The Black Sea
The Danube

5. Identify and write down the names of the natural parks..

	
1. 2. 3. 4. 5.	6. 7. 8. 9. 10.

6. The joint-stock company "Yulen" JSC intends to build a second cableway over Bansko. The concessionaire explains that there is a great need for the new facility, which will optimise the work of the existing lift. It states that all construction activities will be in the buffer zone and will not affect nature. The residents and the local authority in Bansko believe that the project will have a beneficial effect on tourism. Environmental organisations, however, insist that the project should not be given permission because they believe centuries-old forests will be destroyed. Propose a solution that satisfies all parties.

NATURAL ENVIRONMENT OF BULGARIA

9. THE DANUBE PLAIN

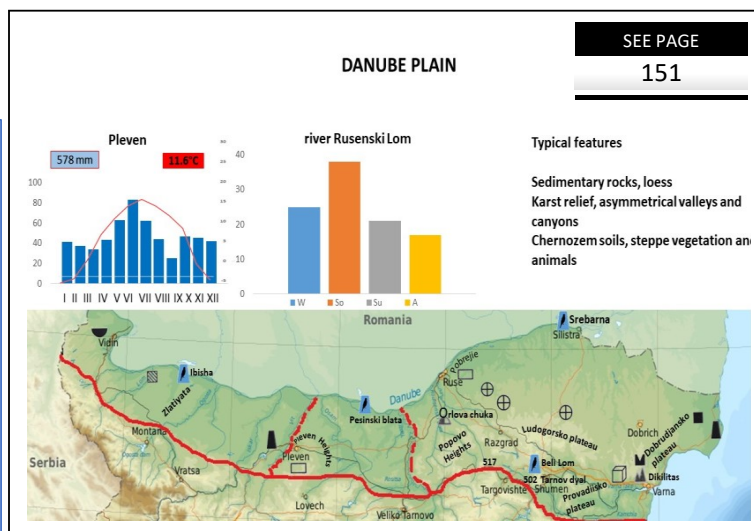
The Danube Plain is located in Northern Bulgaria. Its boundaries are defined by the Timok River to the west and the Black Sea to the east; to the north, it is bordered by the Danube river and to the south by the Pre-Balkan. It covers an area of about 31,500 km². Its surface area and height increase from the west to the east. The Danube Plain has a lowland-hilly and plateau relief. Its average altitude is 178 m.

The Danube Plain is divided into three parts.

The loess plateaus (Zlatii) and the asymmetric river valleys are the most typical forms of relief for the western part (between the Timok and Vit rivers) and the middle part (between the Vit and Yantra rivers). There is a series of 14 basalt mounds between Svishtov and Suhindol, extending from the north to the south. The eastern part (between the Yantra and the Black Sea) is the most extensive and has a plateau-hilly relief with characteristic karst forms. Alluvial lowlands and active landslides are common along the Danube.

The climate of the Danube Plain is temperate continental. The annual temperature amplitudes are the highest and reach 25-26°C, which defines them as the highest in the country. The amount of precipitation decreases from the west to the east and from the south to the north. Temperature inversions and fogs are characteristic phenomena.

There are three main types of soil in the Danube plain: chernozem, gray forest, and alluvial meadow soils. The natural plant and animal world occupies limited spaces due to the agricultural use of the Danube Plain. Within the boundaries of this natural region, there are two of the major nature parks in the country, Rusenski Lom and Shumen Plateau.



In the Danube Plain, there are negligible reserves of oil, natural gas, and lignite coal. Manganese ore deposits have been discovered. The deposits of non-ores (gypsum, kaolin, rock salt, limestone, etc.) are the most significant and diverse.

On the territory of the Danube Plain, there are all types of groundwater (unconfined, artesian, karst, mineral). The majority of the rivers that cross the Danube Plain rise from the Balkan Mountains. Despite the different types of feeding, most of them have spring high flow. The only preserved Danube lake – Srebarna, has been turned into a reserve.

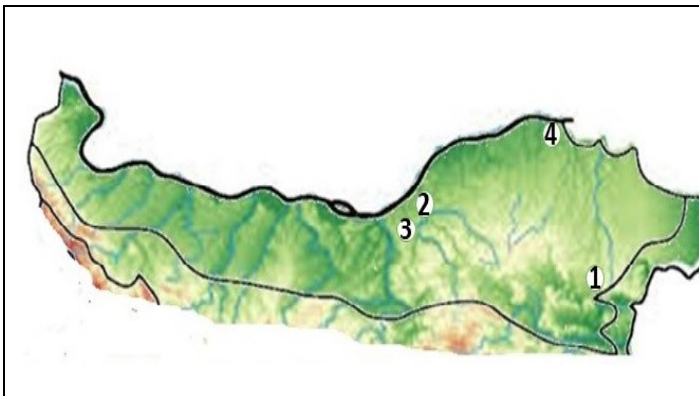


There is such a place where you can walk on the bottom of a river and this is the riverbed of the once swollen river of Suha Reka. It rises from the village of Izgrev near Varna and it used to flow through the territory of the current districts of Varna, Dobrich and Silistra and then flow into Lake Oltina in Romania. At present, it dries up around the village of Karapelit. The nearby Tsaratsar and Topchiyska rivers also have a low flow and are intermittent in their discharge.

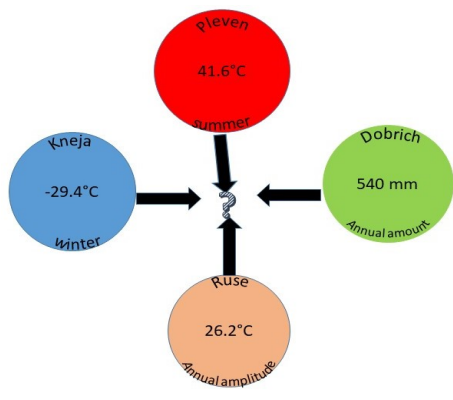
- A.** Which distinctive feature of the Eastern Danube Plain can we see along the valleys of these rivers?

- B.** How do the rocks and relief contribute to the presence of dry valleys?

2. Identify the natural landmarks. Write the names and the corresponding number on the card.



3. What feature of the climate in the Danube plain is shown in the scheme? Support your answer with arguments.



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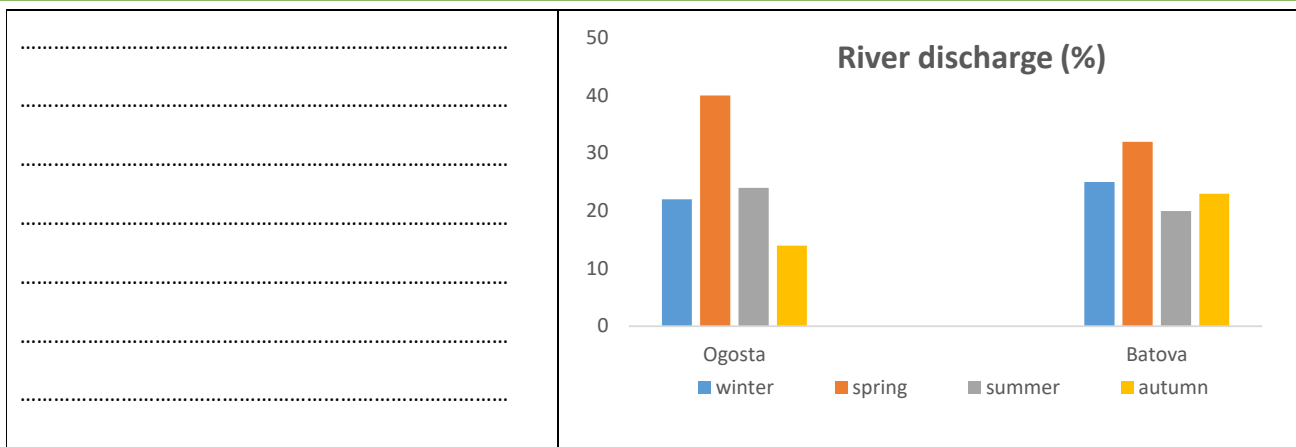
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4. Compare the hydrograms and explain the causes for the differences in the flow regime of the Rivers Ogosta and Batova.



5. Evaluate the potential of the Danube Plain for the development of the following economic activities. Assess their impact on the natural environment. Use "H" for high and "L" for low.

Selected economic activities	Assessment of development potential	Assessment of the impact on the natural environment
Intensive agriculture		
Construction of railways and highways		
Extraction of non-ores		
Development of tourism		

6. For more than 10 years now, the possibilities for shale gas extraction in Dobrudzha have been discussed. Both researchers and investors say that the shale deposits are rich and mining will make significant profits. Local people and environmental organisations are against it and present their arguments concerning mainly soil and groundwater pollution. Study the case from the point of view of both sides and present your idea of the position which the Bulgarian state institutions should take with regard to the issue.

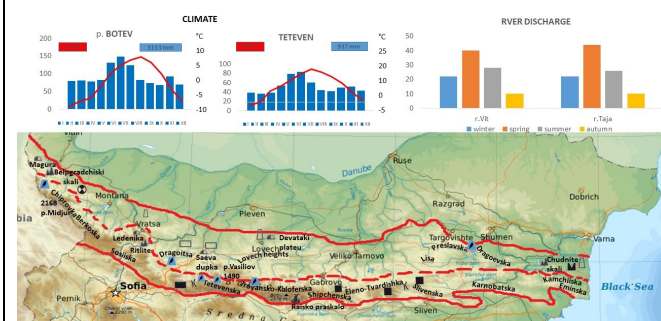
10. THE BALKAN MOUNTAINS REGION

The Balkan Mountains region is south of the Danube Plain and stretches all the way to the Kraište-Srednogorie region. Its width varies between 20 and 70 km. From the west to the east it extends from the Timok River and the border with Serbia to the Black Sea and has a length of 550 km. Due to its natural geographical features, the area is divided into two parts – the Pre-Balkan region and the Main Balkan Mountains chain.

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STARA PLANINA REGION



The Pre-Balkan occupies a transitional position between the Danube Plain and the Balkan Mountains and covers an area of about 12,000 km². The relief is hilly with an average altitude of 364 m. The ridges are separated by depressions, valleys and gorges. The Pre-Balkan is divided into western, central (the highest and widest) and eastern parts.

The Balkan Mountains region is characterised by the greatest variety of karst relief forms (the caves of Magura, Saeva Dupka, Ledenika). Other more well-known forms are the Belogradchik Rocks, the gorges of the Iskar, the Kamchia, and its tributaries. The highest waterfall in Bulgaria – Rayskoto praskalo (124.5m) is located in the central part of the Balkan Mountains.

In the Balkan Mountains region, there are deposits of anthracite and black coal, natural gas, iron and copper ores, marble, limestone, and clay.

The climate of the Pre-Balkan is temperate continental with average annual temperatures around 10-11°C, and the climate of the main Balkan Mountains chain (over 1000 MASL) is mountainous with a small temperature amplitude. The easternmost and southernmost parts of the Balkan Mountain region are characterised by a transitional continental climate. Temperature inversions are frequent phenomena in the valleys, the foehn blows on the northern slopes of the mountain, and the cold fall wind of borà is characteristic of the region of Sliven.

A number of rivers with a predominant spring high flow and snowy-rainy feeding rise from the Balkan Mountains. Most of the main watershed of Bulgaria runs along the summit of the Balkan Mountains. There are karst and mineral waters in the area.

Grey forest soils predominate in the Pre-Balkan. Brown forest soils are common in the main Balkan Mountains chain; along the southern and eastern parts there are cinnamon soils, and mountain-meadow soils are found in the higher parts. Along the rivers, there are alluvial-meadow soils. Rendzina soils are found in the karst areas.







The Central Balkan National Park, three nature parks (Vratsa Balkan, Sinite Kamani and Bulgarka), as well as numerous reserves, were set up for the conservation of nature, flora and fauna in the Balkan Mountains region.

There are several large ridges in the western part of the Pre-Balkan. The well-known rocks are there. The Cave was formed in the karst relief of Rabishka Mound. The highest peak,, rises in the Middle Pre-Balkan. The Devetasko Plateau, the Lovchanski, Mikrensky, and Sevlievsky Heights stand out among the hills. Many caves were formed here, the most well-known of which are , The eastern part is narrow and low. The only higher mountains are..... and Mountains.

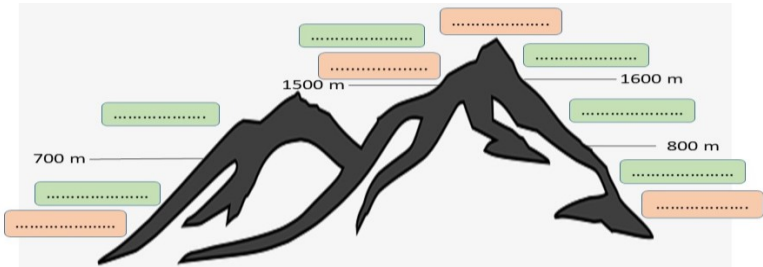
2. Compare the Pre-Balkan and the Main Balkan Mountains Chain. Write down four similarities and differences:

Similarities	Differences	
	The Pre-Balkan	The Balkan Mountains

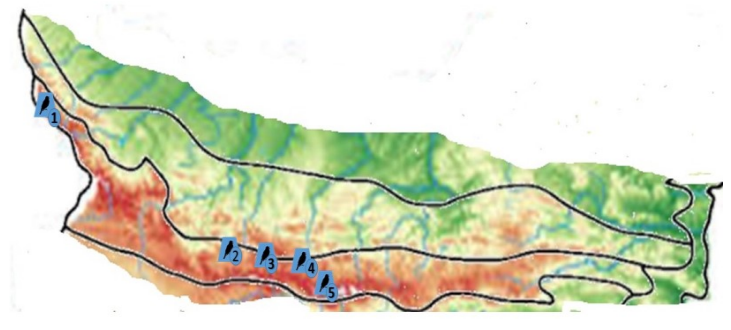
3. Identify the natural landmarks, write their names under the images, and group them by the number indices in the table:

			Western Balkan Mountains
1 Chudnitsa.....	2 praskalo	3 Cave		Central Balkan Mountains
			Eastern Balkan Mountains
4.....	5.....praskalo	6 Cave	

4. Write the listed types of soils and vegetation on the scheme:

	grey forest soils, brown forest soils, dark color soils, cinnamon, mountain meadow soils, oak belt, beech belt, coniferous belt
---	---

5. Look at the map. Identify the reserves in the Central Balkan National Park marked with a numerical index. Write down their names. Research the electronic edition of the Red Data Book of the Republic of Bulgaria and write at least one protected plant and animal species for each of the reserves.



1.
2.
3.
4.
5.
6.

6. Evaluate the natural potential of the Balkan Mountains region for the development of the listed economic activities. Assess the danger to nature from the development of these activities. Use "H" for a high degree and "L" for a low degree. Do some research and write down at least one protected plant species for each of the reserves.

Construction of transport infrastructure		
Cultivation of perennials		
Development of ski tourism		
Extraction of raw materials		

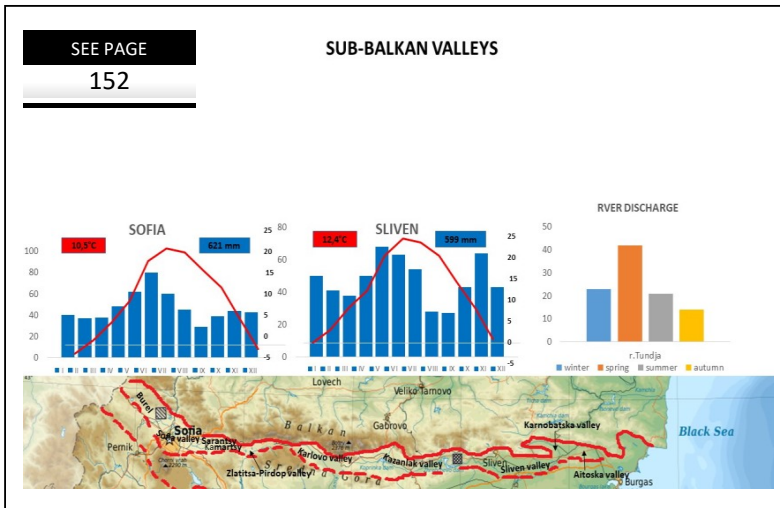
7. *After many years of discussions, the state proceeded to build a tunnel under Shipka Peak in the Balkan Mountains. In March 2021, the competition was won by the contractor candidate who offered the lowest price – BGN 358 000 000. It includes a section through the Balkan Mountains with a total length of 10.5 km, in which one tunnel, 3.22 km long, is to be built,, as well as four smaller ones – with a length between 90 and 290 m, six bridges and one underpass. The deadline for the execution of construction works is nearly three and a half years. At the same time, the idea of building a second tunnel is gaining momentum. It would facilitate transport connections between Northern and Southern Bulgaria. The proposals for the Trojan Pass and Petrohan pass are in competition.*

Taking into account the technical difficulty and high cost on the one hand and the possible revenue and benefits on the other hand, express your opinion on the realisation of these ideas. If your opinion supports the construction of a second tunnel, argue where and why it should be built.

11. THE REGION OF KRAISHTE AND SREDNOGORIE

The Region of Kraishte and Srednogorie has a transitional geographical position and stretches between the Balkan Mountain region to the north and the Rila-Rhodope region, and the Thrace-Strandzha region to the south. It is divided into three parts – the Sub-Balkan hollows, Kraishte, and Srednogorie.

The Sub-Balkan hollows



The Sub-Balkan hollows (often called fields) are located between the Balkan Mountains and Srednogorie and stretch to the west-east. The boundaries between the valleys are determined by transverse ridges, with Galabets, Koznitsa, Strazhata and Mezhdzenik being some of the highest ones. The Sub-Balkan hollows differ in size and altitude. The Koznitsa ridge divides them into high (western) and low (eastern).

The Sub-Balkan hollows valleys are not rich in raw materials. There are deposits of lignite coal, fire clay, building materials.

The western valleys are characterised by a temperate continental climate, and the eastern ones – by a transitional continental climate. The low annual rainfall is typical of all valleys and is due to the rain shadow of the Balkan Mountains, the bora wind on the southern slopes of the Balkan Mountains (Sliven Valley) and the foehn wind on the northern slopes of Vitosha (Sofia Valley).

The Sub-Balkan hollows are rich in groundwater (unconfined and mineral). The rivers spring from the Balkan Mountains or the region of Srednogorie and have snowy-rainy or rainy feeding. Most rivers are characterised by spring high flow and summer-autumn low flow. Two of the largest rivers in the country (the Iskar and the Tundzha) flow through the area.

Smolnitsa soils predominate in the western valleys, and in the eastern ones there are mostly cinnamon forest soils. Along the rivers, alluvial-meadow soils are common. The natural conditions are suitable for the development of agriculture and cultivation of vegetables, Industrial crops, fruit trees, etc. The valleys of Karlovo and Kazanlak are known for their oil-producing rose plantations.

The natural vegetation and the animal world are limited due to the agricultural use of the valleys. Anthropogenic activity is the cause of air, water and soil pollution and the deterioration of the ecological situation in some valleys.

The valley has an elliptical shape and stretches from the northwest to the southeast. To the north, it reaches the western Balkan Mountains, the Slivnitsa Heights to the west. Ithhimanska Sredna Gora to the east, and Lozenska Mountain, Plana, Vitosha, Lyulin to the south. During the Pliocene it was a lake, on the bottom of which thick layers of sand and clay are deposited. The bottom of the valley is cut by transverse faults connected to numerous mineral springs.

- A. Which is the valley described?
- B. What type are the prevailing rocks in the valley?
- C. What is the economic importance of groundwater?

2. Look at the information in the table. Describe and explain the differences between the nature of the western and eastern Balkan valleys.

The average January temperature in Sofia Valley is negative	The high flow of the Topolnitsa River is in spring
The altitude of the Zlatishko-Pirdopska Valley exceeds 750 m.	In the valley of Sliven, the winter is warm, and the summer is hot
Karnobat Valley has an altitude of only 180 m.	The Aytoska River reaches its highest flow in February and March
.....	
.....	

3. Identify the numbered rivers (1-4) and dams (5-6). Write the name of the valley they are in.



1.	2.	3.	4.	5.
6.	7.	8.	9.	10.

4. Using the map from the previous task, identify the designated mineral springs. Write the numeric code (7-10) under the photos:

5. Identify the valleys in which the listed economic activities are developed:

- There are several mineral springs in the valley and mineral water is bottled
- Roses are grown and rose oil distillation takes place
- Remains of Thracian tombs contribute to the development of cultural tourism
- The natural conditions are suitable for viticulture and wine production

6. The ancient city of Seuthopolis was the capital of the Odrysian Kingdom back in Thracian times. This is the first and best preserved Thracian city in present-day Bulgaria. Seuthopolis is the most famous underwater site (the remains are located under the Koprinka Dam) in Bulgarian archaeology – the only Thracian town fully studied to date on Bulgarian territory. It is not only a unique archaeological and historical site but also a whole treasure trove with data on the life of the Thracians.

In 2005, the municipality of Kazanlak decided to restore the grandeur of Odrysians’ ancient capital. It was then that the conceptual architectural project of *Seuthopolis Museum and Tourist Complex* was prepared. The project involves drainage of the territories around the ancient settlement, which would allow for direct observation of the ruins. Rated as too expensive, it has not been implemented.

Consider all the possibilities and difficulties, and divide into two teams, justify the social and economic advantages as follows:

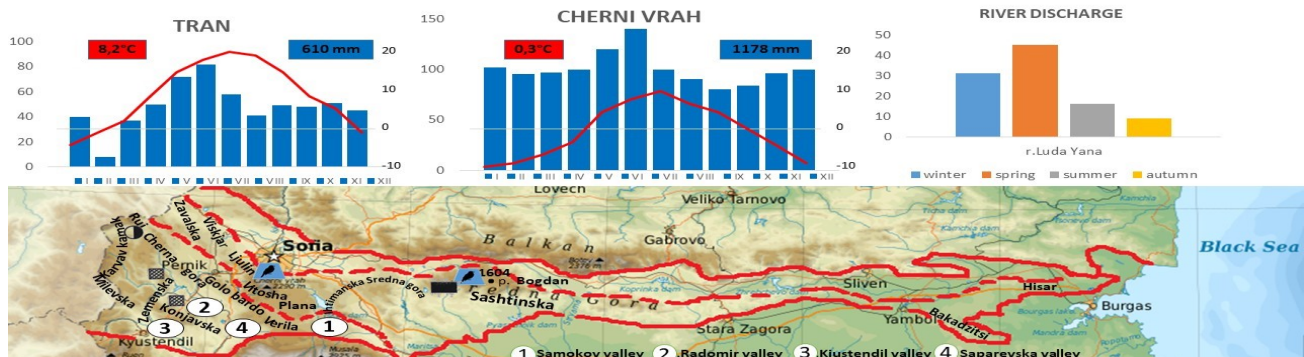
Team one: The implementation of a project related to prioritising the utilisation of Seuthopolis as a tourist site.

Team two: Preservation of Koprinka Dam in its current entirety.

12. THE REGION OF KRAIShte AND SREDNOGORIE

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Kraishte – Srednogorie region



Kraishte is situated between the Osogovska Mountain and Rila to the south; it is bordered by Sredna Gora to the north and the east, and to the west it reaches the state border with North Macedonia and Serbia.

Kraishte is a mosaic of mountains and valleys. It comprises the Verila-Ruy and Konyavska-Milevska mountain ranges. The valleys of Pernik, Breznik and Tran are to the north, the valley of Radomir is located between the two mountain ranges, and the valleys of Kjustendil, Sapareva Banya, Samokov and Dolna Banya are to the south. The gorge of the Struma River and the ravine of the Erma River are some of the well-known forms.

The most significant reserves of brown coal in the country, as well as deposits of iron ore and gold near Breznik are in the region of Kraishte. Limestone and clay are mined.

The Verila-Ruy mountain range and the northern (high) valleys are characterised by a temperate continental climate, and the southern (low) valleys have a transitional continental climate. The climate over 1500 m above sea level is mountainous. Temperature inversions are a characteristic phenomenon for the valleys.

Most rivers are short and flow into the rivers Struma, Iskar and Maritsa. Kraishte has unconfined karst and mineral waters. Part of the main watershed of the country passes through this area.

There is a wide variety of soil types in Kraishte – smolnitsa soils are distributed in the high valleys, and in the others, there are cinnamon forest soils; along the rivers there are alluvium-meadow soils, in the mountains – brown forest soils, mountain-meadow soils and rendzina soils.

The natural vegetation and animal world in the valleys occupy limited spaces due to their agricultural use. The extraction of raw materials, the development of agriculture, industry, logging, transport and others are the cause of air, water and soil pollution. The Ostritsa Reserve (Golo Bardo), where unique endemic species are preserved, was set up in Kraishte.

TRAINING SECTION

1. Mark the correct statements with "+" and the wrong ones with "-".

The mountains in Kraishte are horsts, and the valleys are grabens.	
The mountains in Kraishte are in the middle mountain belt	
The most important natural landmarks are formed by erosion	
Most of the lignite coal in Bulgaria is mined in Kraishte	
The territory of Kraishte falls into one of the earthquake zones in Bulgaria.	

2. Write the corresponding numeric code from the map for each of the erosion forms:

	Krakra Gorge
	Tran Ravine
	Chardakski Gorge
	Zemen Gorge
	Which rivers formed these natural landmarks?

3. The climatic characteristics refer to the valleys of Dupnitsa, Tran and Pernik. Write the name of the valley which they refer to.

-3°C	9,5°C	-2°C	8,2°C	10,6°C	-1°C
Rainfall maximum May/ June			Rainfall maximum May/ June and November/ December		

Identify the climate zones and describe the differences.

4. Evaluate the potential of Kraishte for the development of these economic activities. Use "H" for high and "L" for low. Write examples of valleys or mountains with suitable conditions for its development.

Activity	Evaluation	Examples
Transport		
Tourism		
Crop production		
Extraction of raw materials		

5. In recent years, frequent cases of high air pollution with sulphur dioxide in Pernik have been detected. Chronic air pollution makes breathing difficult and threatens the health of the population. The main causes of the problem are frequent inversions and gassing by Republika TPP, which works with coal.

Divided into teams, try to assess the problem from different perspectives: environmental, economic, social. Propose a common team solution that, on the one hand, guarantees the quality of life in the area and, on the other hand, preserves the importance of the city as an electrical production centre.

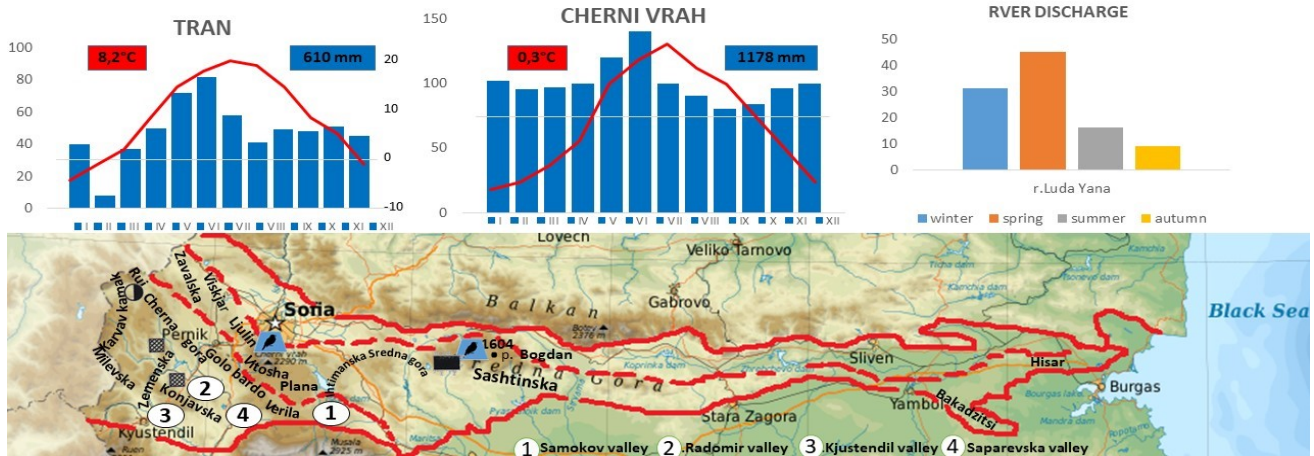
If that was a real and not a hypothetical situation, which groups of experts would you trust? Which institutions would you seek support from? How would you convince civil society of the need to implement certain measures if they are unpopular?

13. THE REGIONS OF KRAIShte AND SREDNOGORIE

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Kraishte – Srednogorie region



Kraishte is a system of mountain ranges between the Sub-Balkan hollows to the north and the Upper Thracian Lowland to the south. From the west to the east, it stretches from the border with Serbia to the Burgas lowland. Srednogorie includes the Zavalsko-Planska Mountain Range, Sredna Gora, and the hills of Bakadzhitsi and Hisar.

The Zavalsko-Planska Mountain Range (the Mountains of Zavalska, Viskyar, Lyulin, Vitosha, Plana) is part of the Western Srednogorie, which is the highest. Some well-known forms of the relief are the karst forms (the longest cave in Bulgaria – Duhlata Cave), as well as the stone rivers in Vitosha Mountain. The central part of Srednogorie has the largest area and includes Sredna Gora (Ihtimanska, Sashtinska and Sarnena), the Lozen Mountain and the valleys between them (the valleys of Ihtiman, Koprivshitsa, Panagyurishte, etc.). The eastern Srednogorie with the hills of Bakadzhitsi and Hisar are to the east of the Tundzha River.

The most significant deposits of copper ores are in the Sashtinska Sredna Gora (near Panagyurishte); limestone and other building materials are extracted in Srednogorie.

The predominant climate is temperate continental, over 1500 m. above sea level, it is mountainous, and in the eastern parts (Sarnena Gora, Bakadzhitsi and Hisar), it is transitional continental.

Many rivers and main tributaries of the rivers Iskar, Tundzha and Maritsa rise from Srednogorie. The peculiarities of the climate determine the differences in their river regimes and the periods of high flow and low flow. The region of Srednogorie is rich in unconfined waters and mineral waters.

Brown forest soils and mountain-meadow soils are distributed in the mountainous territories; in Sarnena Gora there are cinnamon forest soils, and on the river terraces - alluvial-meadow soils. In Srednogorie, the prevailing type of vegetation is deciduous (oak and beech forests). Coniferous forests are found at an altitude of over 1500 m in Vitosha Mountain. The first nature park in Bulgaria and on the Balkan Peninsula, Vitosha Nature Park, is in Srednogorie.

TRAINING SECTION

1. Read the text and answer the questions:

Among Bulgarians, there is a common, long-standing misconception related to the natural phenomenon of the Vitosha moraines. Let's keep in mind that moraines appear only as a result of glacial activity and are non-homogeneously accumulated rock debris. They are formed as a consequence of scraping the bottom of a glacial valley and from material torn off from the sides of the valley as a result of the activity of the ice crystals. Unlike other Bulgarian mountains, such as Rila and Pirin, where there are obvious traces of ancient ice, there are no such traces whatsoever in Vitosha.

There are no cirques and glacial lakes formed due to glacial pressure. So, the objects in question in Vitosha are in fact the so-called stone rivers. They are huge clusters of large-sized rounded rocks formed under the influence of moisture, wind, and temperature amplitudes in the process of weathering. While moraines are found in many places around the world where there was glaciation, stone rivers are far less common. The only two places on the planet where stone rivers can be seen are those in Vitosha and those on the Falkland Islands. In the past they were used as a building material, mostly for paving the streets of Sofia, but nowadays, they are already protected and cannot be used.

Source: 360mag.bg

- A. What are the famous "moraines" in Vitosha Mountain?
- B. What proves that they are not moraines?
- C. What process sculpted these curious shapes?
- D. What were they used for in the past?

2. Arrange the mountains in the right order starting from the west:

Liulin	Plana	Ihtimanska Sredna gora	Vitosha	Sarnena Sredna gora	Sashtinska Sredna gora	Viskyar

3. The scheme presents the economic branches represented in the region of Srednogorie, the specific economic activities and the places where they are developed. Fill in the blanks to show the logical sequence.



4. Look at the indications and fill in the table:



code	river name	It divides (parts of Srednogorie)	It rises from	It flows into
1				
2				
3				
4				

5. Look at the photos and name the unique natural features in the regions of Srednogorie and Kraishte.



Duhlata Cave

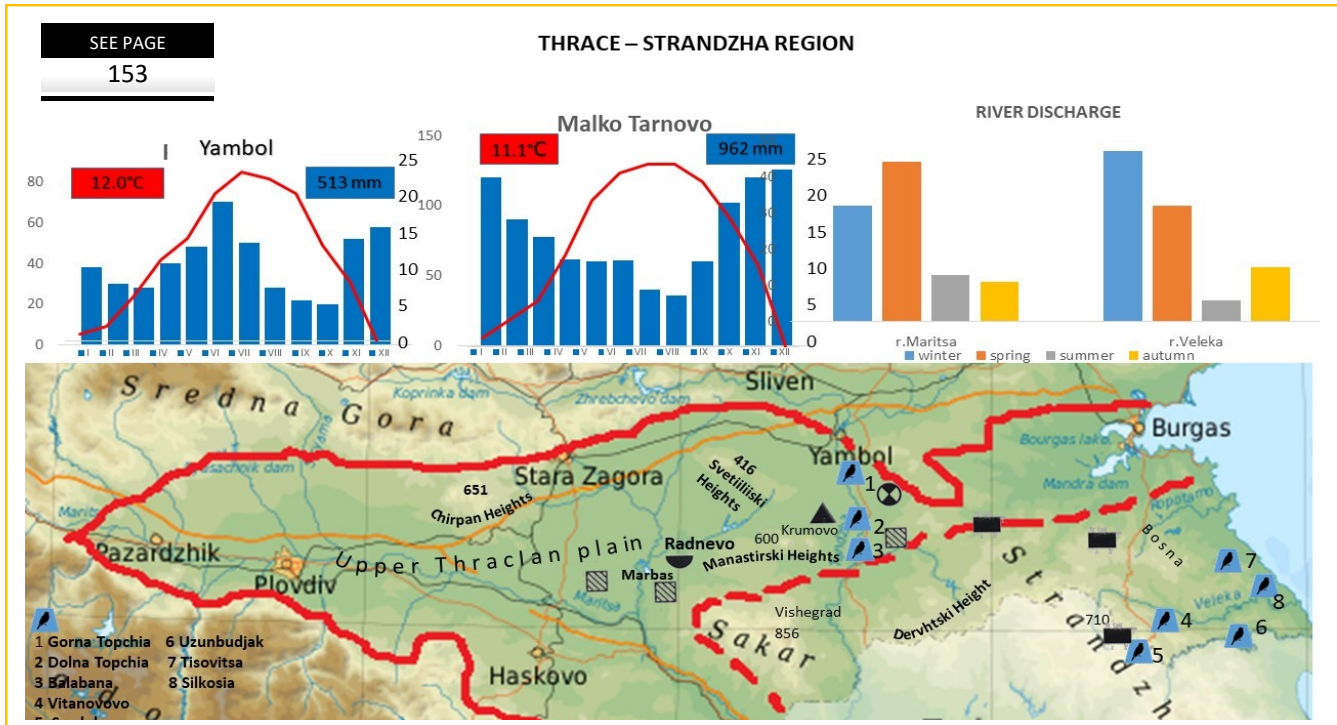


Sapareva banya



The town of Tran

14. THE THRACE-STRANDZHA REGION



The Thrace-Strandzha region stretches between the Srednogorie region to the north, the Rila-Rhodopes massif to the south, and reaches the Black Sea and the state border with Turkey to the east-southeast.

The region includes: the Upper Thracian Lowland (Plovdiv-Pazardzhik field and Stara Zagora field, separated by the Chirpan Heights), the middle reaches of the Tundzha (Yambol and Elhovo fields), Sakar, the Derwent Heights, and Strandzha, through which the state border with Turkey passes.

The area is rich in raw materials – the largest deposits of lignite coal in the country, as well as iron, copper and polymetal ore, gypsum, marble, granite are mined.

The Upper Thracian Lowland and the field of Yambol are characterised by a transitional continental climate, and in Strandzha and Sakar the climate is continental-Mediterranean.



The largest rivers are the rivers Tundzha and Maritsa. They run to the Aegean region together with their numerous tributaries and the rivers rising from Strandzha (the rivers Ropotamo, Veleka and Rezovska) run to the Black Sea. The region has unconfined, mineral and karst waters.

Smolnitsa soils, cinnamon forest and alluvial-meadow soils are common in the Thrace-Strandzha region. Yellow earth soils are found in Strandzha, along the Veleka River Valley. The soils are suitable for growing cereals and Industrial crops, vineyards, orchards, vegetables.

The economic use of most of the territory of the region limits the spread of natural flora and fauna. The first reserve in Bulgaria, "Silkosa", in which numerous relict and endemic species are preserved, is located in Strandzha.

TRAINING SECTION

1. Fill in the missing geographical terms. Determine and write down which of the natural components are not included in the text.

The relief is higher in the southeastern part of the Thrace-Strandzha region. The Mountain rises between the rivers Maritsa and Tundzha. Further east are the Heights and the Mountain, most of which extends on the territory of the Republic of Turkey. This part of the area is interesting to visit. Before leaving the territory of Bulgaria, the Tundzha River makes its way through Gorge which separates and The oldest reserve in Bulgaria,, is located along the Veleka River, and the Uzunbudzhak Biosphere Reserve stretches along the valley of the Rezovska River. The habitats of many plant and animal species are in these protected areas.

2. Compare the Upper Thracian Lowland (1) and the Danube Plain (2) using the characteristics listed in the table. To mark the differences, write the numeric code from the brackets, and for the common characteristics, write a "+" sign.

Low relief	Sedimentary rocks
Steppe vegetation	Transitional continental climate
The Black Sea drainage basin	Meadow vegetation
Chernozem soils	Temperate continental climate
Smolnitsa soils	Karst relief

3. Identify the left and right tributaries of the Maritsa River marked on the map and fill in the table:

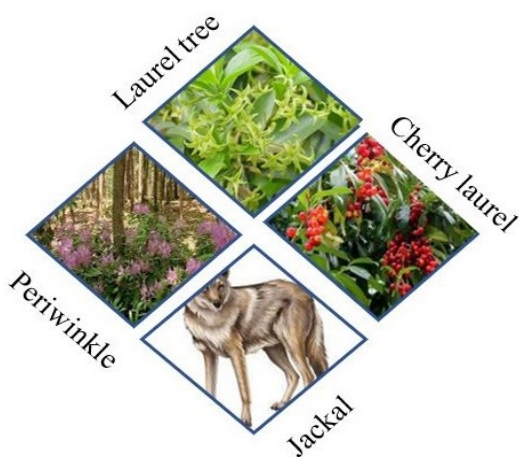


	River	It rises from	
1			
2			
3			
4			
5			
6			

4. The Thrace-Strandzha Region offers good conditions for the development of various economic activities. Distribute these activities in the Upper Thracian Lowland and Strandzha. Take the colour into consideration as well – green for the primary sector, blue for the tertiary sector.

crop farming, cultural tourism, animal husbandry, ecotourism, mining, coal mining

the Upper Thracian Lowland	.....	.....	.....
Strandzha	.....	.....	.....



5. The photos show specific plants and animals whose habitats in Bulgaria are mainly in a border mountain. Answer the questions.

In which mountain do these species grow?

.....

How can the specific flora and fauna in the municipality be explained?.....

How is the conservation of these plants and animals organised?.....

6. Apply your skills of using an internet search engine through keywords. Determine how the words ishmer/yuschmer, langidi, rachel, bohcha relate to the traditional cuisine in the Strandzha region. Explore and explain the natural, historical and ethnogeographical reasons for the uniqueness of this element of indigenous culture in order to link the outcome of your study to the information in the following text:

The recipes of Strandzha folk cuisine include the knowledge and experience of the population from the end of the 19th and the beginning of the 20th century. The mountainous nature of the area, crossed by small and larger rivers, the proximity to the sea, determine the main food ingredients in food composition. Throughout Strandzha, subsistence farming was preserved until relatively late. The collection of forest grasses and fruit which are used both fresh and dried, occupies a significant place in Strandzha cuisine.

15. THE RILA-RHODOPES REGION

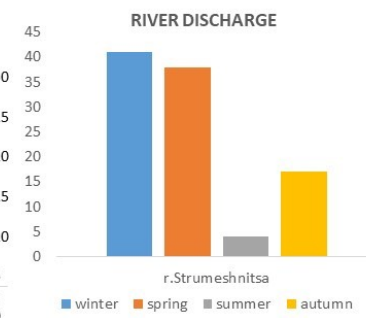
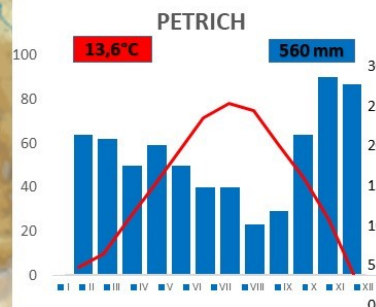
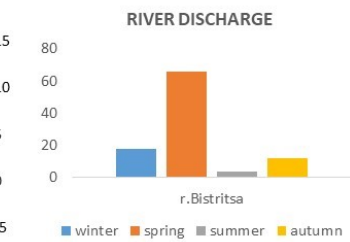
The Rila-Rhodopes region is located in Southern Bulgaria and includes the Osogovo-Belasitsa mountain range, the middle part of the valley of the Struma River, Rila, Pirin, the Mesta River Valley and the Rhodope Mountains.

Osogovo-Belasitsa Mountain Range and the Valley of Middle Struma

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Osogovo-Belasitsa region



The Osogovsko-Belasishka mountain range comprises medium-high and high mountains located in the westernmost parts of the Rila-Rhodopes region along the border with North Macedonia. To the east of them is the valley of the Struma River, along which several valleys are formed, separated by gorges, the longest of which is Kresna Gorge.

With regard to raw materials, lead-zinc ores, fluorite and brown coal are of economic importance.

To the north of Kresna Gorge, the climate is transitional continental, and to the south – continental-Mediterranean. The climate is mountainous at altitudes over 1000 MASL.

The water resources are represented by the Struma River and its right bank tributaries. At the foot of the mountains, there are significant amounts of mineral and unconfined waters.

There are cinnamon forest, brown forest, and mountain-meadow soils on the mountain slopes. Alluvial-meadow soils are widespread in the valleys.

The flora and fauna are very diverse as both middle-European and Mediterranean species are found. In the northern foothills of Belasitsa, there are relict chestnut forests.

The soils and pastures, the favorable climate and the presence of mineral waters are a prerequisite for the development of crop farming (viticulture, fruit farming, early season vegetable production), livestock breeding and tourism.

The anthropogenic activity leads to disturbances in the natural environment and to the emergence of serious environmental problems (deforestation, erosion and pollution of the waters of the Struma River).

TRAINING SECTION

1. Read the text. Check the validity of the statements. Use "+" to mark the correct answers.

At the very southwestern end of Bulgaria, Belasitsa rises majestically like an insurmountable wall. It is the southernmost mountain of the Osogovo-Belasitsa mountain range, but it is separated from the others by the valley of the Strumeshnitsa River, and from the south, in Greece, it is surrounded by the Ser Field and Doyran Lake. It stretches from Rupel Gorge of the Struma River to the east, to the Kostur Saddle in the Republic of North Macedonia to the west. About 30% of the area of the mountain is on the territory of Bulgaria. From intense tectonic movements in the past geological eras, between two deep, parallel faults, a majestic horst has risen, forming the summit of Belasitsa – long, narrow and high, with a pronounced parallel extension. Its highest peak, Radomir (2029 m), which has a pronounced pyramidal shape and very steep slopes, rises at the eastern end of the mountain. Its northern slopes are furrowed by deep valleys of short but fast-flowing rivers and streams, which have formed wide silt cones. It has the largest water supply among all mountains in the Osogovo-Belasitsa mountain range, due to the heavy rainfall caused by the orographic effect. The Mediterranean climate influence is felt in the low parts of the mountain. The northern slopes of Belasitsa, unlike the southern, heavily deforested slopes in Greece, are overgrown with dense, varied vegetation. For the conservation of the exceptional biodiversity of the mountain, a large part of its territory is included in the newest (since 2008) Bulgarian Nature Park "Belasitsa", which also includes the Kongura Reserve and the Toplishte protected area.

Most of its territory is included in the newest nature park in Bulgaria – Belasitsa.

More than 2/3 of the territory of Belasitsa is located in neighboring countries.

.....

Belasitsa was formed as a result of faulting.

.....

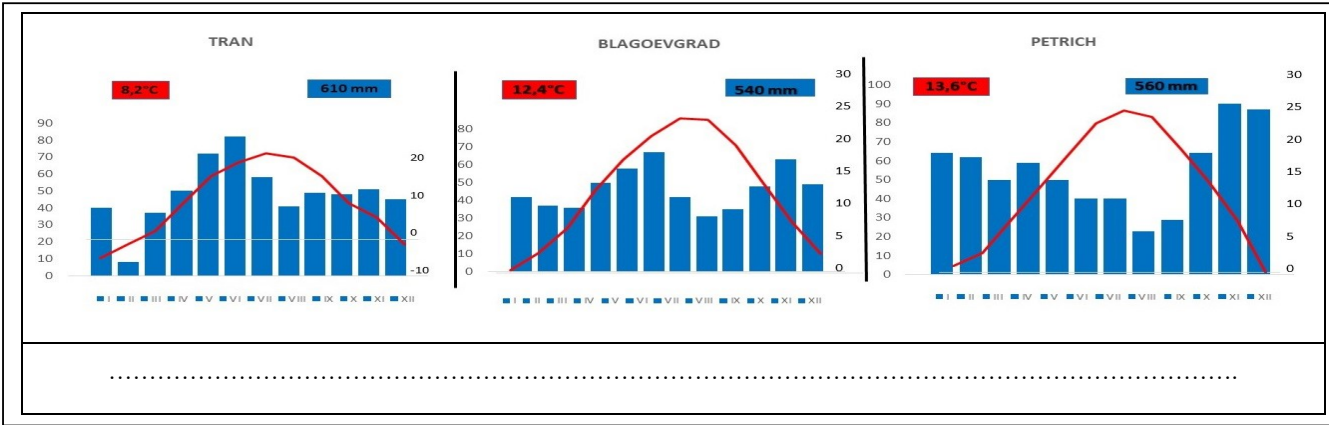
The mountain falls entirely within the continental-Mediterranean region.

.....

Most of its territory is included in the newest nature park in Bulgaria – Belasitsa.

.....

2. Using the climatograms, describe and explain the climatic differences along the Struma River.



3. Identify the correct statements and write down the relevant numerical code that marks the location of the object on the map.:

	Logodaj Checkpoint was built in the Vlahina Mountain.	
	The largest brown coal deposits are near Simitli.	
	Several state borders converge at Mount Tumba.	
	The largest mineral springs in this subregion are in the town of Sandanski.	
	The Melnik Pyramids are formed at the foot of Belasitsa.	
	The Kongura Reserve conserves forests of sweet chestnut.	

4. Look at the table. Write at least four branches of the economy for which favourable conditions exist in the listed mountains and valleys.

Forms of relief	Branches of economy
Osogovska Mountain	
Blagoevgrad Valley	
Sandanski-Petrich Valley	
Belasitsa Mountain	

5. During the construction of the Struma highway near Blagoevgrad in 2018, archaeological remains were discovered. Several months of excavations and field exploration were commissioned. As the archeological discoveries were made along the highway route, a dispute arose between scientists, cultural heritage advocates, and civil engineers. To this day, there is no conclusive evidence that these are ruins of the ancient Thracian and later on Roman settlement of Scaptopara. Moreover, there are no arguments strong enough to reject the doubt. Despite the disputes, it was decided that the construction of the highway should continue along the preliminary route and that the found artifacts be exhibited in a new archaeological park not far from the highway. Do you think this decision is right and what are the potential benefits and harms resulting from it?

Divided into two teams, hold a discussion on the issue, taking into account the opposing views. Team 1 must select appropriate arguments to demonstrate the rationality of the decision. Team 2 must reject the rationality of the decision with counterarguments. After the discussion, you need to unite around a single solution: whether the decision of the institutions is correct or wrong, taking into account its real and potential benefits and harms.

16. THE RILA-RHODOPE REGION

Rila and Pirin are the highest mountains in Bulgaria, and Rila is the highest mountain on the Balkan Peninsula as well. Their highest peaks are Musala (2925m) and Vihren (2914m), respectively. Rila connects with Pirin through the Predela saddle, with the Rhodope Mountains through Avramova Saddle and Yundola, and with the region of Srednogorie through Borovetska and Klisoura Saddle.

SEE PAGE

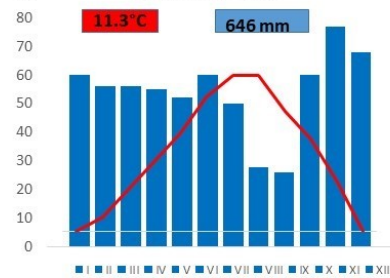
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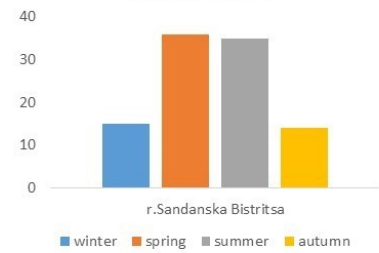
1. Bayovi dupki
2. Yulen
3. Orelek
4. Alibotush
5. Parangalitsa
6. Marichini lakes
7. Ibar
8. Skakavitsa

Rila-Pirin sub-region

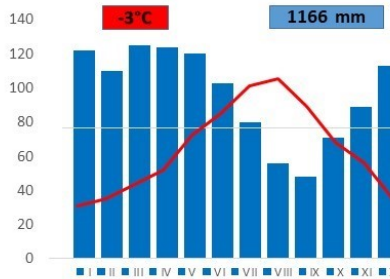
Gotse Delchev



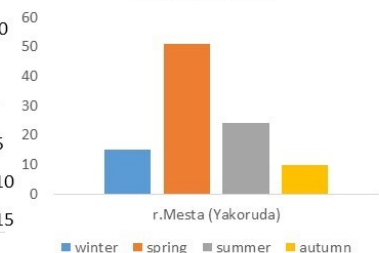
RVER DISCHARGE



p. Musala



RVER DISCHARGE



To the south, Pirin connects with Slavjanka Mountain through the Parilska saddle. The average altitude of Rila is 1487 m and that of Pirin – 1033 m. As a result of glacial activity in the past, both mountains are rich in cirques, pyramidal peaks, moraines. River erosion is the cause of the formation of numerous waterfalls, and the weathering resulted in the formation of the famous Stobsky and Melnik Pyramids. Morphohydrographic differences led to the formation of the four parts of Rila: Eastern (the highest; the Maritsa and Mesta rivers spring from it), Central (the smallest in area and hardest to reach; the largest glacial lake on the Balkan Peninsula (Smradlivo Lake) is located there, Northwestern (the Seven Rila Lakes are there) and Southwestern (the lowest).

Pirin is divided into three parts with different features – Northern, Middle and South Pirin. The extent of the area and the altitude of the parts decrease from the north to the south. The valley of the Mesta River includes two valleys – those of Razlog and Gotse Delchev, connected by Momina Klisura Gorge.

The extraction of marble, mica and fluorite are of economic importance. Small deposits of brown and lignite coal have been found.



The climate of Rila and Pirin is mountainous; the influence of the Mediterranean climate is best expressed along the valley of the Mesta River and Gotse Delchev Valley, and weakens to the north, and in Razlog Valley it is transitional continental.

A lot of rivers rise from Rila and Pirin – the rivers Iskar, Maritsa, Mesta, as well as many of their tributaries. The main watershed of Bulgaria passes through Rila. The majority of lakes (140 in Rila and 119 in Pirin) are of glacial origin. There are numerous mineral springs at the foot of the mountains.

In the low parts of the mountain, there are cinnamon forest soils; brown forest soils can be found higher up, and mountain-meadow soils – at an altitude over 2000 m. Rendzina soils have developed in places in South Pirin, and alluvial-meadow soils – along the rivers.

The plant belts in Rila and Pirin are clearly defined and alternate with the increase in altitude: the oak belt, the beech belt, mixed forests, coniferous forests and shrubs, meadows, and pastures. Many endemic and herbs grow in Rila and Pirin. The animal world is also rich and diverse.

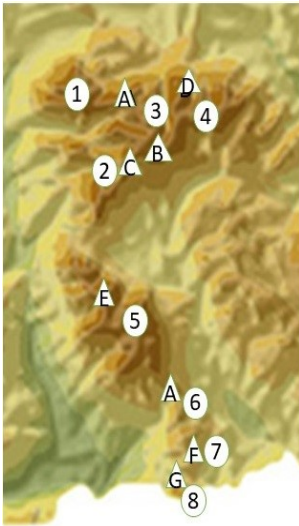
The natural conditions are a prerequisite for the development of many economic activities, especially tourism. Most of both mountains are included in the territories of Rila National Park and Pirin National Park for the protection of natural resources.

TRAINING SECTION

1. Fill in the gaps in the text:

A lot of Bulgarian rivers rise from Rila and Pirin. The main watershed passes through..... but only the river drains to the Black Sea basin. A number of tributaries of the Struma River also spring from Rila, the longest of which,, separates the north-west and the south-west parts of Rila. The river with the biggest discharge in Bulgaria rises from..... Lakes. The rivers in Pirin descend on the western and eastern slopes as tributaries of and.....

2. Look at the table. Write the letter code (for the peak) and the numeric code (for the part of the mountain).

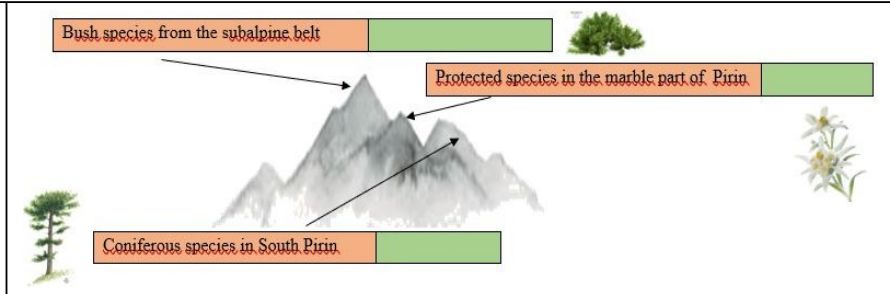


	Letter code	Numeric code
The highest part of Rila		
A mountain on the border with Greece		
A part of Rila, known as the Malyovishka part		
The part of Rila that is the smallest in area		
A part of Pirin between Todorova Polyana and Popovi livadi saddles		
The lowest part of Rila		
The part of Pirin closest to Greece		
The highest part of Pirin		

3. By evaluating the natural potential, write down two economic branches for which appropriate conditions exist. Try not to repeat the branches.

Rila		Pirin	
Razlog Valley		Gotse Delchev Valley	

4. Based on the elements of the scheme, fill in the blanks with the names of the plant species which are typically found in Pirin.



5. Compare the natural features of Rila and Pirin. Put a tick.

	Rila	Pirin
<i>Moraines, cirques and carling formations have remained since the Ice Age.</i>		
<i>Marble is the most widespread metamorphic type of rock.</i>		
<i>The weathering processes have formed interesting rock pyramids.</i>		
<i>Kazanite are dry cirques formed in the marble rocks.</i>		
<i>The mountain climate is cold, harsh, with heavy rainfall and snow retention.</i>		
<i>Soils and vegetation are with altitudinal zonation.</i>		
<i>The influence of the Aegean Sea can be felt in the lower parts.</i>		
<i>Highland rivers separate the mountain parts.</i>		

6. Write the names of the listed natural attractions and the mountain in which each of them is located under the photos: *Koncheto, Stobsky Pyramids, Ledeno Ezero, Kostenetski Waterfall, Melnik Pyramids, Big Kazan*



1.

2.

3.



4.

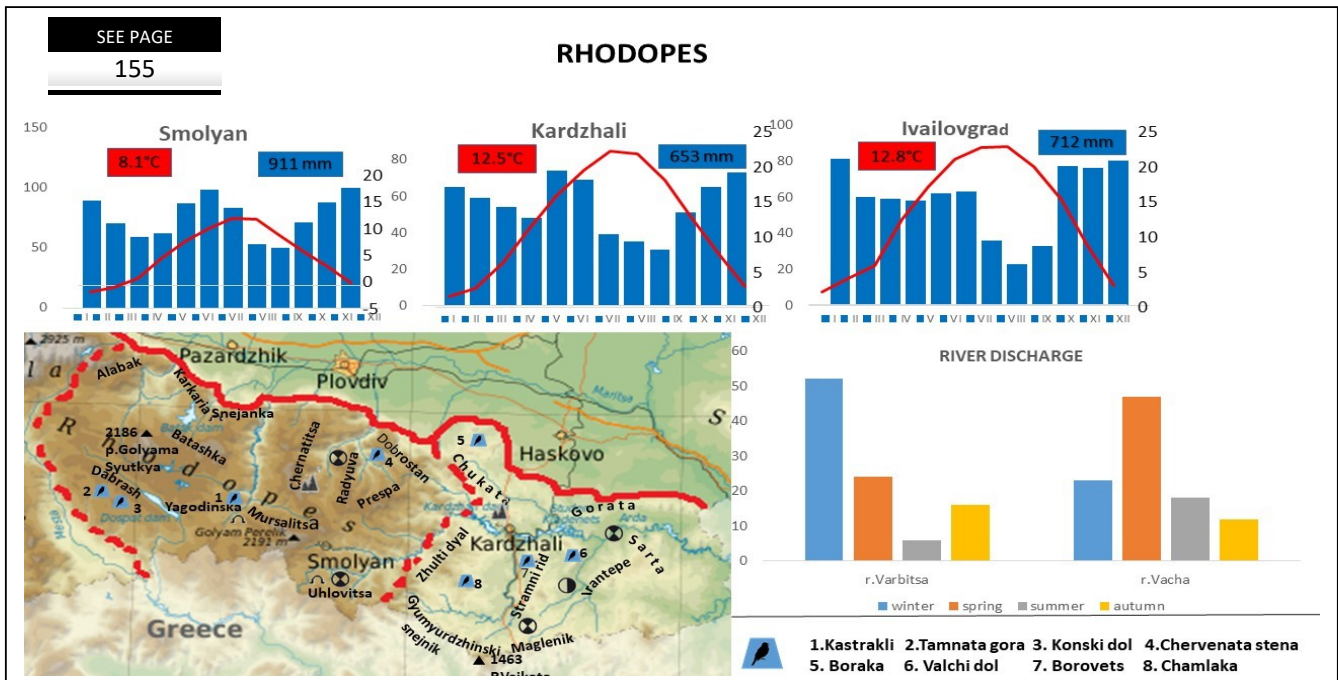
5.

6.

7. Rila and Pirin are mountains with significant natural potential. There is an increasing interest among young people about opportunities for adventurous experiences. Discuss and compile a list of activities for the development of adventure tourism and sports that would be of interest to young people, but at the same time the realisation of these activities would not threaten the natural wealth of the two mountains.

Which of your ideas is it possible to implement as virtual events as well? What groups of people can such an online product target?

17. THE RILA-RHODOPES REGION



The Rhodope Mountains are the most extensive mountain range in Bulgaria with an area of about 15,000 km². To the west, they border Rila and the Mesta River Valley, to the north – the Upper Thracian Lowland, and to the south and southeast, they reach the state border with Greece.

The relief is diverse, consisting of high mountain parts and ridges, separated by deep depressions and small valleys. Based on the natural differences in its geological development, the rocks, the altitude, etc., the mountain is divided into two parts – Western (high) and Eastern (low) Rhodopes. The average altitude of the Western Rhodopes is 1150 m, and of the Eastern – 320 m. As a result of erosion processes, karst relief is characteristic for the Western Rhodopes (Caves Snezhanka, Yagodinska, Dyavolsko Garlo) as well as for the rock phenomena Chudnite Mostove and Trigrad Ravine. The rocks of the Eastern Rhodopes are less resistant and are subjected to weathering and denudation processes, as a result of which unique rock shapes have formed, such as Vkamenenata svatba – rock mushrooms of different sizes and colours, Nevyastata, and others. The Arda River forms several gorges and meanders along its current.

In the Western Rhodopes, the deposits of lead-zinc ores, tungsten, fluorite, marble are of economic importance. In the Eastern Rhodopes, there are deposits of polymetal ore, chromium ores, gold.

The climate is mountainous in the high parts of the Western Rhodopes, transitional continental – in the lower parts and in the Eastern Rhodopes, to the north of the Arda River. The southern part of the Eastern Rhodopes has a continental-Mediterranean climate.

The water resources of the Rhodope Mountains are very large. Some of the biggest tributaries of the Maritsa rise from the mountain – the rivers Vacha, Arda, Chepinska, etc. Some of the largest dams in the country have been built there – Batak, Dospat, Tsankov Kamak, Vacha, Kardzhali, Studen Kladenets, Ivaylovgrad. The area has many karst and mineral springs.

There are predominantly cinnamon forest soils, and in the high parts – brown forest soils, dark color soils and mountain meadow soils. Rendzina soils are found in the areas with limestone and marble, and along the rivers the soils are of the alluvial-meadow type.

The oak belt and the beech belt, both mixed with Mediterranean species, are in the lower areas. Large parts of the Western Rhodopes are occupied by coniferous forests. The animal world is represented by mid-European species in the Western Rhodopes and Mediterranean species in the Eastern Rhodopes.

The natural conditions are a prerequisite for the development of a variety of economic activities.



TRAINING SECTION

1. Fill in the gaps in the text with the corresponding names of the objects marked with a number index on the map.







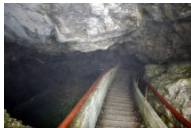

The Rhodope Mountains are extremely rich in water resources. Three of the most significant tributaries of the Maritsa spring from the Western Rhodopes(1).....(2).....(3). Its longest right tributary,(4), which flows into the Maritsa River outside the territory of Bulgaria, rises from the eastern part of the mountain. Numerous thermal mineral springs are found in the Rhodope Mountains, among which(5) are particularly important, where large amounts of water are bottled and one of the most visited healing resorts has developed –(6). The waters of the fast-flowing Rhodope rivers are regulated by large dams. In the Western Rhodopes, the most significant ones are: (7) on the Matenitsa River, and (8) on the Dospat River. In the Eastern Rhodopes, the town of Kardzhali separates the(9) and(10) dams along the Arda River Valley.

2. In the table, write the distinctive characteristics of the Western and Eastern Rhodopes related to the components of the natural environment. Draw conclusions about the similarities and differences between them. Write the numerical indices from the satellite image in front of each of the names of the geographical objects so as to match the object, its appearance, and location.

	Western Rhodopes	Eastern Rhodopes
Relief		
Climate		
Water		
Soils and vegetation		

3. For each natural landmark, write down the number from the map.



Chudnite mostove	Yagodinska cave	Snejanka cave	Trigrad	Dyavolsko garlo	Rock mushrooms
					

4. Assess the economic potential of the Rhodope Mountains. Write down:

four primary sector activities of national importance.

two secondary sector branches of national importance.

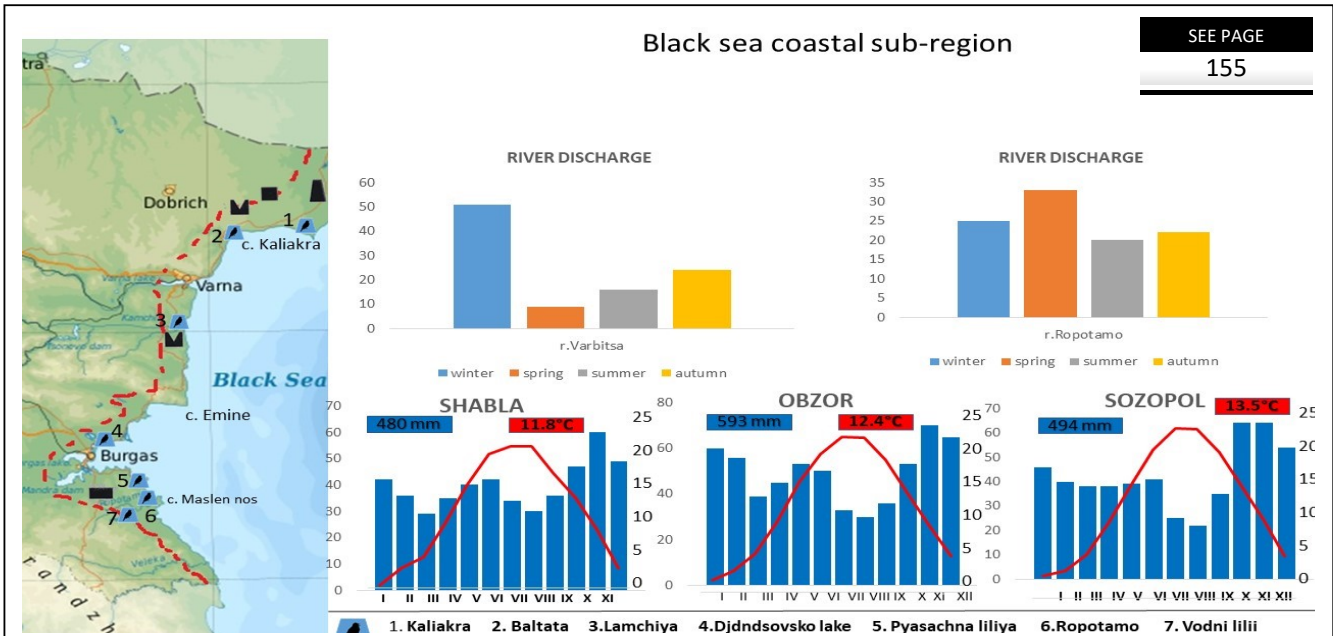
three types of tourism of national importance.

5. According to the assessment of specialists, our country has deposits of 20,000 tonnes of uranium. A significant part of the deposits are in the Rhodope Mountains (between Velingrad, Dospat and Smolyan). At the moment, they are not being developed. The reason is that in 1992 by decree of the Council of Ministers, all 48 existing uranium mines in Bulgaria and another 30 under construction, as well as both processing plants, were closed. The revival of uranium mining requires billions of euros of investment , as well as overcoming the resistance of environmental activists. However, the growing need for uranium and the rising prices on the international market periodically renew the interest of large global and Bulgarian companies in Bulgarian deposits.

Discuss the benefits and harms of this mining activity. Try to assess whether you would have a different opinion if you were residents of the listed Rhodope settlements. Express your strong opinion of "for" or "against" the resumption of uranium mining in Bulgaria, giving convincing arguments.

18. THE BLACK SEA. THE BULGARIAN BLACK SEA COAST

The Black Sea is an inland sea located between southeast Europe and Asia. The Straits of Bosphorus and Dardanelles connect it to the Marmara and Aegean Seas to the south, and the Kerch Strait to the Azov Sea to the north. The Black Sea covers 436,500 km². Its average depth is 1300 m and it has a maximum depth of 2245 m. The only larger peninsula is the Crimean Peninsula. The relief of the Black Sea valley includes shelf (24%), a continental slope (40%) and sea bottom (36%).



The salinity of the Black Sea is low – 18‰ (per mille), the average annual temperature of the surface layer is about 13°C. Sea waters freeze very rarely, usually during the coldest winters. In the Black Sea, two circles of sea currents are formed flowing clockwise. The tides are very weak.

The Bulgarian Black Sea coast is a strip with a width of 40 – 60 km and includes the easternmost parts of the Danube Plain, the Balkan Mountains region and the Thrace-Strandzha region. It starts from Cape Kartal and extends to the mouth of the River Rezovska (378 km). The northern and middle Black Sea shores are higher and steeper. Landslides are a serious problem for the North Coast. The coastline of the Southern Black Sea coast is more irregular and includes small coves and capes, the islets of St. Anastasia and St. Ivan, Nessebar and Pomorie Peninsulas, etc. The largest bays are Varna and Burgas. The sandy strips (beaches), which occupy about 24% of the Bulgarian coast, are of the greatest economic importance. Along the south coast, there are dunes with a height of 8 – 10 m.

Along the coast, there are deposits of manganese ore, copper ores and brown coal. Salt and lye are extracted from the lakes.

The Black Sea makes the climate of the coast milder. Temperatures rise from the north to the south, and the rainfall regime changes. In general, winter is mild, with a long frostless period; summer is warm and characterised by breezes.

The rivers flow directly into the Black Sea (the rivers Kamchia, Provadiyska, Ropotamo, Veleka, Rezovska). The karst springs in Dobrudzha and the mineral waters are of economic importance.

From the north to the south, soil types correspond to the soils of neighboring natural geographic areas – chernozem, gray forest, cinnamon forest, and rendzina soils. Yellow-earth soils are distributed along the Veleka River, and alluvial-meadow soils – along other rivers.

Due to the economic use of the area, the flora and fauna have limited distribution. Forests are preserved in Strandzha. Swamp forests develop along the lower currents of the rivers. The swamp forests of the Kamchia and Ropotamo rivers are especially beautiful. In order to preserve nature, the Golden Sands and Strandzha Nature Parks and numerous reserves have been set up.


TRAINING SECTION

1. Read the text and answer the questions:

Seaside lakes are a great asset for the Black Sea coast. They have been formed by marine abrasion and most of them occupy the estuaries of the Black Sea rivers. The deepest one is Varna Lake, formed at the mouth of the Provadiyska River, and the largest by area is Burgas Lake (on the Chakarliyska River). Some of the larger lakes are Atanasovsko Lake in the Bay of Burgas and Beloslav Lake, on which the port of Varna-West is built. Pomorie Lake is a lagoon. It is used for salt extraction due to the high salinity of the water. The mud from the lake is used for the treatment of a number of joint diseases. The healing mud of Balchik and Shabla lakes are used less.

- According to their origin, which group do most Black Sea lakes belong to?
- Why is the water in Pomorie Lake very salty?
- Which lakes perform port-transport functions?
- What are the economic activities whose development benefits from the favourable conditions in the Black Sea lakes?

2. Identify the Black Sea capes marked on the map. Write their names and corresponding numeric code against the descriptions in the table:



		Code	Name
	The Varna lighthouse is located on it		
Sea endpoint of the Balkan Mountains			
The easternmost point of Bulgaria			
Located near the town of Sozopol			
It is located near the mouth of the Ropotamo River			
The best shaped cliff on the coast			

3. Compare the natural features of the Dobrudzha and Strandzha coasts:

	Relief	Climate	River discharge
Dobrudzha coast			
Strandzha coast			

Explain the differences:

4. Look at the natural landmarks. Distinguish them by the specified criteria:

		
Shape of relief		
Way of formation		
Utilisation		
Tourist significance		

5. Assess the economic potential of the Black Sea coast. Write three economic activities for each of the coastal territories. Grade them by importance.

1. Shipping 2. Ecotourism 3. Extraction of raw materials 4. Maritime tourism

5. Trade 6. Cultural tourism 7. Agriculture 8. Fishing 9. Generation of wind energy

Dobrudzha coast	Varna Bay	Burgas Bay	Strandzha coast
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

6. Read the texts. Assess the problem. Read about similar situations in other coastal territories on the planet. Justify the need to implement sound regional risk management policies. Express an opinion on what the benefits of utilising the harmful gas will be.

The Black Sea, which can burn and destroy

Compared to other seas and oceans, underwater life in the Black Sea is extremely scarce. This applies especially to deep-sea species. This is not accidental because hydrogen sulfide, which is contained in the water layers, kills all living things. And the water layer saturated with this poisonous gas, in some areas begins at a depth of 50 meters. When it rises upwards, there may be a mass death of marine life.

The Black Sea is not the only one where the water is saturated with this gas, but in other places, the problem is less acute. The fact is that the Black Sea is one of the most closed seas. It has access to the oceans through the Bosphorus and the Dardanelles, which connect it to the Mediterranean Sea. Therefore, hydrogen sulfide, which is formed here, does not dissipate anywhere – it only accumulates. In addition, waste water and other pollutants reacting with seawater form new hydrogen sulfide. Experts say that very soon, the depth of the hydrogen sulfide layer in the Black Sea will be 15 meters. Poisoning of marine fauna is not the worst thing that can happen. Remember that hydrogen sulfide is explosive. The simultaneous explosion of such a large amount of gas by force can be comparable to the fall of an asteroid the size of half of the moon. In addition, hydrogen sulfide emerging from the deep sea and entering the atmosphere can cause intense acid rain. Such an amount of acid carried from the air masses and falling in the form of rainfall can destroy all life at a distance of tens of kilometers from the Black Sea coast.

Source: actualno.com

Hydrogen sulfide in the Black Sea waters can be a serious energy source

This was confirmed by the research of the international expedition led by Professor Benko Beshkov. Specialists from Bulgaria, Romania and Georgia, working on a European project, have been developing a system for extracting pure hydrogen or electricity by extracting hydrogen sulfide from the sea water. The scientists took samples from depths of 500 and 1,000 metres and identified the first results as encouraging. By the end of the year, they will also be able to prepare an installation with industrial parameters for processing hydrogen sulfide, from which they expect a serious effect.

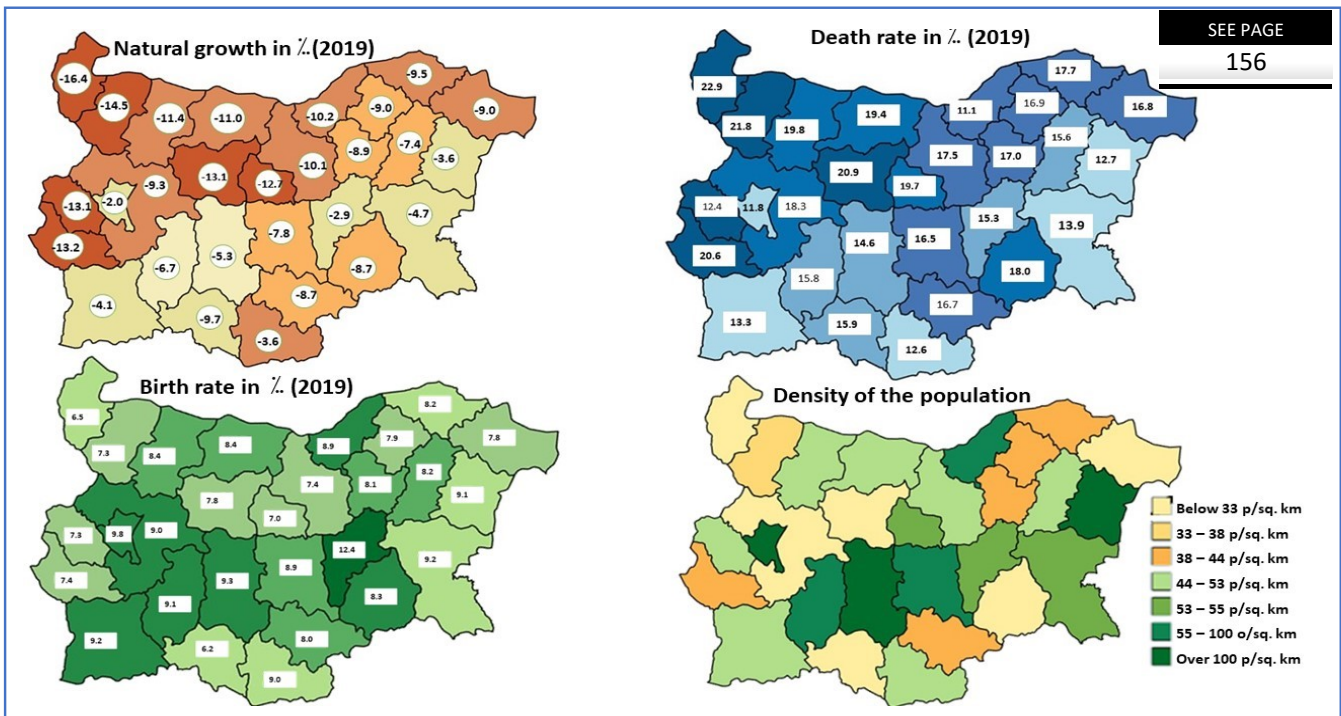
Prof. Wenko Beshkov, Director of the Institute of Engineering Chemistry at BAS: "First of all – a drastic decrease in the consumption and import of natural gas and oil in Bulgaria. The annual quantities that are formed are 10 times greater than those we import as the energy equivalent of natural gas. In addition, there would be no greenhouse emissions, no carbon dioxide in the air".

When using hydrogen sulfide, the processed waters will return to the same depth, so there is no danger to the upper sea layers. Theoretically, about 9 billion megawatt-hours of energy could be produced from hydrogen sulfides in the Black Sea. A similar pilot installation is already in operation in Turkey.

Source: **BNT**

POPULATION OF BULGARIA

19. NUMBER, DISTRIBUTION AND MOVEMENT OF THE POPULATION



SEE PAGE
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Population is the most important factor for the development of Bulgaria. The population is variable and its numbers are established by periodic censuses. The first official census was carried out in 1880. Until 1989 the number of the population was steadily increasing, and after that year it began to decrease.

At the end of 2020, it was below 6.9 million people. The reasons for the population decline are low birth rates and migration.

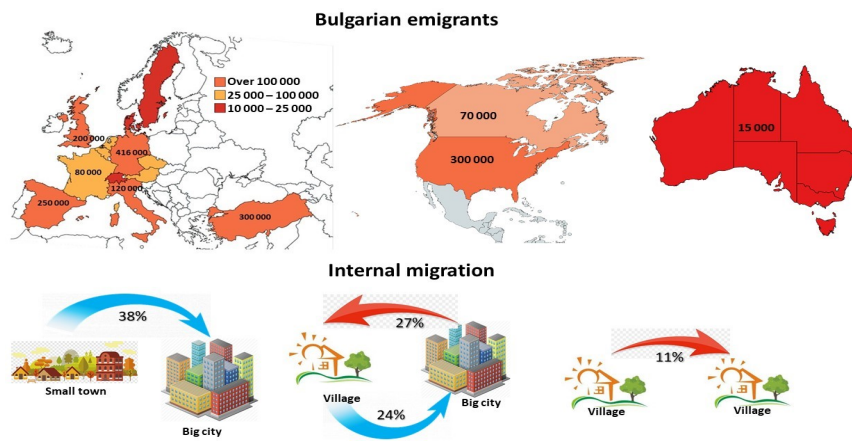
The population is unevenly distributed. The natural conditions and social factors contribute to this trend. The average population density in 2020 was 62.3 people/km². The Sofia hollow, the Upper Thracian Lowland, the Black Sea coast are densely populated, and there is a small population density in Kraisheto, the Central Balkan Mountains, Sakar, Strandzha and Northwestern Bulgaria.

There are two types of fluctuation of the population – natural and mechanical. The natural fluctuation is the reproduction of the population. It is measured by the following demographic factors: birth rate (8.5‰ for 2020), death rate (18.0‰ for 2020) and natural increase (-9.5‰ for 2020). An important indicator of the living standards is the infant death rate (5.1‰ for 2020). It represents a ratio between the number of deceased children up to one year old per 1,000 live births. It is measured in per mille (‰).

The mechanical fluctuation of the population represents a change in the place of residence. The factors influencing this fluctuation are: natural, economic, social, political, etc. Migrations are internal and external. Internal migrations take place within the country. External migrations are divided into emigrations (relocation of Bulgarians abroad) and immigrations (settlement of foreigners in Bulgaria).

Bulgaria is among the countries with the first type of reproduction characterized by low birth rate, high death rate and negative natural growth. The country is suffering from a severe demographic crisis.

The demographic problems in the country are related to the decrease and ageing of the population, its uneven distribution on the territory of the country, the low birth rate, and the high death rate.



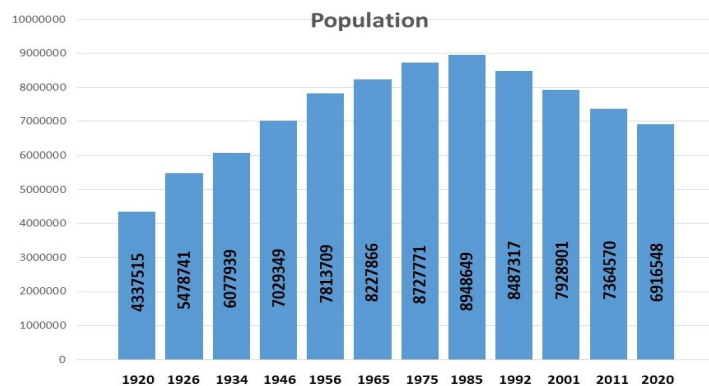
TRAINING SECTION

1. Read the text and tick the correct statements:

About one million Bulgarians live abroad. Over the past three decades, both young men and women and entire families have emigrated from Bulgaria. The motivation for almost everyone is economic – seeking better professional realisation and a standard of living. A driving motivation for some of the migrants is the pursuit of a better education. The most worrying trend is that the vast majority of immigrants are young people. Their emigration affects both the reproduction of the Bulgarian population and the labour market in the country. Another serious problem is the emigration of qualified specialists, which affects important sectors in Bulgaria. The fact that a significant proportion of young medical professionals are looking for professional realisation outside the country's borders is particularly worrying.

Statement	<input checked="" type="checkbox"/>	Statement	<input checked="" type="checkbox"/>
Due to migration, the population has decreased by 2 million.	<input type="checkbox"/>	Mostly young people migrate	<input type="checkbox"/>
Good education is one of the causes of migration	<input type="checkbox"/>	Health care suffers greatly from migrations	<input type="checkbox"/>
Migrations ease labour market problems	<input type="checkbox"/>	The causes of migration are mainly family relative	<input type="checkbox"/>

2. Look at the diagram and explain the causes that led to the changes in the size of the population:



.....

.....

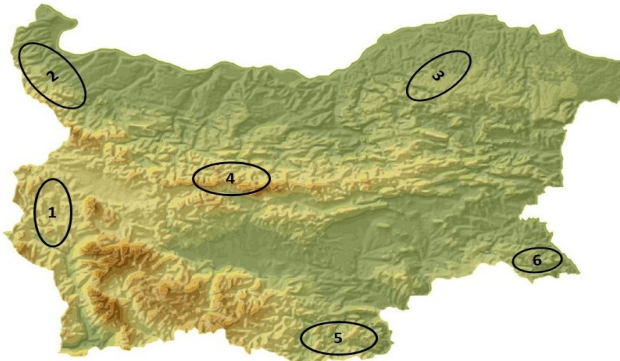
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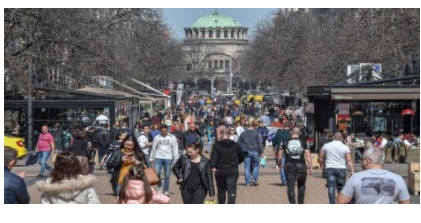

.....

3. Write the area codes in the table, assess the demographic situation and prove the objectivity of your assessment.



Region	Demographic situation	Evidence
Strandzha		
Kraishte		
Northwestern Bulgaria		
Ludogorie		
Eastern Rhodopes		
Central Balkan Mountains		

4. Comment on the demographics and the problems shown in the photos:

		<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>Vitosha Boulevard</p>	<p>A village in the Northwest</p>	

5. List five consequences of the deteriorated natural population increase. Then make three suggestions for the improvement of this indicator.

Consequences

Suggestions for the improvement

6. Since joining the European Union, Bulgaria has been divided into 6 planning districts. As of 2007, each of the regions had a population of over 1 000 000 people. In 2020 the population of the Northwestern Region is 720 172 people, and the North Central Region – 764 897 people. With a view to fair planning, allocation and absorption of European funds, the Union insists that statistical regions include at least one million inhabitants. Think about what the consequences will be for both regions in relation to the population change and what steps need to be taken to meet the EU requirements.

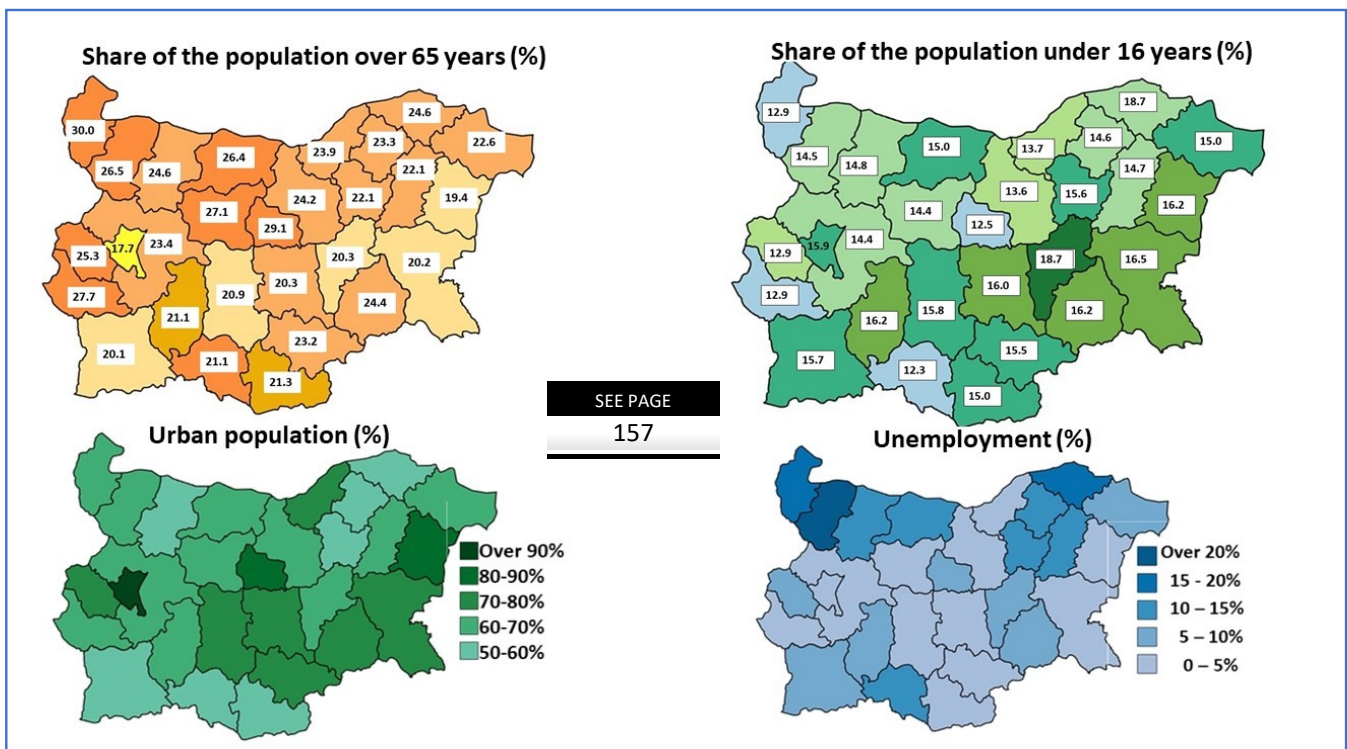
20. POPULATION STRUCTURE

The structure of the population shows the grouping of people by certain indicators - gender, age, religious affiliation, education, employment, etc. The population of Bulgaria is divided into the following structures:

Gender structure – it shows the grouping of the population by gender and the ratio between men and women in the country. Today, the female population prevails over the male population (1,060 women per 1,000 men). The reasons are the shorter life expectancy for men and the emigration.

Age structure – shows the ratio between different age groups. According to their reproductive capabilities population is divided into children (aged <15), parents and grandparents (aged >50). Another classification divides population according to working abilities – below working age (< 16), in working age and beyond working age (>65). Social, economic, political, and other factors have an impact on the age structure. A serious problem in the country is the ageing of the population.

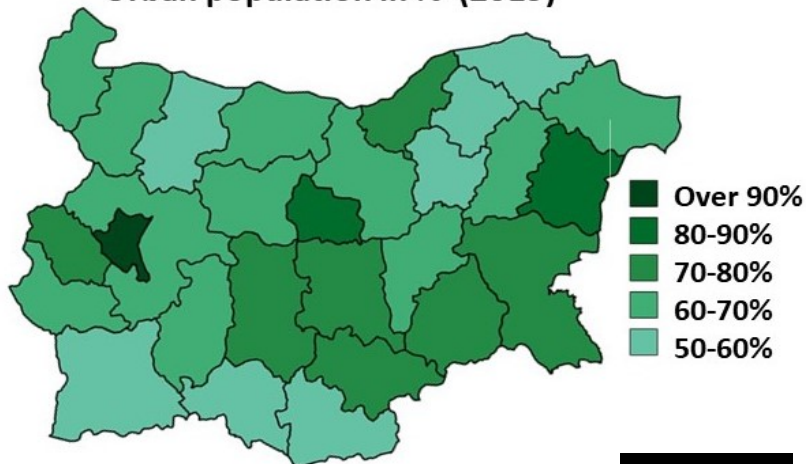
Ethnic structure – these are ethnic groups living in Bulgaria. Ethnicity is a large group of people inhabiting a particular territory and united by common interests. The main ethnicity in Bulgaria is that of Bulgarians, followed by Turks and Romani or gypsies, but there are also some small ethnic groups – ethnic minorities.



Religious structure – expresses the ratio of people according to the professed religion. The main religion in Bulgaria is Eastern Orthodox Christianity. Almost all Bulgarians are Christians. The head of the Bulgarian Orthodox Church is the Patriarch. Islam is the second most common religion in the country.

Structure of education – there are several education levels: elementary, primary, secondary, and higher education. This structure shows the share of the population according to the degree of education completed.

Urban population in % (2019)



SEE PAGE

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Structure-based on the place of residence – it shows the ratio between the rural and urban population. By the middle of the 20th century, the rural population prevailed, and after the end of The Second World War, the urban population grew to about 73 % because of mass migration from villages to cities.

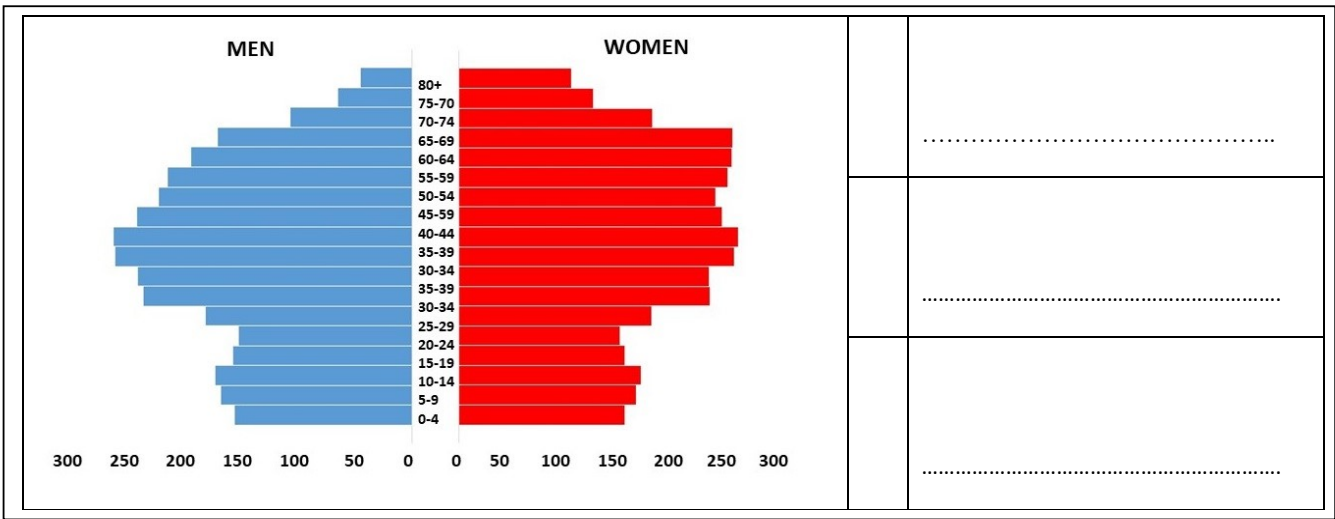
Labour force, labour resources. The concept of labour resources also includes the concept of labour force. Labour resources comprise the economically active and economically inactive population of the country. The labour force (the economically active population) includes all employees and the unemployed. The population that does not work and is not looking for work belongs to the economically inactive population. In Bulgaria, employment in the field of services is the greatest.

The ageing population, rural depopulation and unemployment are major demographic problems in Bulgaria. There is a demographic policy, including childbirth promotion, cash allowances, free medical care, etc.

TRAINING SECTION

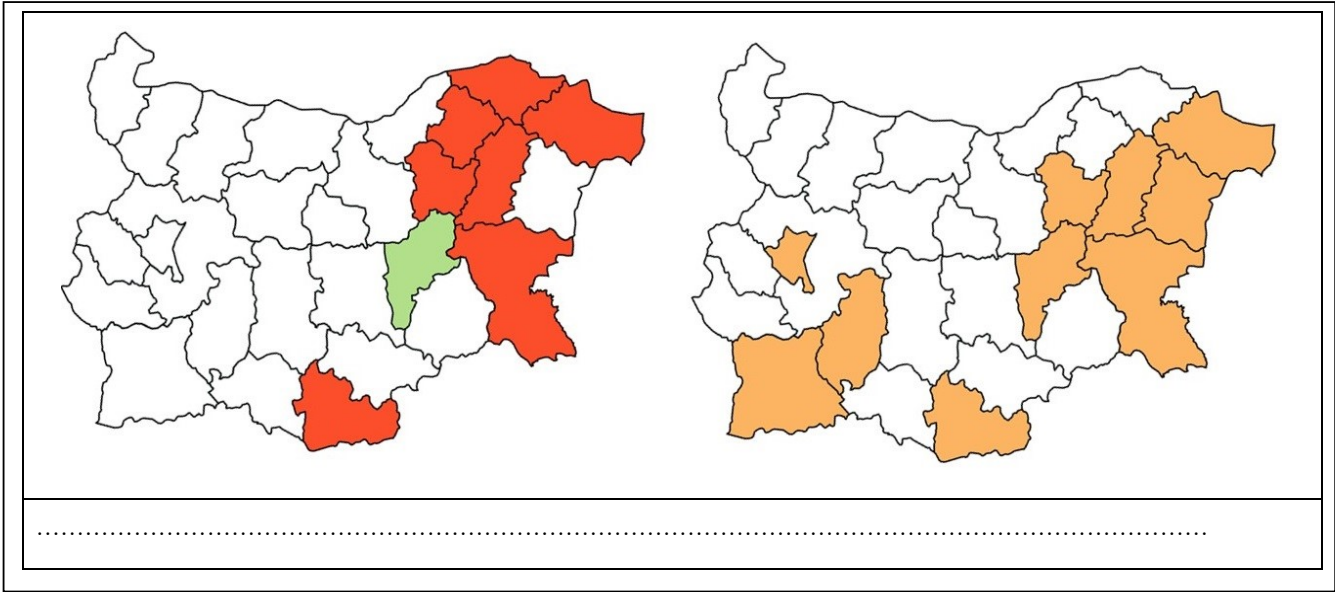
1. Read the text and check if it corresponds to the pyramid. Determine which sentences are wrong and correct them.

The gender-age pyramid shows the distribution of the population by gender and age. The pyramid is irregular, which is evidence of an ageing population. However, the share of the population below working age (aged < 16) is still more than the elderly population (beyond working age - > 65). It is evident that the male population is bigger than the female population, except for the youngest age groups, where girls dominate. This is explained by the fact that more men emigrate among the young population, leading to an imbalance between the sexes.



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2. Take a look at the maps. Determine how many areas overlap. Explain the connection. Areas with the largest share of Turkish and Roma population. Areas with the lowest share of population over 65.

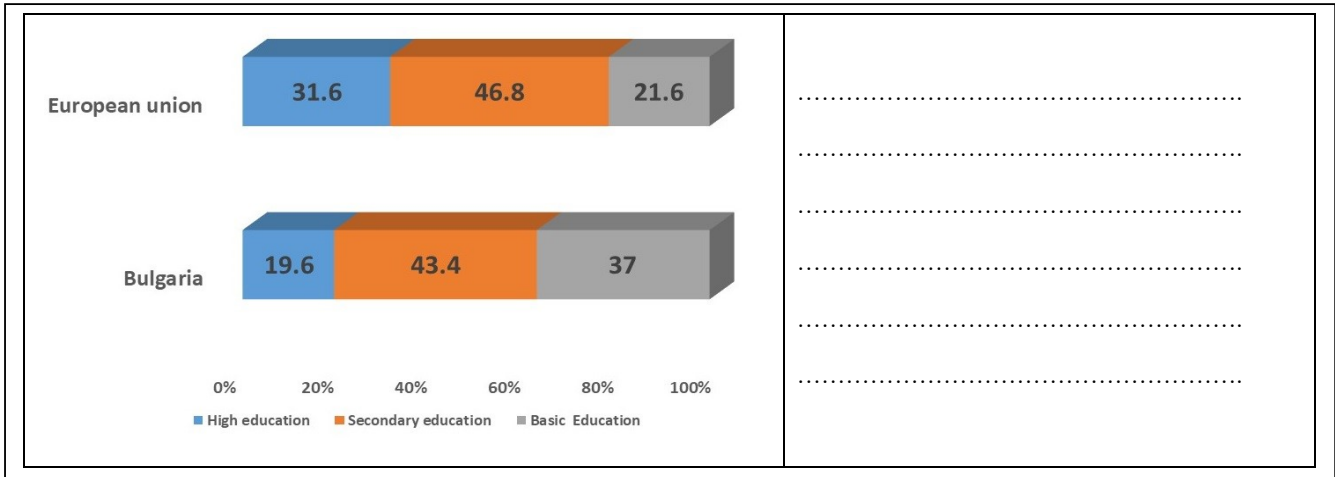


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3. Write the numerical code of the characteristic related to the dominance of rural and urban population in the circles:

	<ol style="list-style-type: none"> 1. Larger young population 2. Worse education structure 3. Lower employment rates and more unemployed people 4. Ageing 5. Higher level of education 6. Better employment rates
--	---

4. Look at the diagram. Compare education in Bulgaria and the EU. Draw conclusions.



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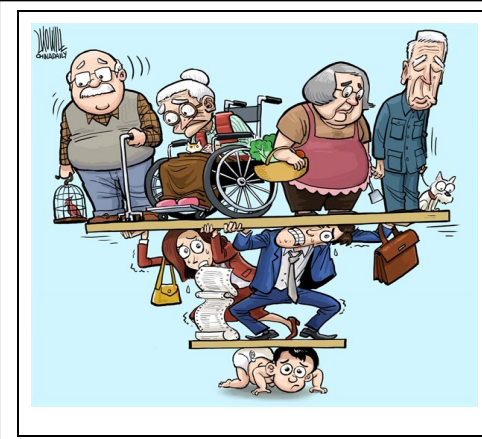
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5. Analyse the cartoon's explicit and hidden messages and answer the questions:



1. Which population structures do you associate the image with?
.....
2. What important social warning does the cartoon contain?
.....

6. A great number of municipalities in Bulgaria are in a severe demographic crisis. Step into the role of mayor of one of these municipalities. A large European investor is interested in the construction of a modern plant. He wants a meeting with you to get acquainted with the conditions you can offer him. You really want to convince him to invest but you have a serious dilemma. You are aware that this is a great chance for the municipality, and can have a long-term impact on its economic and demographic situation. On the other hand, you worry that due to an ageing population, you cannot provide sufficient and skilled labour. Put forward a suggestion on how you could guarantee the investor stability and workforce in order to get the vital investment.

SETTLEMENTS

21. SETTLEMENTS

Settlements are the concentration of population on a territory with suitable living conditions. The social, cultural, economic, and political life of the population develop in the settlements. All settlements on the territory of the country form a settlement network. The first settlements on our lands appeared as early as antiquity. The main factors that determine the appearance of settlements are natural and social factors.

Thracian cities	Greek cities	Roman cities	Old Bulgarian cities
Serdika (Sofia)	Odesos (Varna)	Sexaginta prista (Ruse)	Pliska
Pulpudeva (Plovdiv)	Apolonia (Sozopol)	Bononia (Vidin)	Preslav (Veliki Preslav)
Kabile (Yambol)	Mesemvria (Nesebar)	Augusta Trayana (Stara Zagora)	Tarnovgrad (Veliko Tarnovo)

Initially, settlements developed along the valleys of the Tundzha, Maritsa, Arda, Struma rivers, as well as along the Danube and the Black Sea coast. The oldest settlements developed at the time of the Thracians. The first towns (Preslav, Pliska, Veliko Tarnovo, Shumen) developed with the establishment of the Bulgarian state in 681. During and after the Ottoman rule, different types of settlements emerged – settlements related to craft, commerce, industry, transport, trade as well as mountain, sea and resort settlements.

The settlements in Bulgaria are of two types – settlements and settlement formations. Settlements have a permanent population. They, in turn, are divided into villages and towns. Villages emerged earlier than cities. Their population is engaged in agriculture, while in towns mainly industry, trade, services, etc. are developed. Most villages are located in fertile areas - the Danube Plain, the Upper Thracian Lowland, etc. Today, their number is about 5,000.

There are 257 towns in Bulgaria. Many of them developed on the site of older settlements and today there are preserved remains from the time of the ancient Greeks, Romans, Proto-Bulgarians, Thracians, and Slavs. According to their population size (the number of individuals living there), towns are divided into: very large (cities), large, medium-sized, small, and very small towns (p.158). Cities perform different functions. Sofia has unique functions, larger cities perform complex functions, and small towns are single-functional.

Some settlement formations do not have a permanent population. These include resorts and industrial settlements.

Urbanisation is a lengthy and complex process in which the number and importance of cities increase, as well as the number of urban populations. The merger of cities leads to the formation of urban agglomerations.

The largest villages			Classification of cities by function	
	Village	Region	Function	Example
6000	Lozen	Sofia	Unique (capital)	Sofia
	Aidemir	Silistra	Complex functions	
5000	Draginovo	Pazardzhuk	Administrative, industrial, transport cultural, touristic	Plovdiv, Burgas , Varna Ruse, Stara Zagora
	Kazichane	Sofia	3+ functions	
	Bistritsa	Sofia	Administrative, industrial, transport cultural, touristic	Pernik, Blagoevgrad, Silistra, Gabrovo, Vratsa
	Malo Konare	Pazardzhik	2 functions	
	Rozino	Plovdiv	Industry and transport	Levski, Mezdra Kaspichan
	Trud	Plovdiv	Agriculture and industry	Byala Slatina, Chirpan
4000	Gradets	Sliven	Industry and tourism	Teteven, Peshtera
	Bukovlak	Pleven	Industry and resort	Sandanski, Velingrad
			1 function	
		Spa resort	Bankya, Varshets	
		Mining	Bobov dol, Radnevo	

The problems of the settlements in Bulgaria are related to the migration of the population from the villages to the cities, from small to larger cities and the resulting consequences – depopulation. Other problems are environmental pollution, lack of green areas, high noise levels, etc.

TRAINING SECTION

1. Read the text and answer the questions:

Twenty-four villages have disappeared from the map of Bulgaria in 2019 only. “The depopulation of the villages is continuing at a rapid pace and that has not started today, but has been like that for years”, commented Magdalena Kostova of the National Statistical Institute. For the specialists in demography from the Bulgarian Academy of Sciences, the problem is that in Bulgaria, more than 1100 settlements have between 1 and 50 people and the trend for depopulation cannot be reversed. Many of them are inhabited only by a few old people. The largest number of deserted villages is in the districts of Veliko Tarnovo and Gabrovo, as well as in the Elena Balkan. The population in the regions of Vidin and Vratsa is also greatly reduced. There are still young families who prefer to abandon the comforts of the urban environment for the clean air and tranquility of the village.

One in five migrants replaces their flat with a country house, but the number of rural residents who move permanently to the city is much higher.

Source: Plovdiv 24

A. What are the reasons for hundreds of villages in Bulgaria to disappear from the map?

.....

B. In which parts of the country is the greatest number of depopulated villages?

.....

C. Which demographic process is the greatest threat for villages in the future?

.....

2. Determine the factor that had the greatest influence on the emergence and development of:

A strategic settlement on the site of today's Varna originated in antiquity.

Many of the largest villages are located in the Plovdiv-Pazardzhik field.

Pernik was a small settlement before coal deposits were discovered at the end of the 19th century.

Velingrad has established itself as a national centre of balneotherapy.

3. Write the given cities in the relevant category. Cities can't be repeated.

Karlovo, Ruse, Varna, Burgas, Pleven, Bankya, Melnik, Oryahovo, Sofia, Chepelare, Lovech, Haskovo

Geographical location	Examples	Number of inhabitants	Examples	Functions	Examples	Relief
A crossroads location		large		unique		mountainous
At the Danube		average		complex		plain
At the Black Sea		small		single function		valley

4. Look at the photos of the city of Plevna. Which social process led to the expansion of the city? In your opinion, during what period did these changes take place and what are the reasons for them?



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5. What territorial forms are presented on the map? Write them.

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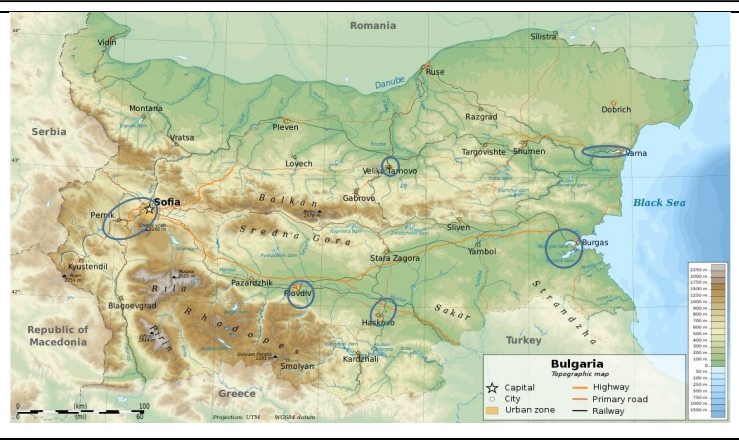
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6. Imagine you were a member of a youth team and are about to participate in a press conference on the issues of your home village and the region. To prepare, you need to look into and evaluate the credibility of media coverage of important social and economic topics. Individually, compile a list of ten titles that have been present in regional electronic and/or print media for the past month and which you define as significant. Compare the lists, analyse the matches, and use them as a basis to build a common profile of problems in your settlement. Have a plenary (class) discussion on the following issues:

- A.** Which of the topics are you really interested in and would like to express your position on?
- B.** What information from which sources would you trust in preparing your argument?
- C.** Are you more optimistic or more skeptical of the institutions' assurances that young people's position on the settlement problems is important and taken into account when seeking solutions?

22. POLITICAL SYSTEM AND GOVERNMENT

PUBLIC AUTHORITIES

Legislative

Executive

Judicial

**National
Assembly**

**Council of
Ministers**

**Prosecution
Court**

**Regional
administrations**

The form of the political system is determined by the basic law of Bulgaria – the Constitution. Since the Liberation, four constitutions have been adopted, the oldest being the Tarnovo Constitution of 1879. On 12th July, 1991, the Seventh Grand National Assembly adopted the country's newest constitution. Bulgaria is a parliamentary republic, and according to its political system, our country is a unitary state. Bulgaria is a democratic country with a multi-party system. Any Bulgarian citizen over the age of eighteen can participate in the elections for President, Parliament, Members of the National Assembly, Municipal Councillors and Mayors. Every citizen has the right to education, health care, choice of religion, etc.

**NATIONAL
ASSEMBLY**

**COUNCIL OF
MINISTERS**

JUDICIARY

Adopts the
budget

Implements the
budget

Protects rights

Passes laws

Implements foreign
and domestic policy

Protects citizens'
interests

Elects the Council
of Ministers

Ensures public order

Protects the interests
of legal entities

Ratifies
agreements

Head of state
administration

Protects the interests
of the State

PRESIDENT

Head of state

Supreme
Commander-in-
Chief

Represents the
State

The President of the Republic of Bulgaria is the country's **Head of State**. He has a five-year term of government. In his work, the President is assisted by a Vice President.

The legislative power is carried out by the National Assembly (Parliament), which makes and adopts the laws. The Parliament consists of 240 Members of Parliament (MPs) who are elected every four years.

The executive power is carried out by the Council of Ministers (the Government), which ensures order, security and defence in the country. The Council of Ministers includes a Prime Minister, Deputy Prime Ministers and Ministers who head separate ministries.

The judiciary is independent and protects the rights and interests of citizens. The main body of the judiciary is the Supreme Judicial Council, which includes 25 members elected for a term of 5 years.



Bulgaria is an independent state with its own symbols of state power – a coat of arms, a flag, a national anthem. The country is a member of a number of global and regional organisations.

The administrative-territorial planning is a major and very important feature of state government. The country is divided into administrative units – districts, municipalities, local councils. The territory of Bulgaria is divided into 28 districts. The districts are managed by district governors and district administrations. Each district includes municipalities, whose total number in the country is 265. The municipalities are bodies of local self-government which is carried out by a mayor and a municipal council. The municipalities are divided into local councils, and the three largest cities in Bulgaria (Sofia, Plovdiv, Varna) are divided into boroughs.

LOCAL AUTHORITIES

Municipal Council

Mayor

MUNICIPAL COUNCIL	MAYOR
Adopts local budget	Represents the municipality
Adopts local regulations	Implements decisions of the Municipal Council
Adopts local taxes and fees	Head of the municipal administration

ELECTIONS

President

National Assembly

EU Parliament

Mayor and municipal councillors

	President	National Assembly	EU Parliament	Mayor and councillors
Term	5 years	4 years	5 years	4 years
Chosen by	All Bulgarian citizens over the age of 18	All Bulgarian citizens over the age of 18	Bulgarian citizens in EU Member States	All citizens over the age of 18 with an address in the respective municipality

TRAINING SECTION

1. Mark the districts in Bulgaria on the map. On each district write the number of municipalities it comprises.



2. Who should they approach?

- A. A group of ecologists submit a petition against construction in a national reserve
- B. A relative of yours wants to manage a hereditary property and needs a certificate of inheritance
- C. Young lawyers want to propose an amendment to the electoral code
- D. Your neighbour's child needs an expensive treatment and she hopes to get financial help
- E. A well-known journalist has been insulted in public and is seeking protection in
- F. A man who has served most of his unfair sentence is going to ask for amnesty

3. In its history Bulgaria has had four constitutions. Read the texts and mark which constitution they apply to.

It defines Bulgaria as a hereditary monarchy with national representation. **(1)**

It advocates freedom of the press and the right of association. **(4)**

It defines Bulgaria as a People's Republic. **(3)**

It refers to public ownership as the main support of the state in the development of the national economy. **(8)**

It introduces the leadership role of the Bulgarian Communist Party in the development of society. **(2)**

It establishes the State Council as the highest body of state power. **(7)**

A real separation of powers (legislative, executive and judicial) is introduced for the first time. **(5)**

The presidential institution was introduced. **(6)**

the 1979 Constitution	the 1947 Constitution	the 1971 Constitution	the 1991 Constitution

4. Fill in the table by putting a tick for the institution with the relevant power:

	PRESIDENT	PARLIAMENT	MAYOR	MUNICIPAL COUNCIL
Appointment of a Prime Minister				
Change in the amount of the municipal waste charge				
Awarding symbols to honorary citizens				
Amendment to the Education Act				
Amendment to a local regulation				
Election of the Council of Ministers				
Scheduling national elections				
Appointment of Regional Governor				

5. After the parliamentary elections in April 2021, Bulgaria found itself in a constitutional case. The first, second and third political powers failed or were reluctant to form a government. Who took the responsibility of being an arbitrator in the situation and how was the case resolved?

23. NATIONAL ECONOMY

The national economy is a set of economic activities combined into sectors and industries. It reflects the interaction between population, natural resources and markets. Its organisation and management aim to improve the quality of life and protect the environment. The main activities of the national economy are the production, consumption and exchange of goods and services, and the market is the main mechanism for managing the economic system through demand, supply and price.

The national economy consists of economic sectors: primary (extracting), secondary (processing), and tertiary (service sector). A fourth sector based on the development of high technology is also being established.

Various factors have an impact on the national economy: natural, demographic, socioeconomic, scientific and technical, environmental. Of all the natural factors, the natural resource potential is of the greatest importance. The country has non-ores, but has poor deposits of ferrous ores and fossil fuels. Bulgaria is rich in forest and land resources.

FACTORS FOR THE DEVELOPMENT OF NATIONAL ECONOMY

GEOGRAPHICAL LOCATION	NATURAL GEOGRAPHICAL					SOCIOECONOMIC			DEMOGRAPHIC	ENVIRONMENTAL		
	relief	climate	water	soils, forests	raw materials	international labour division and markets	scientific and technical progress	membership in the EU	infrastructure	transport	the population as a consumer	labour resources

The demographic factor influences through the size of the population (the number of people) as consumers, the proportion of employed people, their education, qualifications, etc.

When referring to the group of the socioeconomic factors for the development of the economy, those with the greatest influence are raw materials, scientific and technical progress, transport and markets, the EU.

The environmental factor affects the degree of environmental change resulting from economic activity.

Geographical location	Natural Geographical	Socioeconomic	Demographic	Environmental
A crossroads location	Options for construction	International specialisation	Domestic consumption	Reducing pollution
Proximity to markets	Development of outdoor activities	Logistics and use of scientific achievements	Age composition of the population	Use of environmental technologies
An outlet to the sea	Availability of resources	EU subsidies and loans	Qualifications of employed people	Ecological

The economic indicators of Gross Domestic Product (GDP) and Gross National Product (GNP) are used to analyse and assess the development of the national economy. GDP is the monetary expression of goods and services for final consumption produced in one year. GNP is the monetary value of GDP plus all income from Bulgarian companies abroad, minus the revenues of foreign companies in the country. In addition to being compared directly, the two indicators can also be calculated per capita, which reflects more accurately the state of the economy when compared with other countries' economies.

PERIODS IN THE DEVELOPMENT OF THE ECONOMY

After the Liberation

Promoting small private property

Protection of local production

Agriculture is extensive but leading in gross product

Light and food industry products dominate industrial production

After World War II

Centralised economy with state ownership consolidation

Nationalisation and collectivisation

Transition from centralised to market economy

Limited trade relations in the Council for Mutual Economic Assistance

Energy, raw material, and environmental crises

After 1990

Transition from centralised to market economy

Restoration of private property

Privatisation and restitution Attracting foreign investments

Currency Board/ Monetary Council

Accession to the European Union

1. Read and write down the benefits and the disadvantages of Bulgaria's accession to the European Union:

In 2007 Bulgaria joined the European Union after long negotiations and a signed contract with the Union. In the negotiation process, Bulgaria accepted a number of economic and political requirements and harmonised the Bulgarian legislation with that of the Union. With full membership, Bulgaria gained access to the large European market and a number of social advantages. Among the biggest advantages is the opportunity for all Bulgarian citizens to travel freely and without restrictions in the countries of the Union. Access to the labour market and the EU budget is of great importance. European subsidies finance significant projects of business, farmers, modernisation of infrastructure, education, and health.

2. Write examples of the shown impacts between the sectors:

Primary sector		Secondary sector	
Secondary sector	➔	Tertiary sector	
Tertiary sector	➔	Primary sector	
Tertiary sector	➔	Secondary sector	
Secondary sector	➔	Primary sector	

3. Identify the leading factor that underpins the statements made about the economic activities:

Most of the grain in Bulgaria is produced in the Danube plain.

In recent years several modern clinics have been built in Pleven.

The largest chocolate factories operate in Sofia and the nearby town of Svoge.

The Maritsa Iztok Energy Complex is a leading producer of electricity.

Shipbuilding is one of the important specialisations of Varna.

Dozens of Bulgarian companies produce components for leading car brands.

4. Match the concepts to their explanations:

Nationalisation		Restoration of private property that was taken away
Currency Board		Closure of loss-making enterprises and development of profitable ones
Restructuring		Denationalisation of property
Restitution		Fixing the exchange rate of BGN to a stable currency
Collectivisation		Seizure of private property by the State
Privatisation		Introduction of a collective form of ownership in agriculture

5. Calculate GDP per capita and determine Bulgaria's place on the Balkan Peninsula:

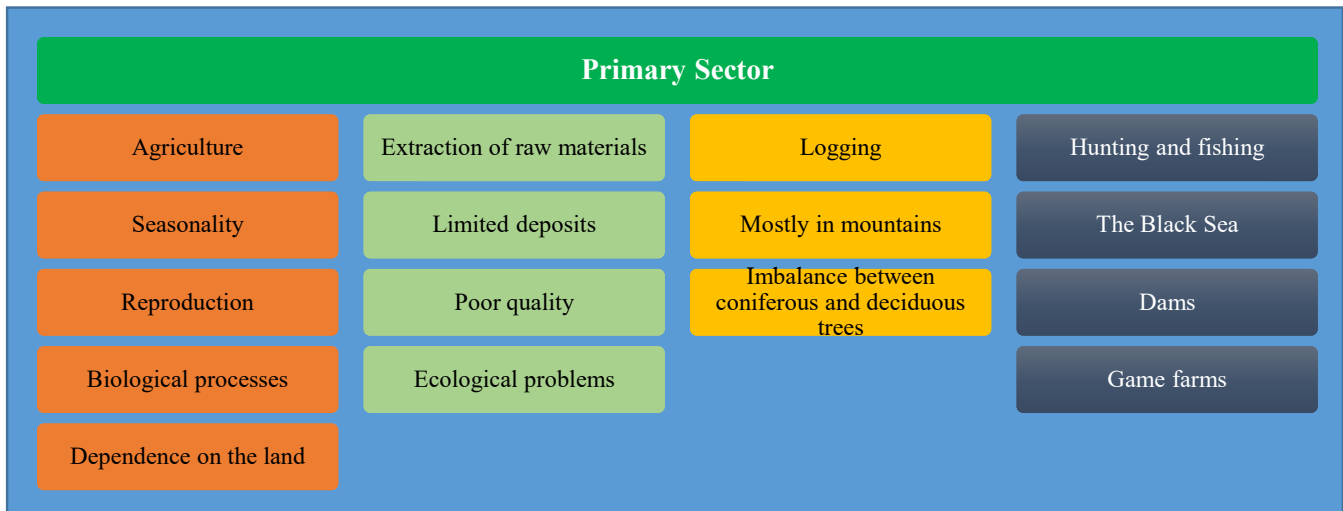
Country	ABSOLUTE VALUES ACCORDING TO DATA BY 2020			Country rating by GDP/per person
	GDP (in billion dollars)	Population size (in number of people)	GDP/per capita	
Turkey	761	85 355 179		
Romania	250	19 093 603		
Greece	205	10 365 905		
Bulgaria	77	6 916 548		
Croatia	65	4 076 844		
Slovenia	59	2 079 259		
Serbia	60	8 697 870		
Bosnia and Herzegovina	22	3 257 908		
Albania	17	2 847 272		
North Macedonia	14	2 083 278		

6. Bulgaria has been a member of the EU for 14 years. Our country already enjoyed European financial support during two budgetary periods – 2007 – 2013 and 2014 – 2020. Despite the progress, our country lags behind other Eastern European countries that have joined the union in the last twenty years. It is often commented that Bulgaria is using European funds insufficiently. In your opinion, what are the actions that need to be taken by the responsible institutions in order to improve the business climate in Bulgaria and increase the interest of foreign investors, respectively?

24. PRIMARY SECTOR – GENERAL CHARACTERISTICS

The primary sector includes activities for exploration, evaluation and extraction of various natural resources. It includes: agriculture, extraction of raw materials, logging, hunting, and fishing. The development of the primary sector is determined by natural and social factors and influences the development of the secondary sector.

Agriculture includes crop farming and livestock breeding. Agriculture provides a livelihood for the population, raw materials (plants and animals) for the light and food industry. It employs mainly the population of the villages. Agriculture is widespread and has a seasonal character (mainly crop farming).



Land is a basic means of production. The utilised agricultural area includes arable land, permanent crops, family gardens, etc. Arable land is used annually for crop rotation. Natural and social factors influence the territorial and sectoral structure of agriculture. Natural factors include relief, climate, water, soils, and public factors include the population as a producer (workforce) and as a consumer of agricultural products. The importance of scientific and technical factors and the application of agro-techniques is gradually increasing.

Agro-techniques			
Mechanisation	Chemicalisation	Melioration	Biologisation
Mechanisation of land cultivation	Fertilisation	Irrigation	Cultivation of productive and sustainable plant varieties
Mechanisation of harvesting activities	Plant protection chemicals	Drainage	
Mechanisation of livestock farms	Veterinary medication		Selection of productive and healthy breeds

Energy and mineral resources are used in industry and construction. Bulgaria has fossil fuels. Despite their limited quantities, they determine the development of energy. Ores are the basis for the development of black and non-ferrous metallurgy. Non-ores are the raw material base for the development of the chemical industry and construction. Raw materials are unsustainable and non-renewable, so their rational use is a necessity. Their extraction is accompanied by a number of environmental problems, as it disrupts the environment. The extraction of sea salt from the salt pans near Pomorie and Burgas is also important.

Logging provides a raw material base for wood processing, furniture, pulp, and paper industries. Its development depends on forest resources (unsustainable, renewable). Logging takes place in the mountainous and semi-mountainous regions. Forest fires and illegal logging are the problems in this industry.

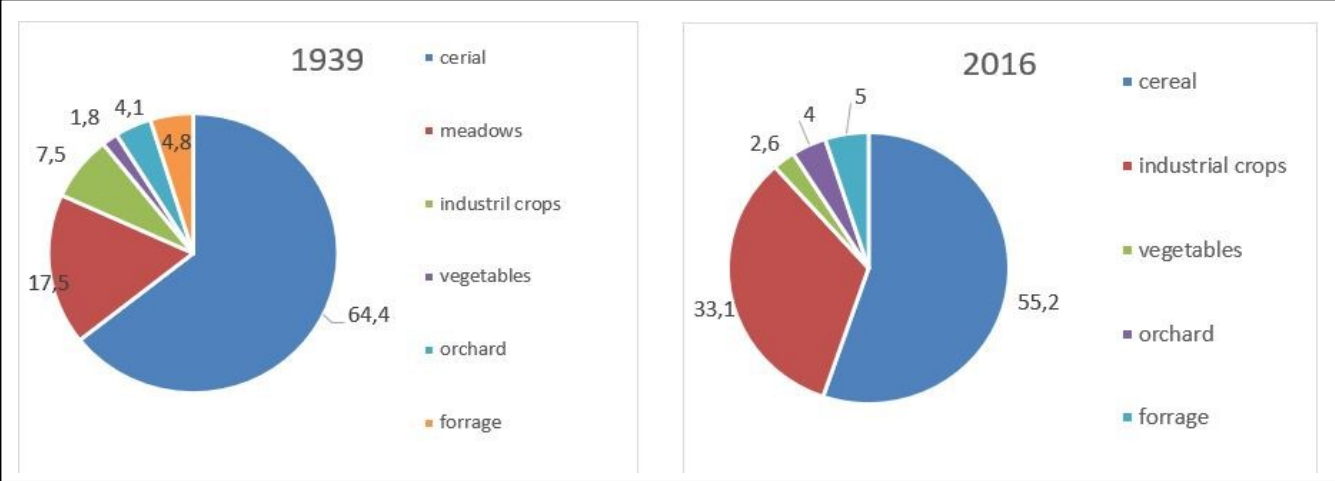
Hunting and fishing provide raw materials for the food industry. Hunting is related to game breeding and the development of hunting tourism. Fishing takes place mainly in the waters of the Black Sea and the Danube River, and in the interior of the country, mainly on fish farms.

TRAINING SECTION

1. Match the terms with their definitions:

Vertical integration	Increased production with an increase in the areas used and the number of animals
Extensive agriculture	Production link between crop farming and animal husbandry
Intensive agriculture	Manufacturing link between agriculture and processing industry
Horizontal integration	Higher production as average yields increase

2. Compare the diagrams that represent the structure of arable land (in relative share). Identify the statements that do not correspond to the graphically presented data.



Cereals retain a leading share in plant production (1). Growing vegetables and fruit (2) is steadily increasing. Forage crops continue to occupy a small but stable share in plant production (3). The share of industrial crops doubled in 2016 compared to 1939 (4).

False statements.....

3. Put the X factors influencing primary sector activities in the table:

Factor	Agriculture	Extraction of raw materials	Logging	Hunting and fishing
Labour resources				
Scientific and technical progress				
Climate				
Relief				
Transport				

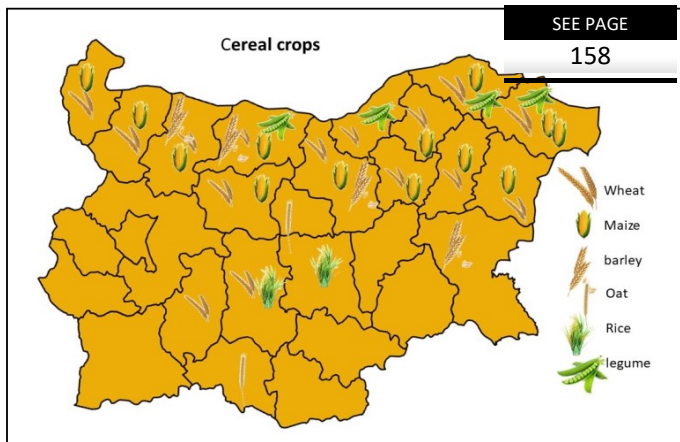
4. Write down one economic and one environmental consequence of poaching and unauthorised logging. How do you, institutions and civil society respond to these activities?

Poaching			Unauthorised logging		
.....

5. Hunting is an activity controlled by the Executive Forest Agency. It brings revenue from individual and organised hunting tourism and the sale of game meat and products, the production of hunting weapons, gear, and equipment, etc. At the same time, environmental organisations are pushing for major changes to the Law on Hunting and Conservation of Game in Bulgaria (in force as of 2018). Step into the role of an MP who has become familiar with the positions of both sides. What question would you ask the Minister of Agriculture, Food and Forestry during the parliamentary scrutiny related to the problem described?

25. CROP FARMING

The development and territorial characteristics of plant production depends on the soil and climatic conditions and the quality of arable land. It has a seasonal character. Crop farming is a raw material base for livestock breeding and industry. The branch structure of crop farming combines grain production, cultivation of industrial crops, perennials, and vegetable production.



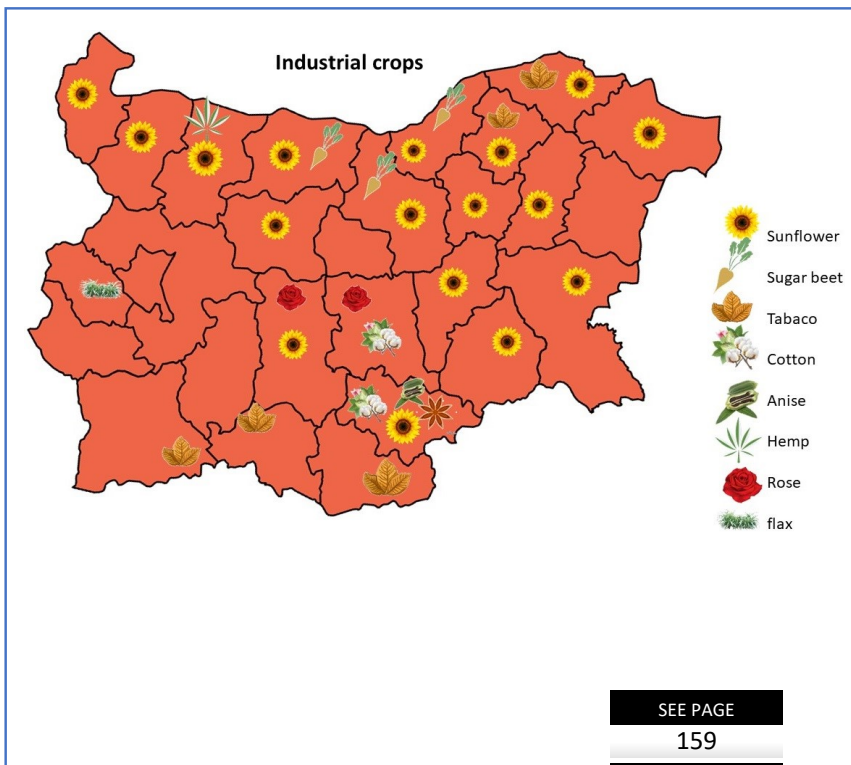
The main sub-branch of crop farming is grain production. The most important cereal crop is wheat. It thrives on chernozem soils, in temperate continental climates and on flat relief. The areas sown with rye are significantly more limited. It is an unpretentious culture grown in mountainous and semi-mountainous areas.

Maize is widely used in animal husbandry. It is a thermophilic plant, it thrives on humus-rich soils and gives high yields if there is irrigation. It is grown mainly in the Danube plain and along the Maritsa, Struma, Mesta rivers. Rice is a thermophilic and moisture-loving culture. It occupies areas in the Plovdiv-Pazardzhik and Stara Zagora fields.

Barley, oats, soybeans, beans, peas, lentils, chickpeas, broad beans, etc. are also grown in Bulgaria.

Industrial crops undergo technical processing before becoming the raw material base for the food, light and chemical industries. They are divided into oil seeds (sunflower, peanuts, sesame), essential oilseeds (oil rose, lavender, mint), fibre (cotton, flax, hemp), tobacco, sugar beet, etc.

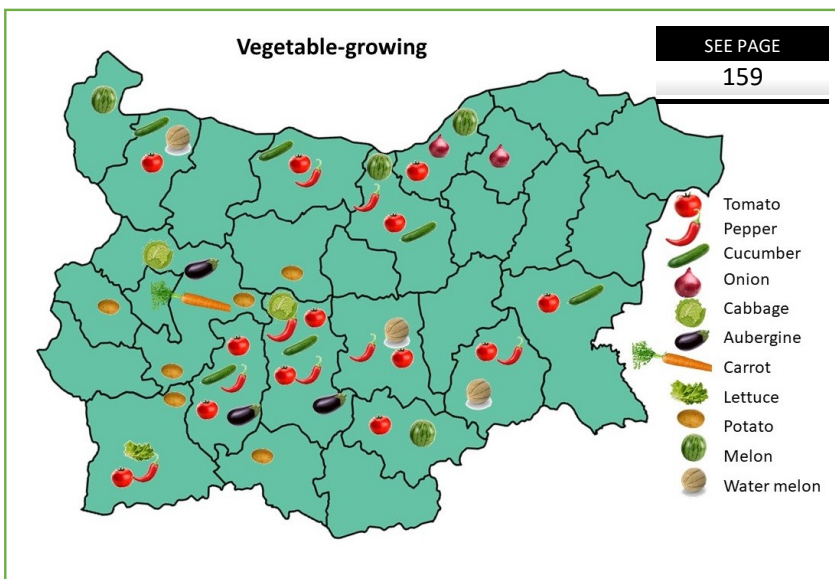
Sunflower is the most important oil crop. It is grown in areas in the Danube Plain. Sesame and peanuts are grown in the southern parts of the country, and canola – in the northern ones.



Essential oil seeds (oil rose, lavender) are grown mainly in the Kazanlak and Karlovo fields. They are the raw material base for perfumery and pharmaceuticals. Bulgaria is a major exporter of rose and lavender oil. Mint and anise are grown in Southern Bulgaria.

Fibre crops (cotton, flax, hemp) are used in the textile industry. Cotton is grown in Southern Bulgaria, flax – in the high valleys of Western Bulgaria, and hemp – in the Danube lowlands.

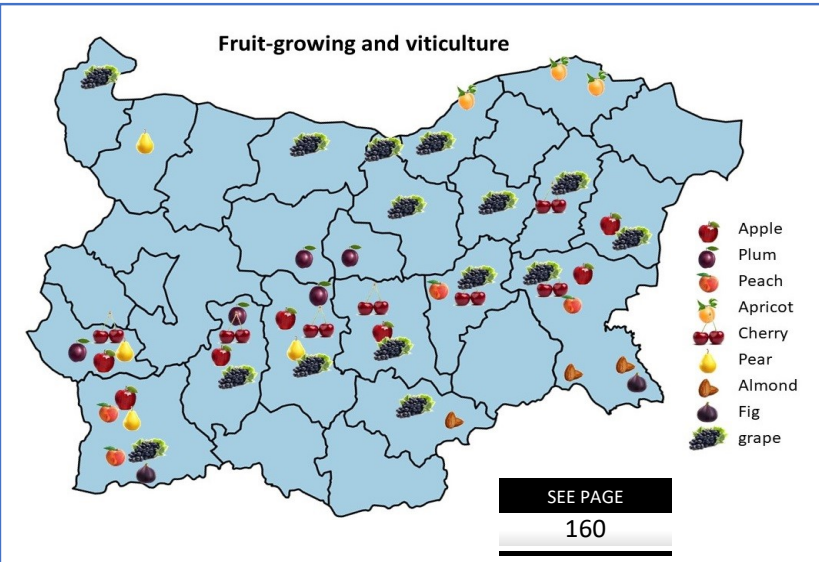
Our country is a traditional tobacco producer and exporter. The most suitable conditions for its cultivation are in the Eastern Rhodopes.



Vegetables are an important raw material base for the canning industry. The most suitable conditions are in the Upper Thracian Lowland, the Danube Plain and the Sandansko-Petrich field. Bulgaria has traditions in the cultivation of tomatoes, pepper, cucumbers, onions, cabbage, courgettes, lettuce, etc. Potatoes, watermelons and melons are vegetables.

The perennials include fruit trees, shrubs and vineyards. The main orchard crops (trees) are cherries, apples, plums, peaches and apricots.

Viticulture is mostly developed along the Black Sea coast and the Danube, in the Pre-Balkan region, the Plovdiv-Pazardzhik and Sandansko-Petrich fields.



TRAINING SECTION

1. Fill in the gaps in the text:

Industrial crops are a group of plants that undergo processing before they become raw materials for They demand conditions and require more care. Sunflower is the most grown crop in the group of Other export-important crops are and..... They are grown in the Sub-Balkan valleys and the Rhodope Mountains.

3. For each of the crops, choose the two most important natural conditions.

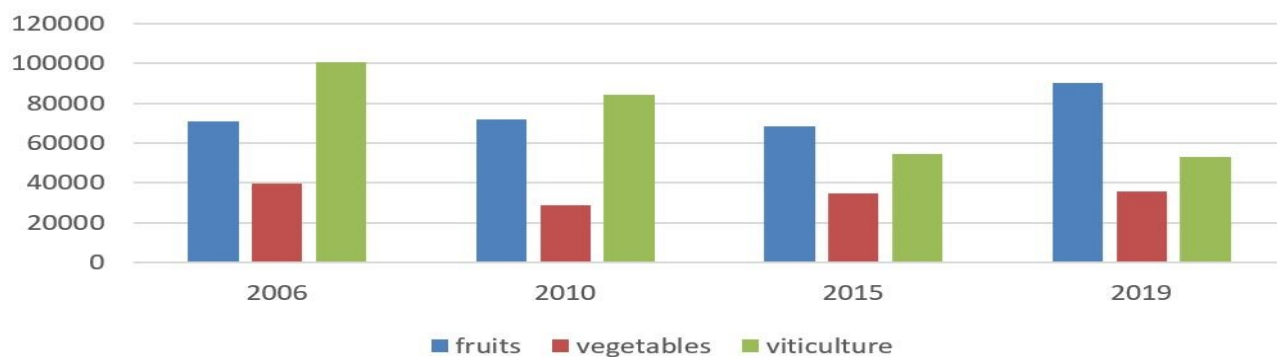
Fertile soils, high temperature, cool climate, irrigation, dry climate, mountainous areas, river lowlands, flat relief

wheat		sunflower	
maize		rose	
rice		tobacco	

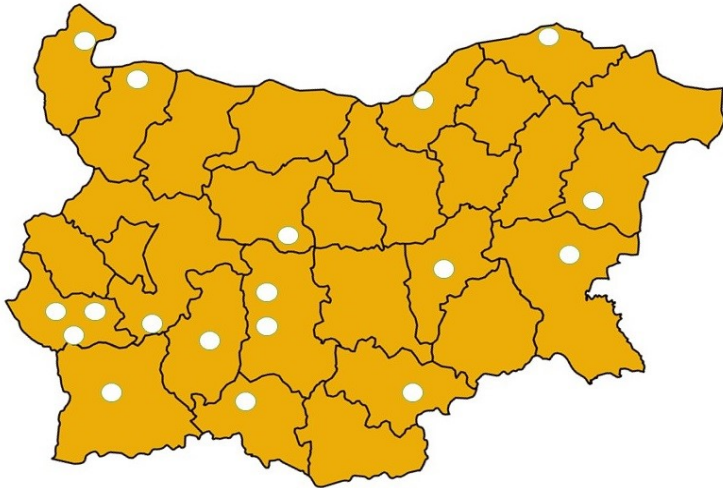
2. Use arrows to build logical chains, each of which includes one item from the three columns (culture – application – a feature in its cultivation).

tobacco		bread		export
rose		confectionery		perfumery
wheat		cigarettes		diminishing areas
sugar beet		oils		inappropriate conditions
cotton		textiles		the most extensive areas

4. Outline the trends in the development of fruit growing, vegetable production and viticulture in Bulgaria using the graphically presented statistical information for the period 2006 – 2019. Explain the reasons for the changes found.



5. For each crop, select two regions of its cultivation and write its numerical code in the corresponding places on the map.



1. potatoes
2. tomatoes
3. apricots
4. apples
5. plums
6. peaches
7. grapes
8. cherries
9. watermelons and melons

6. **Atanas is a vegetable producer. His farm is small and cannot apply under the recently opened EU programme because it only finances large (industrial type) farms. In order to maintain his business, Atanas has three alternatives. One of them is to sign a contract with a large retail chain. In this case, there will be a guaranteed market, but he will have to maintain produced quantities and sell at a relatively lower price. Another alternative is to sell his products to a processing factory. The factory is ready to buy his produce, but he will have to grow inferior and therefore cheaper varieties. The third alternative is to sell his own production by touring the markets around the country. If you were Atanas, which alternative would you choose?**

26. LIVESTOCK BREEDING

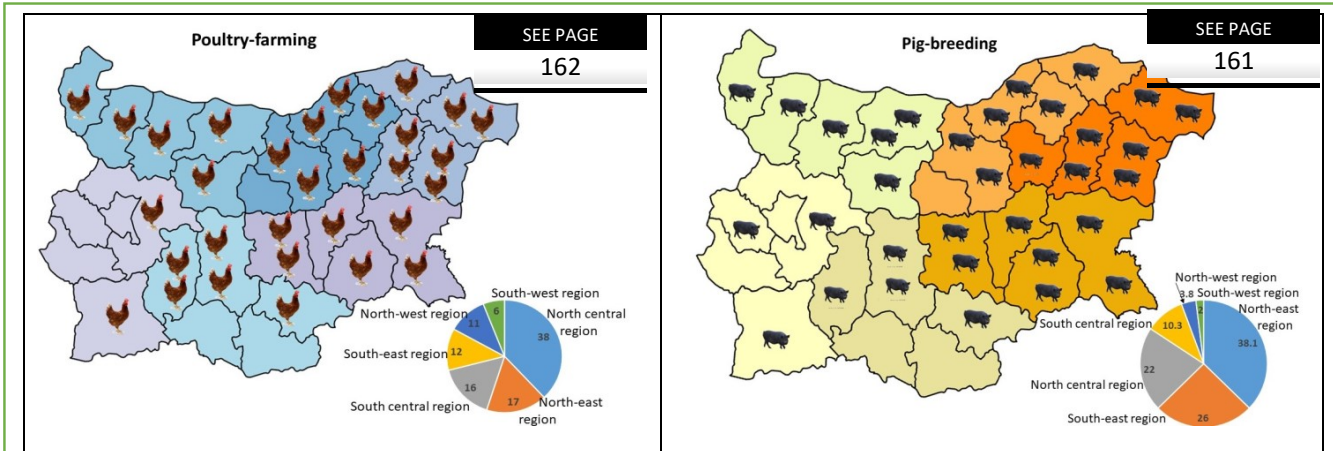
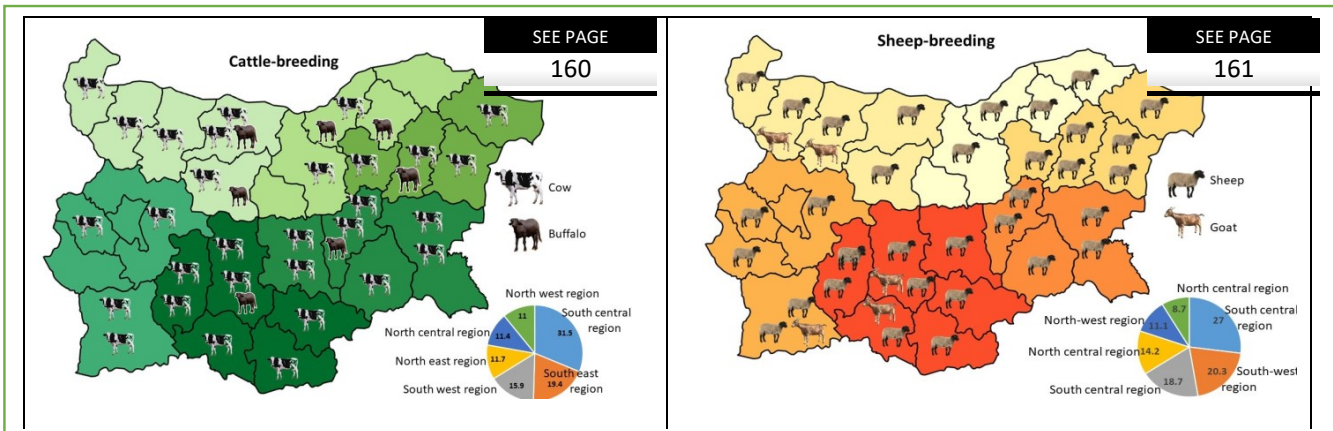
Livestock breeding is a sub-branch of agriculture that provides food for the population and raw materials for many industries – food, textiles, footwear, etc. Livestock breeding is directly related to the plant production from which it receives forage and it is not of a pronounced seasonal character. It is developed everywhere. Its production is perishable and it has widespread consumption.

Natural factors – availability of meadows and pastures, and social factors, such as labour force, consumption, investment, the economic policy of the state, availability of markets, scientific service, etc., have an impact on livestock production.

It is divided into: cattle breeding, sheep breeding, pig breeding, and poultry breeding.

Cattle breeding provides milk and meat for the food industry, as well as hides for the fur and leather industry.

Sheep breeding supplies the light industry with wool and skins and the food industry with milk, cheese, yellow cheese, and meat. Sheep breeding is seasonal in nature.



Pig breeding is a source of high-calorie meat and animal fats for the food industry, and a small percentage of skins for the light industry.

Poultry breeding gives low-calorie meat, fluff, feathers, and eggs. It includes the rearing of hens, turkeys, geese, ducks, and ostriches. Poultry breeding is highly mechanised.

Goat rearing is prevalent mostly in the mountainous and semi-mountainous regions, buffalo rearing – in areas such as Northern and Northeastern Bulgaria, Srednogorie and along the Tundzha River, horse rearing – in the region of Shumen, rabbit rearing – in the eastern and central parts of Northern Bulgaria. Silk cocoons are produced mainly in Northwestern Bulgaria and the region of Ivaylovgrad. Beekeeping provides honey, wax, royal jelly, etc. It is developed mainly in Northern and Northeastern Bulgaria and is extremely dependent on the cleanliness of the environment.

A long-standing problem in livestock breeding is low purchase prices. The sub-industry is in acute need of specialists. Mechanisation in sheep farming is also necessary.

TRAINING SECTION

1. Read the text and identify the right and the wrong statements.

In Bulgaria, there are 17 000 registered beekeepers who raise 747 000 bee hives. Beekeeping is very useful because bees give us honey, bee pollen, propolis, royal jelly, and they pollinate plants. The main problem faced by beekeepers is plant protection activities because poisons kill bees. A significant problem is also the use of pesticides, as even in small quantities, they remain permanently in soil and water. They penetrate the seeds and plants, then the bees take them into the hives and feed the larvae from which sick bees come out. Beekeeping, unlike other livestock fields, is deprived of direct payments under EU programmes. However, it is supported by the National Beekeeping Programme. It supports the purchase of hives and equipment, the sowing of honey crops, veterinary support, stimulation of exports. Bulgaria has unique conditions for the production of quality honey, but there is still no recognisable national brand on the international market.

- Bulgarian beekeepers take care of an average of 45 hives
- Bees suffer from the chemigation of plant production
- The EU supports beekeepers with funds for bee breeding and equipment
- Our country is among the big, well-known exporters of honey

2. Connect the livestock divisions with the regions, taking into account the following dependencies: poultry and pigs – cereals, sheep - mountain pastures, cattle – lowland and plain pastures.

Sheep farming

Pig farming

Poultry farming

Cow farming

Pleven Region

Sliven Region

Plovdiv Region

Dobrich Region

3. Look at the table, draw conclusions and answer the questions:

Sub-branch	Feeding	Watering	Production	Hygienisation
Cattle breeding	✓		✓ milking	✓
Sheep breeding			✓ shearing	
Pig breeding	✓	✓		✓
Poultry breeding	✓	✓	egg collection	✓
Bee keeping			honey processing	

Which livestock sub-branches are the most labour-intensive?

How does that affect their development?

4. Write the numeric code from the text in the corresponding places on the map:

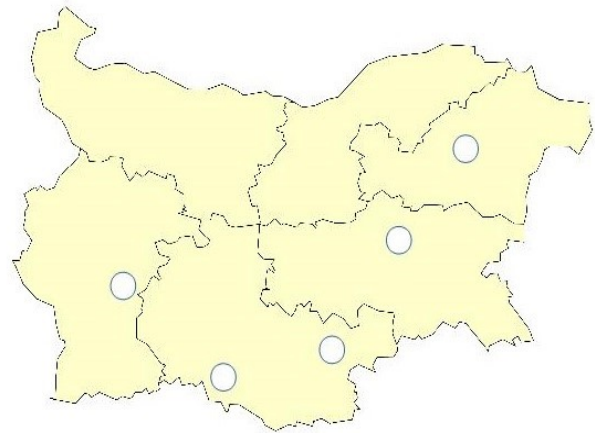
Sericulture, although limited, is still developing along the Maritsa river in the Haskovo region (1).

Buffalo-breeding is developed in the wet meadows of the Maritsa, Tundzha, Osam rivers (2).

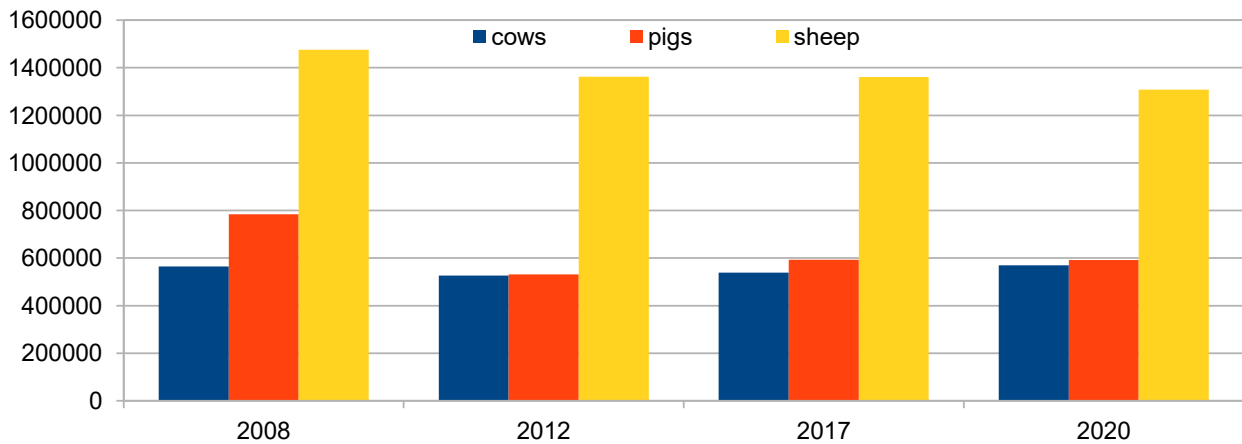
Goat breeding is typical of the mountainous territories (3).

Being with more preserved ecological characteristics, the Danube plain is best suited for bee breeding (4).

There are large game farms in the regions of Pernik, Provadiya and Smolyan (5).



5. Track the trends concerning the change in the number of farm animals. Look for the reasons and draw conclusions about the development of livestock divisions.



6. Connect the concepts with arrows in such a way as to represent chartatically the vertical integration between livestock breeding and the processing industry.

Leather industry

Textile industry

Pharmaceutics

Food industry

Cattle breeding

Sheep breeding

Pig breeding

Sericulture

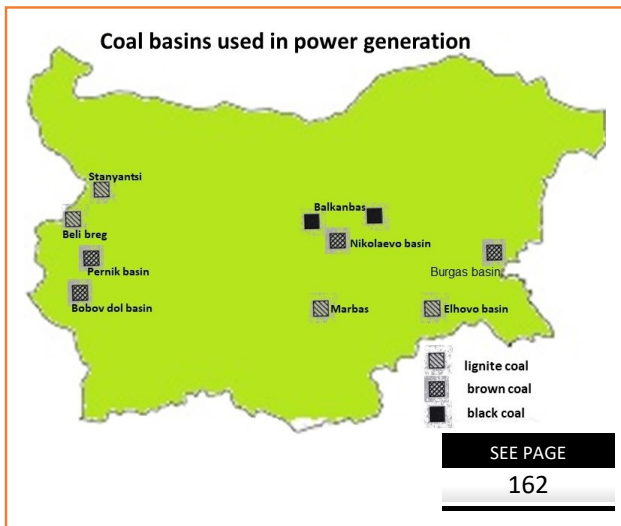
7. In recent years, farmers have periodically protested against the state policy in the sector. National and regional media have been publishing information about problems with the purchase prices of agricultural produce, low subsidies for processing per decare, unfair competition when importing goods from the neighboring Balkan countries, etc. At the end of summer 2021, livestock breeders, fruit growers, vegetable growers, and producers from 27 branch organisations in the field of agriculture organised protests because the parliament did not approve 70 million BGN in the update of the COVID compensation budget in the sector. The organisations submitted their request to the Committees on Budget and Finance, and Agriculture, Food and Forests in the National Assembly, and expect them to approve the estimate of the Ministry of Agriculture, according to which the budget of the department should be updated by 110 million BGN, including funds provided for Covid compensation.

Would you share the described problems with your students if you were a geography and economics teacher and had to teach related learning content? Would you fully trust media information or look for other information channels? Justify your answers.

27. SECONDARY SECTOR

The secondary sector comprises all processing branches of industry and construction. It produces energy, tools and equipment, metals, machinery and chemicals, items for consumption and creates all kinds of infrastructure. Of all the natural factors, the influence of the raw material factor is the most significant. Fossil fuels are used in the energy and chemical industries. Ores are the basis for the development of ferrous and non-ferrous metallurgy, and non-metallic – for the chemical and construction materials industry. Of the social factors, those of the greatest importance are the production process, the economic policy of the state, skilled workforce, markets, transport, etc. The industries are divided into heavy industry (energy, black and non-ferrous metallurgy, metalworking, mechanical engineering, and chemical industry) and light industry (textile, knitting, food industries, etc.).

ENERGY PRODUCING INDUSTRY



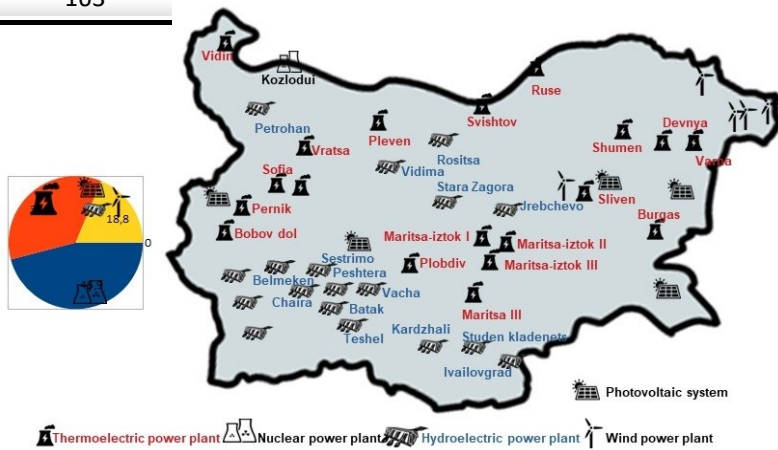
The energy-producing industry is important for the development of the national economy. Without energy, almost no modern production can develop. The energy-producing industry brings together research, extraction and use of energy sources; electricity generation; transmission of electricity to consumers. The electricity produced cannot be stored and is carried quickly over long distances. Its production requires large investments, and is consumed in all spheres of life.

The development of the energy-producing industry depends on natural geographical factors, the most important of them being that of raw materials. Of the social factors, the most important ones are the qualification and the size of the workforce, the energy market, the energy infrastructure, etc. The energy-producing industry pollutes nature.

The main source of energy in Bulgaria is coal. Large Thermoelectric power plants (TPPs) have been built near the deposits. There are two types of TPPs – condensation types (built near the sources of raw materials) and district heating types (for the production of electricity, steam and hot water; located close to the users). Natural gas, hydropower, wind energy, solar energy, and enriched uranium are also used for electricity generation in the country.

Kozloduy Nuclear Power Plant (NPP) takes second place in electricity generation in the country.

Energy industry



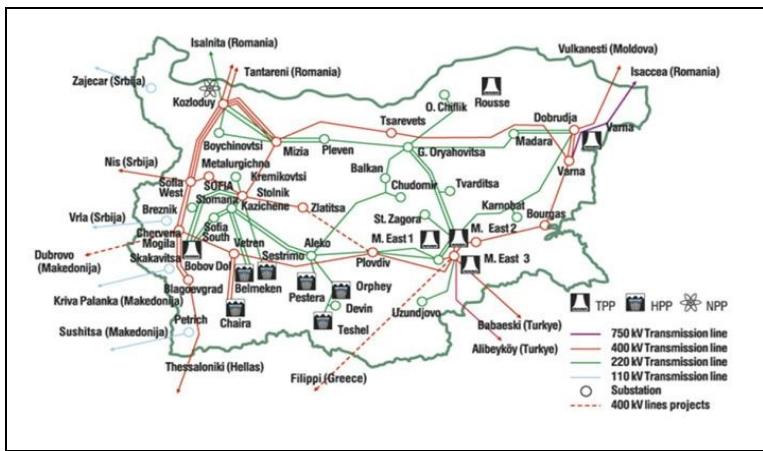
Hydroelectric Power Plants (HPPs) are the most numerous in Bulgaria, but by energy produced they take third place. Hydropower is cheaper and independent of commodity prices. Large HPPs are built on the rivers Arda, Vacha, Iskar, etc. Fourteen large HPPs are grouped into cascades (Belmeken-Sestrime, Chaira, etc).

Most of the electricity production is concentrated in southern Bulgaria. Northern Bulgaria relies on electricity production from Kozloduy NPP and Ruse TPP.

The transmission and supply of electricity is carried out through an electricity transmission network that is over 36 thousand km long.

Some of the major problems in the energy industry are the shortage of raw materials, the rising prices on the international market, the need to modernise power plants, and the environmental pollution from the TPPs.





Which factors have influenced its shape the most?.....

Which neighbouring countries do we have technological connectivity with?
.....

What are the advantages of this energy connectivity?.....

2. Read the text and answer the questions:

Photovoltaic panels use the Sun, which is undoubtedly a free source of energy and preserves their efficiency all day and in all seasons. They are easy to install, do not require any maintenance and their warranty is long-lasting, having proven to work from 25 to 40 years. They contribute to the energy efficiency of industrial, business, and residential buildings, schools, and many others. They provide a clean and healthy lifestyle and reduce the consumption of the increasingly expensive electricity. In Bulgaria, the expert in energy technologies, Prof. Hristo Vasilev, together with his team, has developed a technical solution that would make it possible for each household to produce electricity from a local solar plant with a power of 10 Kwh, which in a year could produce 13 Mwh. Most of the electricity produced will be consumed directly, and the excess will be stored in a domestic electric battery of 10 Kwh. Prof. Vasilev believes that the electricity produced in this way can provide the annual charging of two electric cars, the heating, cooling and hot water for a home of 120 m², as well as energy for the full set of household appliances – a cooker, a washing machine, a dishwasher, TVs, lighting, a refrigerator, a freezer, computers, etc.

Point out three advantages of photovoltaic systems

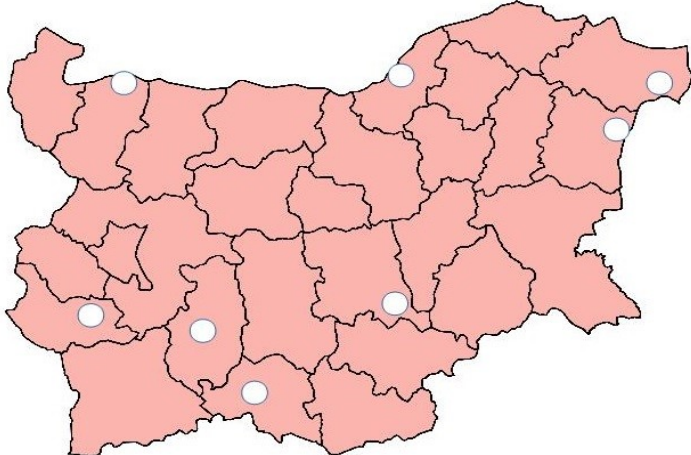
Why are they a budget choice as family installations?

What are the benefits of the more widespread introduction of these systems?

3. Supplement the table with the types of power plants, taking into account the advantages and disadvantages in the exploitation of each of them.

Advantages	Cheap resource	High power	Multiple use	Environmental friendliness
Disadvantages	Hazardous waste	Expensive raw material	It pollutes the air	Less power

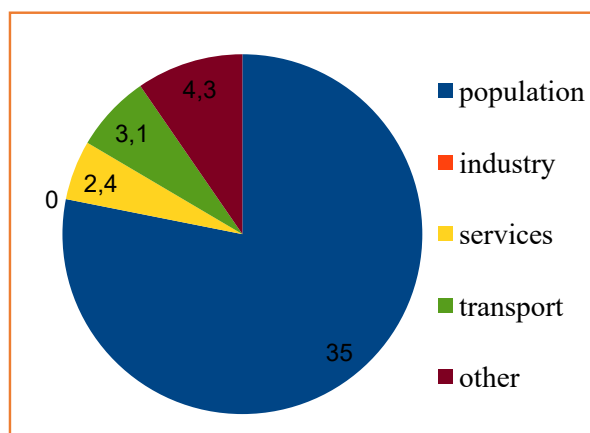
4. Put the numeric code in the appropriate places on the map. Write the names of the plants.



1. The most powerful energy complex
.....
2. The largest wind farm
3. The most powerful cascade
4. The most powerful pumped-storage
hydropower plant
5. The most powerful electric power plant
.....
6. District heating plant
7. The most powerful Brown Coal TPP
.....

5. Look at the charts. Point out the differences in energy consumption in Bulgaria and Germany

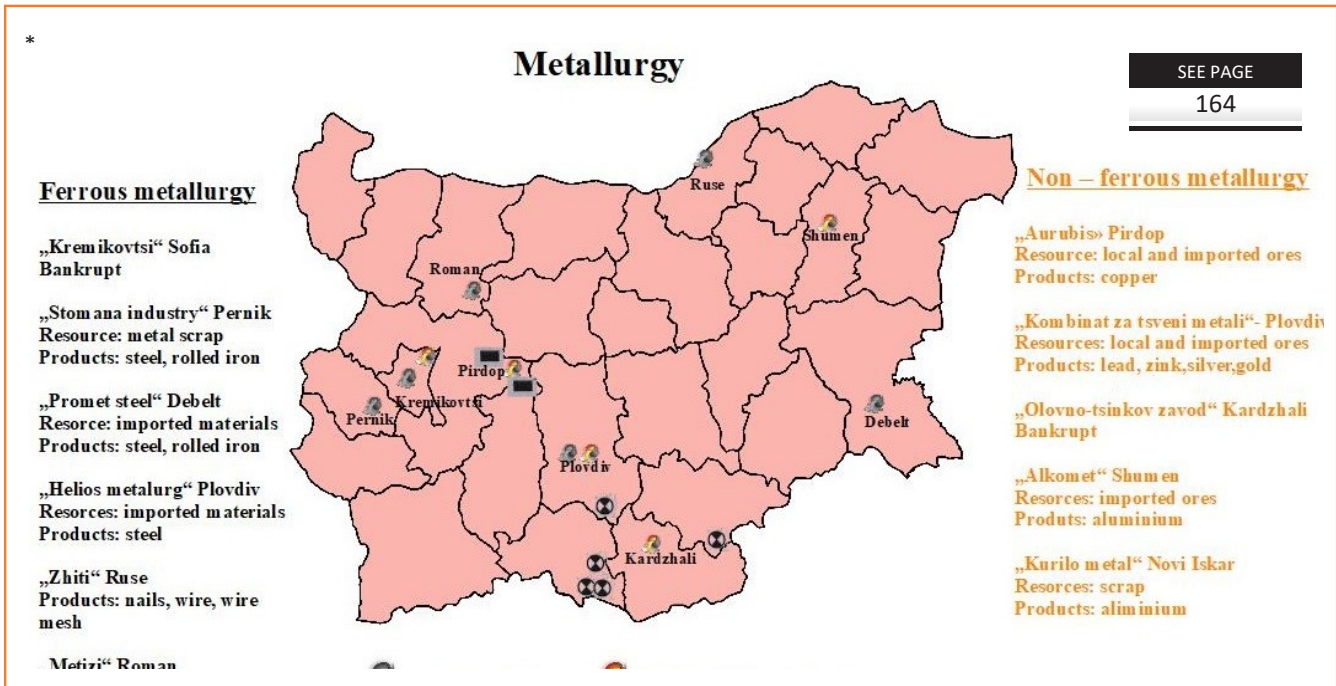
6. Bulgaria is dependent on natural gas imports. Our country imports gas through the pipeline crossing the territories of Ukraine and Romania. Work is underway on a new pipeline, *Balkan Stream*, which will also supply Russian gas. In your opinion, what in particular needs to be done to achieve diversification of the supply and gain greater energy independence for our country?



28. METALLURGY AND MECHANICAL ENGINEERING

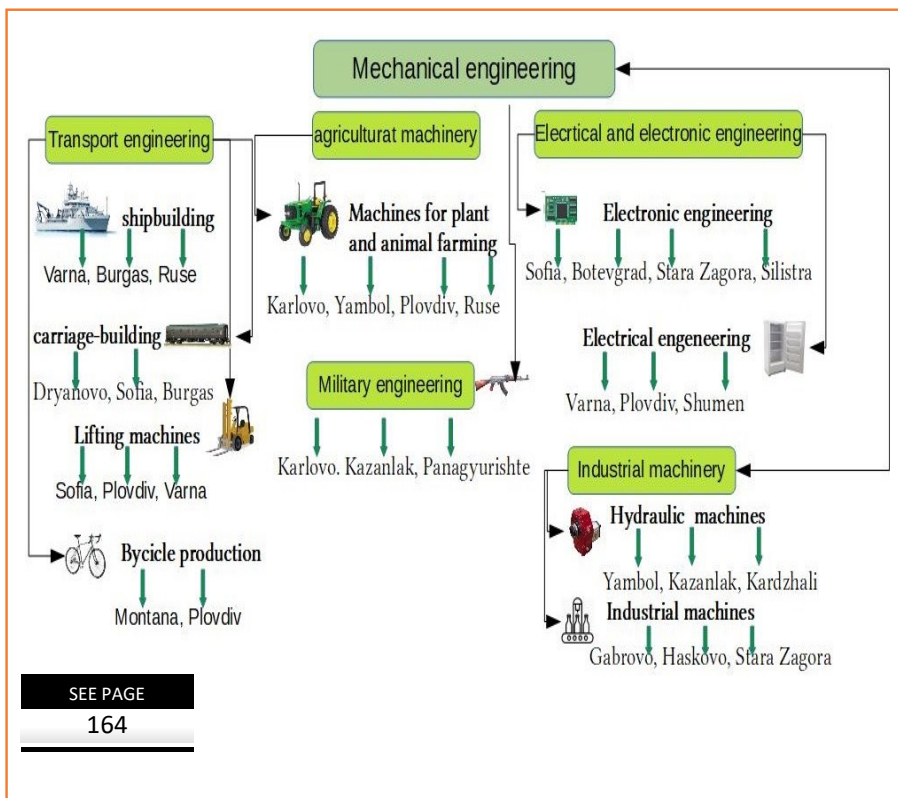
Metallurgy and mechanical engineering are branches of the secondary sector. Their products, such as ferrous and non-ferrous metals, machinery, equipment, tools, appliances, etc., are a raw material base for the development of metalworking, mechanical engineering and construction. Both branches have features such as: the use of significant quantities of raw materials, the need for a lot of capital, the training of skilled labour. They are among the main environmental pollutants.

These industries are influenced by natural geographic and social factors. They depend heavily on technical innovation and scientific research.



Metallurgy comprises activities such as: ore extraction, flotation (enrichment) of ores and production of ferrous and non-ferrous metals organised in plants. The ferrous metallurgy in Bulgaria produces pig iron, steel and rolled steel. There is no plant in the country that includes all stages of production.

Non-ferrous metal ores have a low metal content, which requires them to be enriched near the place of extraction (Rudozem, Laki, etc.). Large amounts of electricity and process water are consumed in the flotation of ores. Copper is among the most used non-ferrous metals because of its high electrical conductivity. There are copper deposits in the Balkan Mountains and Srednogie.



Mechanical engineering produces machinery, equipment, utensils, apparatus, and articles for the economy and everyday life. The industry specialises in several directions. Transport machine building covers the production of forklifts and industrial trucks, ships, agricultural machinery (Ruse, Shumen, Karnobat, Karlovo, etc.), automotive elements (Ruse, Botevgrad, Pazardzhik, Plovdiv, Stara Zagora, etc.).

Electronic and electrotechnical mechanical engineering includes the production of electrical appliances, electric motors, batteries, cables, generators, etc. Various household appliances are produced in Bulgaria – water heaters and washing machines, refrigerators. Electric motors are produced in Troyan, Harmanli, Plovdiv, etc. Heavy investment engineering, which produces machines for other industries, is developed in Radomir and Haskovo. Metal cutting and metalworking machines are produced in Pernik, Sliven, Gabrovo, etc., forestry machinery – in Silistra.

The lack of highly skilled staff and the environmental pollution are emerging as problems in the industry.

1. Read the text. Choose one of the foreign companies that invest in the Bulgarian automotive sector. Conduct an independent internet survey and determine how sustainable the company's interest in the Bulgarian market is in the context of the restrictions imposed in recent years due to the spread of COVID 19.

The production of car components has become one of the driving forces of the Bulgarian economy. The sector employs more than 33,000 people in nearly 100 enterprises. Automotive components are produced for brands such as Peugeot, BMW and Mercedes. The number of auto parts manufacturers has doubled since 2012, and foreign companies are attracted by the low taxes, the cheap labour and a stable currency. However, according to an analysis of the Bulgarian economy by the Financial Times, the authorities in the country still hope that the market will also be able to attract a large car manufacturer to open a plant.

Automotive Cluster Bulgaria generated sales of \$1.55 billion in 2014, which is three per cent of Bulgaria's gross domestic product (GDP). The analysis also notes the concentration of investments around Plovdiv. Trakia Economic Zone, for example, has attracted € 500 million. William Hughes, ABB, Sensata Technologies, which opened a second plant in the country, and Magna Powertrain, whose customers include BMW and General Motors, are present in the industrial zone. The sector is expected to continue to grow. However, some Bulgarian companies in the sector are moving abroad. One such example is Water Fuel Engineering, which relocated in the UK, but still uses Bulgarian know-how to develop clean technologies. The company's management explains the move with growth plans, and its success on the Island has generated interest from Germany, Turkey and other countries.

The production of car components is a fast-growing sector of the economy.
 In Bulgaria, components are still produced for lower-end automotive brands.
 Foreign companies are attracted by low taxes and cheap labour.....
 Logically, a large number of producers are localised around Sofia.

2. Among these factors, two have a stronger influence on the development of metallurgy and two on mechanical engineering. Define the industry on which they have a stronger influence. Explain the reasons.

<i>Factor/Industry</i>	Metallurgy	Mechanical engineering
<i>raw materials</i>		
<i>environmental factor</i>		
<i>scientific research</i>		
<i>qualification of the people employed in the industry</i>		

3. The text boxes present important technological features of the production in metallurgy and mechanical engineering. Write the branches they refer to. Explain them and point examples from Bulgarian metallurgy and mechanical engineering.

specialisation

cooperation

.....

Explain
 Example

combining

concentration

.....

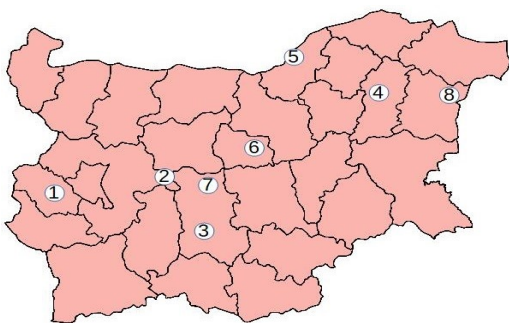
Explain
 Example

4. Compare the condition of the two metallurgical enterprises which is visible from the images. Comment on the reasons.



.....

5. Identify the metallurgical (1-4) and machine building (5-8) centres by their localisation on the map. Write down their names and production specialisation.



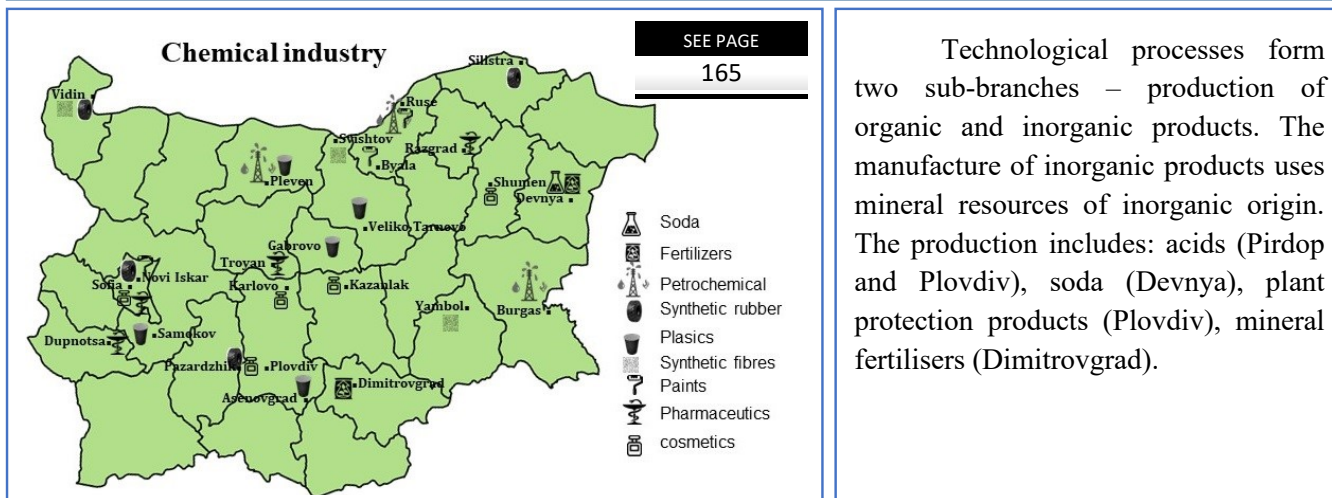
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6. The Bulgarian government is making great efforts to get the country back on the map of the car manufacturers. After the failed production project of the Chinese brand Great wall, there are high hopes for the production of electric cars by the German company Next.e.Go Mobile. This investment will also be made with serious financial assistance from the Bulgarian state. At the same time, Bulgaria is one of the largest manufacturers of car components in Europe. In your opinion, what will the benefits and possible damages be of the state support for new automotive production? Justify your answer.

29. CHEMICAL INDUSTRY

The chemical industry provides raw materials and materials for all other sectors of the economy, as well as household products – acids, plastics, chemical fibres, artificial leather, packaging, mineral fertilisers, etc. It is one of the most technological and progressive industries. It processes a large amount of raw materials, accounts for a significant volume of production and employs a highly skilled workforce. It consumes a lot of energy and pollutes the environment.

The development of the industry is influenced by the natural geographical factor, which includes raw materials and water sources. The market and consumption of chemical products, skilled labour, etc. are the most important social factors, and the environmental factor has an impact on the development and territorial distribution of the chemical industry.



Technological processes form two sub-branches – production of organic and inorganic products. The manufacture of inorganic products uses mineral resources of inorganic origin. The production includes: acids (Pirdop and Plovdiv), soda (Devnya), plant protection products (Plovdiv), mineral fertilisers (Dimitrovgrad).

The production of organic products uses oil, natural gas, wood, coal, etc. as raw materials. In the processing of oil, different types of petrol, diesel fuel, aviation fuel, oils, plastics, etc. are obtained. The largest oil refining plant on the Balkan Peninsula is in Burgas. Organic chemistry also produces dyes and varnishes (Sofia, Ruse, Novi Iskar), rubber products (Stara Zagora, Sofia, Madan, Pazardzhik, Burgas). The pharmaceutical industry (Sofia, Dupnitsa, Razgrad, Troyan) and the perfumery and cosmetics industry (Sofia, Kazanlak, Plovdiv, Shumen) produce consumer goods.

The major problems for the industry are improving the quality of production, the access to new external and internal markets, recovery, and recycling of all chemical products.

TRAINING SECTION

1. Fill in the gaps in the texts:

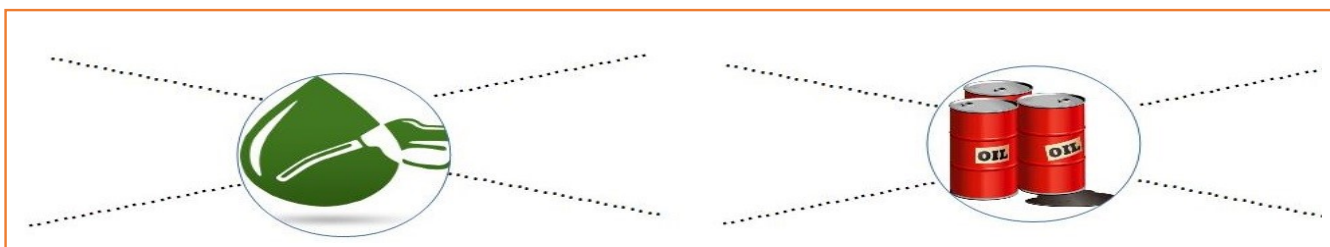
..... chemistry is the older and technologically lower sub-branch of the chemical industry. It includes the production of..... and The largest centre of inorganic chemistry is the town of..... It owes its development to the proximity to raw material sources and....., because some of the raw materials are supplied by import and most of the production is exported. A smaller centre is the town of Dimitrovgrad, which specialises only in the production of, necessary for the intensification of agriculture.

2. Write the numerical code of the factor determining the development of the following types of chemical production:

1. Local raw materials 2. Imported raw materials 3. Convenient geographical position 4. Consumption

Production	Code	Production	Code
Petrochemistry in Burgas		Pharmaceuticals in Sofia	
Perfumery in Plovdiv		Oil distillation in Karlovo	
Tyres in Vidin		Petrochemistry in Ruse	
Mineral fertilisers in Dimitrovgrad		Synthetic fibres in Yambol	

3. Oil is a major raw material in the chemical industry. A number of products are produced from it. On the left scheme, write four products manufactured by the Bulgarian chemical industry. On the right –four centres in which these products are manufactured.



LUKOIL NEFTOHIM BURGAS LTD



SOPHARMA LTD

4. The photos show two leading enterprises of the chemical industry. Compare them by the indicators in the table:

INDICATOR	CHEMICAL ENTERPRISE	LUKOIL NEFTOHIM BURGAS LTD	SOPHARMA LTD
RAW MATERIAL BASE			
IMPORTANCE			
ENVIRONMENTAL FRIENDLINESS			
DEVELOPMENT PROSPECTS			

5. In the past, Plama Plevn was one of the large enterprises of the petrochemical industry. During the process of transition to market economy, the company was declared bankrupt. Look into the reasons for the closure of the refinery. Were any mistakes made with the construction of the plant?



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6. The map shows important centres of the chemical industry. Write down the names of the centres and their production:

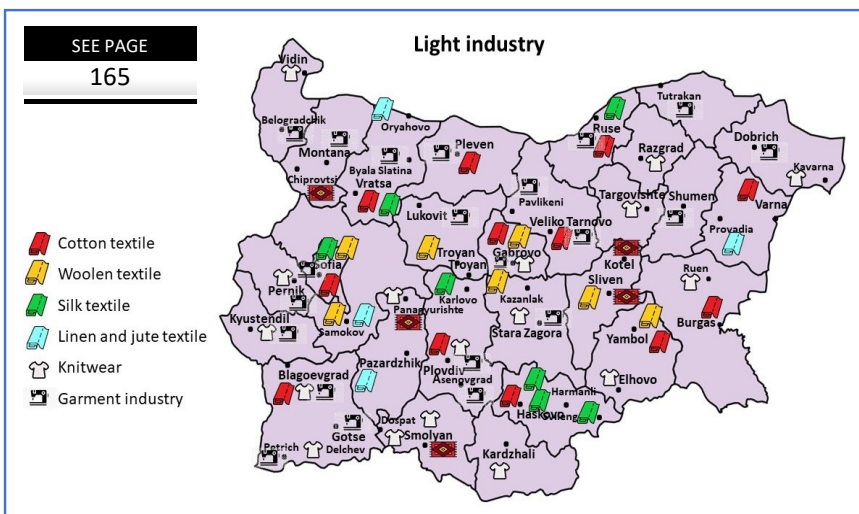
30. LIGHT INDUSTRY

Light industry comprises industries that produce items for consumption and for some other industries. It uses raw materials from agriculture and the chemical industry. Light industry enterprises are built in smaller towns and villages, thus ensuring the employment of labour resources. Raw materials are the main factor for the development of light industry. Public factors influencing the development and territorial distribution of production include markets, labour resources, transport and social infrastructure.

Light industry includes textile, knitting, garment, leather and fur, footwear, and carpet industries.



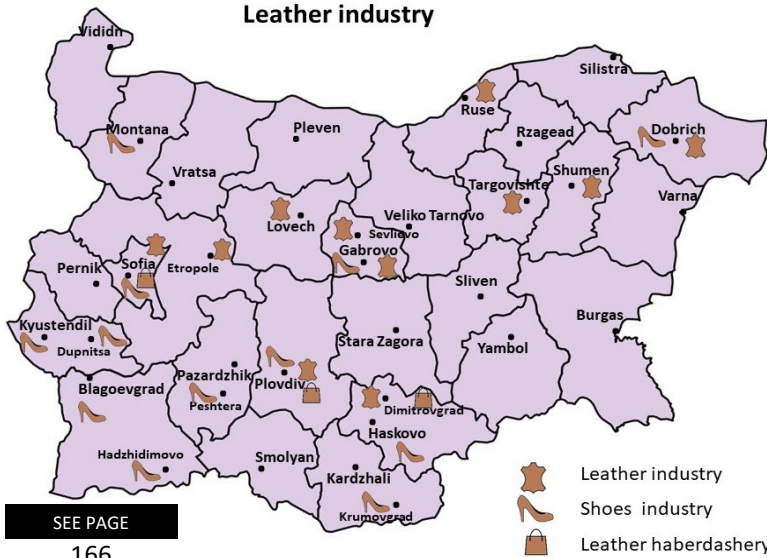
Textile industry is the oldest industry in Bulgaria. The first wool textile factory was founded in 1834 in Sliven by Dobry Jelyazkov. A large number of workers, mostly women, are engaged in the textile industry. Production centres are located near raw materials, consumer centres or in places with a favourable transport and geographical position. The main stages of production are primary processing of raw materials, yarn production, textile fabrics manufacture, washing and dyeing of fabrics. Textile industry is subdivided into: cotton textile industry (with the largest volume of production), wool textile industry (with the oldest traditions in Bulgaria), silk textile industry (relatively new production which developed strongly in the recent past), linen textile industry (with the smallest share of textile production).



Knitting industry uses cotton, woolen, and silk yarn. The enterprises are specialised and widely spread. Garment industry is a natural continuation of textile production and is widespread.

A great number of small enterprises are built near the borders with Greece and Turkey mainly with foreign investment.

Leather industry



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It is distinguished by high quality of goods and good positions on the international market. Carpetmaking is a traditional industry for Kotel, Panagyurishte, Chiprovtsi, etc. Fur and leather industry includes the processing of furs and hides and the production of a variety of products such as leather clothing, fur coats, leather bags, suitcases, belts, gloves. The footwear industry is better developed in the south of the country.

A major problem in light industry is the shortage of raw materials. The strong competitive environment on the international market requires modernisation of production and diversification of the assortment. Some industries still fail to meet the environmental norms and requirements.

TRAINING SECTION

1. Read the text and answer the questions:

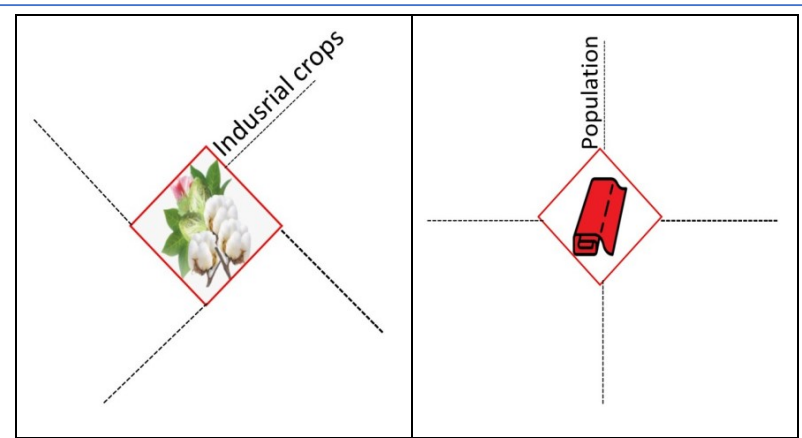
Tolling arrangements have been a common feature of the sewing industry in recent decades. In this form of production organisation, factories work on models of leading companies with materials of those same companies. In practice, a garment sewing service is performed in Bulgarian enterprises. Thus, foreign companies use cheap labour, since labour costs are significant in the sewing industry. Unfortunately, the benefit for Bulgarian factories is not great. They receive constant work and guaranteed income, but cannot make enough profit to invest in modernisation and development of their own fashion line.

- Have you ever bought a garment of a famous brand whose label says “Made in Bulgaria”?
- What does “tolling arrangement” mean?
- What do foreign companies profit from their collaboration with Bulgarian companies?
- Why is this form of work arrangements hindering the development of Bulgarian production?

2. Look at the first scheme.

Write three sub-branches of agriculture which supply raw materials to the light industry.


On the second scheme, write three branches, which, in addition to the population as a consumer, use the production of the textile industry.





3. For each production, mark one factor of leading importance:


	Workforce	Import of raw materials	Local raw materials	Consumption
Woolen textiles in Sliven				
Cotton textiles in Pleven				
Sewing products In Madan				
Footwear in Sofia				

4. Look at the images for export and import of shoes. Calculate the trade balance for the two years. Outline the trends and suggest ideas about the reasons that predetermine them.










.....

5. The map shows centres of light industry which process animal raw materials. Identify them, write the names of the centres and their specialisation:

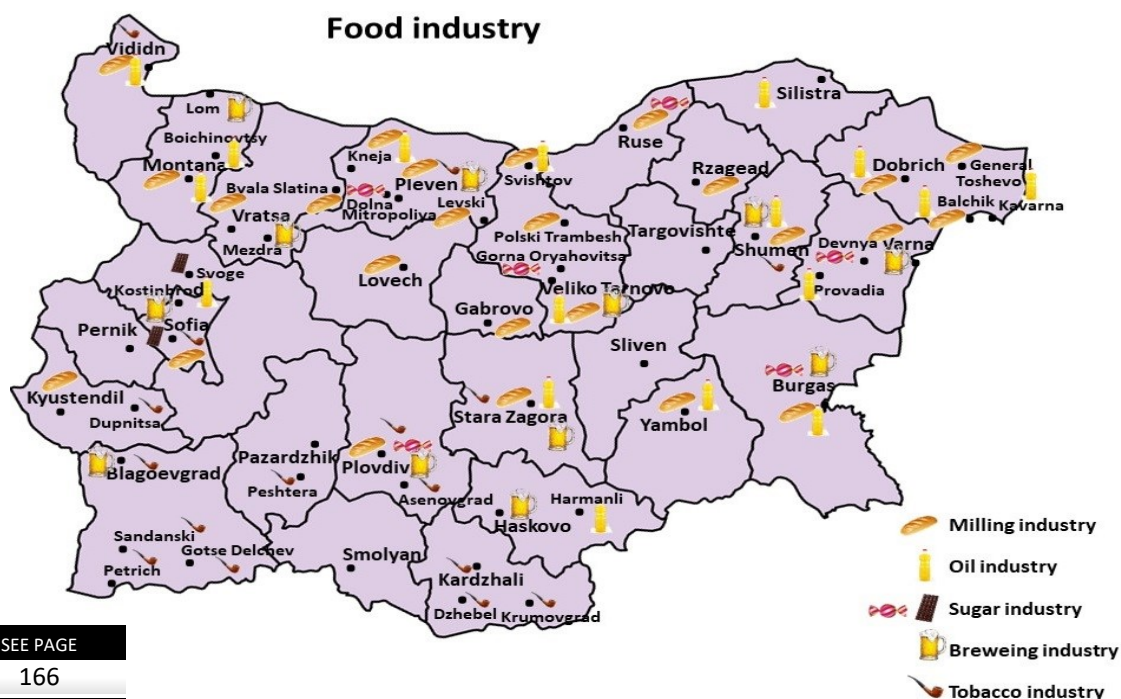


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6. In recent years, the supply of second-hand textiles, knitwear, garment, and leather products in Bulgaria has rapidly expanded its commercial influence. This trend seriously affects the Bulgarian production of light industry products. Propose state measures aimed at protecting Bulgarian manufacturers, but maintaining the presence of used fabrics and garments on the market.

31. FOOD INDUSTRY

Food industry is a traditional processing industry which produces a wide range of food and beverages to meet the needs of the population. Food industry has a complex sectoral structure and widespread territorial distribution. The industry uses large quantities of raw materials from agriculture, that is why some of its production is seasonal in nature. In addition to raw materials as an essential factor, other important factors for development are markets, labour resources and transport infrastructure. Some of the production is located near raw materials, as most of them are perishable, or to reduce transport costs. Others are located near consumers for the faster realisation of production.



Food industry comprises over twenty sub-industries processing plant and animal raw materials.

The main product of the milling industry is flour. Mill enterprises are located both in the regions of grain production (2/3 in Northern Bulgaria) and in large cities near consumption. The production of bakery products is located in the consumer centres due to the perishable nature of the production.

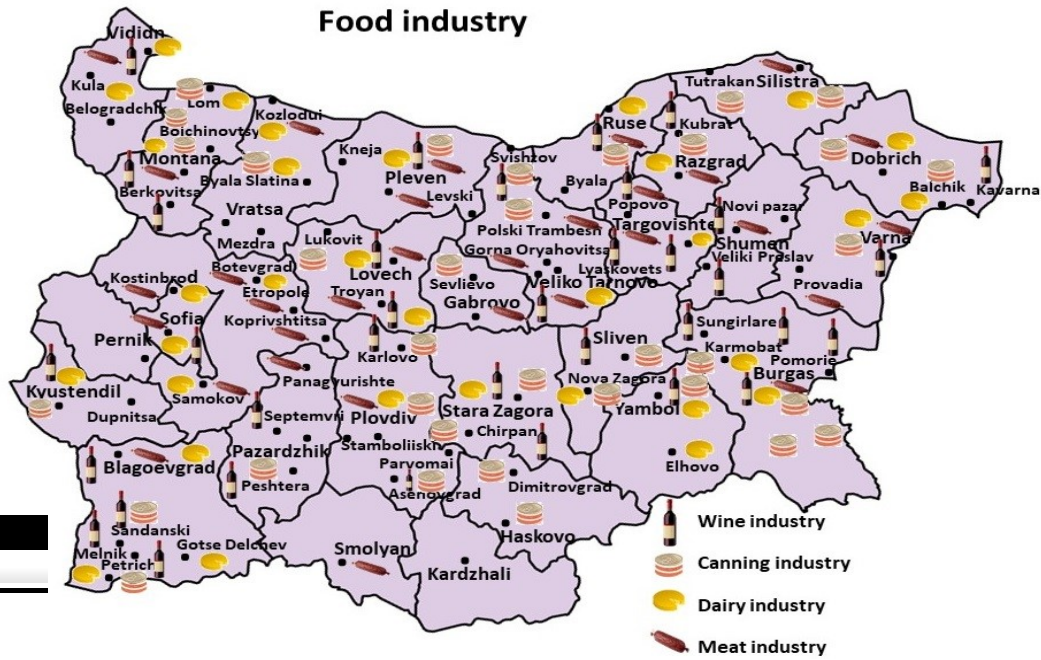
The production of vegetable oils is concentrated in areas with sunflower cultivation. The territorial location of tobacco processing enterprises is influenced by the raw material factor. Over 90% of those employed in the tobacco production work in enterprises in Southern Bulgaria. The sugar industry produces sugar and confectionery by relying entirely on imported raw materials.

Meat production is developed mainly in regions providing raw materials, while meat processing is concentrated in consumer centres. Large poultry farms are located in grain-producing areas. Most of the meat and meat products are produced in Northern Bulgaria.

In Bulgaria, there are about 140 canning factories. Due to the perishability of raw materials, they are concentrated in the regions of their production – the Upper Thracian Lowland, the Danube Plain (tinned vegetables and fruit). Tinned fish is produced in Burgas, Sozopol, Varna, etc.

Milk and dairy products manufacture are located mainly in small and medium-sized enterprises in all regions of the country where raw materials and labour resources are available.

Food industry



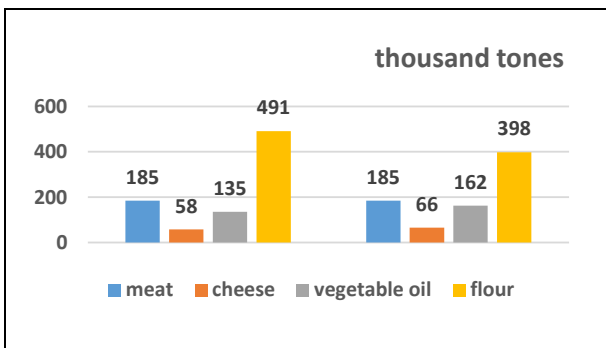
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Wine production is localised in vineyards regions. Part of the production is intended for export. There are over ten large breweries in the country. They produce different brands of beer. The production of soft drinks has been developing in Bulgaria in recent years. Mineral water is bottled near some mineral springs.

The limited internal market, the competitiveness of production, the introduction of new products and technologies, etc. are emerging as problems of the food industry.

TRAINING SECTION

1. Look at the chart and determine whether the statements are true or false:



- Flour production has decreased
- Cheese production has increased by over 10%
- Vegetable oil production has decreased
- There is an increase in all the production.....

2. Match each factor with two types of production:



Raw materials
Consumption
Export

- Production of canned food in Dimitrovgrad
- Production of cooking oil in Shumen
- Production of confectionery in Sofia
- Wine production in Karnobat
- Mill industry in Pleven
- Production of beer in Plovdiv


3. The table shows three of the most important features of the food industry. Explain their influence.

Characteristics	Impact on the development of the industry
Seasonality	
Perishability	
Mass distribution	

4. Compare the conditions and prospects for the development of the two branches presented in the images.

	Raw material base	
	Consumption	
	EU support	
	Prospects for development	

5. The map shows the location of centres of the food industry which developed under the influence of socio-economic factors (mainly consumption). Identify and write down the centres and branches.

	1. 2. 3. 4. 5. 6. 7. 8.
Identify the branches: 1 –, 2,3 –, 4,5,6,7,8 –	

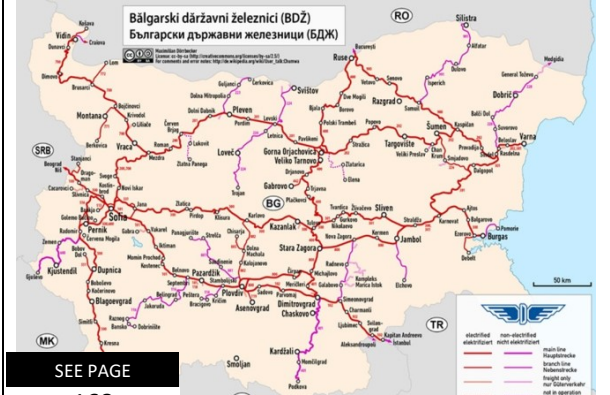
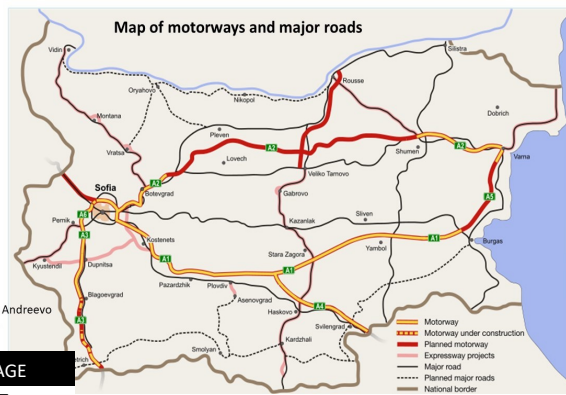
6. As a sales representative of a large chain of grocery stores, you are developing a strategy to support the Bulgarian production of meat and meat products. The condition for the meat processors you are targeting is that their production has an established standard “Stara Planina” for meat products of pork, beef and poultry meat. It describes in detail the mandatory health and hygiene indicators and norms, the technology of production, labelling and packaging, transport and storage requirements, sampling methods and test methods. “Established standards” are voluntary for producers of meat products. What requirements will you impose on small producers to prove the quality of their production so that you can sell their products in the chain's stores?

32. TERTIARY SECTOR. TRANSPORT

The tertiary sector is the service sector. It includes various activities of an intangible nature – transport, tourism, trade, health, education, etc. It is characterised by the highest share (over 65%) of people employed in the national economy. The human factor, which is both the creator and user of the services, has the leading role. Natural conditions (geographical location, relief, climate), socio-economic and environmental factors have an impact on the development of the tertiary sector.

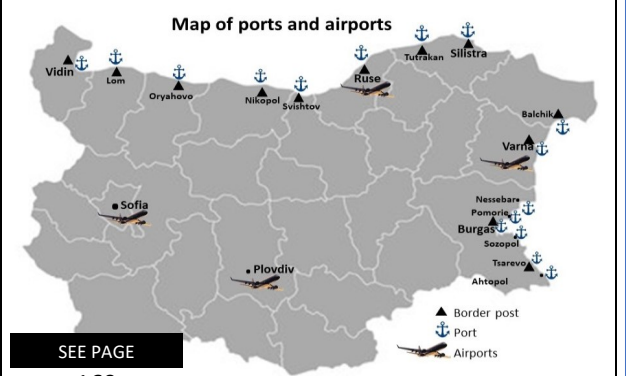
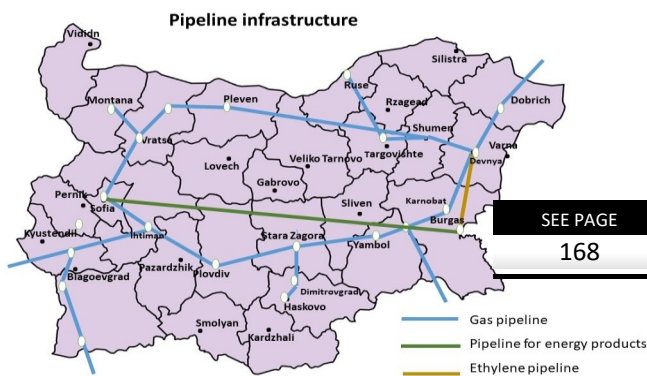
Transport is one of the most important branches. It carries out the transport of passengers and goods over different distances. It is also the link between other economic sectors (extraction, production and consumption). Important roads connecting the Balkan Peninsula with other European countries pass through the territory of Bulgaria. The outlet to the Black Sea and the Danube has an impact as well. There are different modes of transport – land, water and air transport.

Land transport is very important in the carriage of passengers and cargo over short and medium distances. Highways offer the best conditions for fast and safe travel. Cars and trucks are major air pollutants.



Railway transport is important in the carriage of long-distance bulk cargo. It depends on the relief, therefore it is not well-developed in mountainous areas.

Pipeline transport is used only for the transportation of commodities. There is a network of pipelines for the transportation of natural gas (gas pipeline), crude oil (oil pipeline) and fuels (product pipeline) in the country.



Maritime transport is mainly used for the transportation of bulky and heavy goods over long distances. The main ports are Varna and Burgas.

River transport is developed along the Danube. Its importance grew with the opening of the Rhine-Main-Danube navigable canal. The largest river ports are Ruse and Lom.

Air transport is convenient for carrying passengers and cargo over long distances. It is the fastest type of transport, but it is very expensive and climate-dependent. In Bulgaria, there are airports in Sofia, Plovdiv, Varna, and Burgas.

The poor road infrastructure and outdated transport fleet are the main problems of transport. It is essential for the country to improve the technical condition of roads and railways, as well as the completion of highways and construction of new railway lines.

TRAINING SECTION

1. Identify the mode of transport by the specific influence of factors. Fill in the blanks:

Due to the strong influence of this factor, only three railway lines pass through the Balkan Mountains.
.....

Reduced visibility and unstable atmosphere sometimes delay or postpone flights.

Most motorways are built in the direction of the European transport corridors.

The ports in Varna and Burgas process a large part of the country's exports and imports.

With growing fuel needs, that type of transport has been rapidly developing.

2. Study the tables and draw conclusions about the importance of different modes of transport:

	Transported cargo (in thousand tonnes)	Transported passengers (in thousand people)
Total	113118	512458
Land	110270	218786
Water	2827	91
Air	20	591
Urban	-	193008

3. Connect the modes of transport with the corresponding advantages and disadvantages:

Maneuverable and suitable for all terrains		Road		Dependent on the water level
Slow, dependent on relief		Air		Fast, transport of people
Expensive, unprofitable for short distances		Pipelines		Cheap, suitable for cargo
It is not influenced by natural conditions		Railway		Dangerous, polluting nature

4. Take a look at the map. At which stations will you change trains to get:

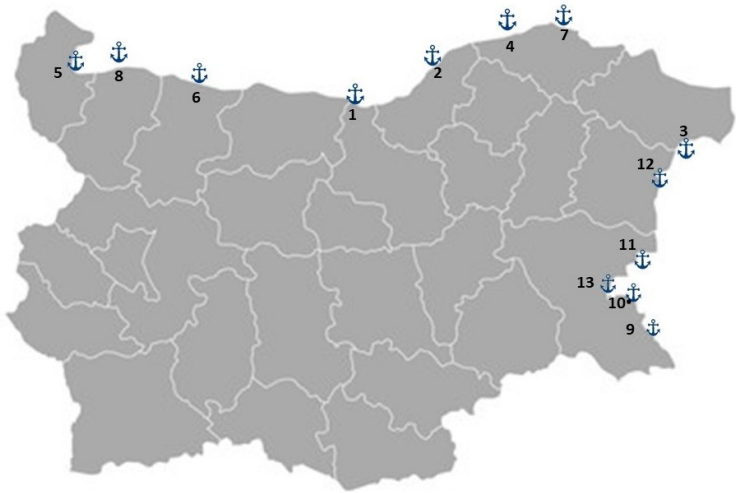
from Shumen to Petrich?..... from Montana to Karlovo?.....

from Lovech to Silistra? from Vratsa to Dimitrovgrad?.....

5. The photos show specific modes of transport. Name them and indicate where they are used in Bulgaria.

6. Identify the ports marked on the map:

	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13.
---	---

7. The European Union has announced a proposal to impose a ban on the movement of petrol and diesel cars as of 2035. Discuss how this will affect transport in Bulgaria? What actions should the Bulgarian state take to meet the requirements?

Tourism is one of the most important branches of the national economy. It is of great social importance – it provides employment to the population and reduces unemployment. Tourism brings direct revenue from tourist sites and indirect revenue from transport, trade, entrance fees.

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Tourism of Bulgaria



The main factors for the territorial peculiarities of tourism are natural resources – geographical location, relief (natural landmarks), recreational resources (climate, water), as well as anthropogenic resources (museums, monasteries, historical monuments, archaeological remains, etc.). The main natural resources for the development of tourism are located along the Black Sea coast and the mountain regions (in Rila, Pirin, the Balkan Mountains, the Rhodope Mountain, Vitosha). The most important socio-economic factors are the population as labour force, the transport infrastructure, the state of the material and technical base (hotels, holiday facilities, campsites, restaurants, etc.).

Tourist resources are a prerequisite for the development of tourism.

On the basis of different criteria, the following types of tourism can be distinguished (according to place, purpose, time, organisation of tourist travel):

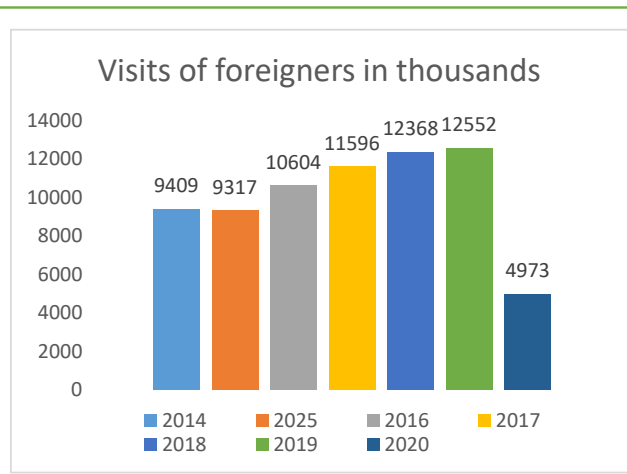
- domestic tourism – involves travelling within the country; it has a seasonal character – in the summer, it is concentrated in the Black Sea resorts, and in winter – in the mountain resorts.
- international tourism – in recent years, the number of foreigners who have visited Bulgaria and of Bulgarians travelling abroad has increased. The main directions of travel are to and from the neighboring countries.

Alternative types of tourism, such as rural tourism (visiting villages with authentic houses – Arbanassi, Bozhentsi, Etar, etc.), religious tourism, ecotourism, wine tourism, etc., are also developing.

Tourism is one of the most prosperous industries, but its development in Bulgaria needs improvement of tourist resources, better service, providing qualified staff, a better advertising campaign of the country on international markets.

TRAINING SECTION

1. Examine the chart and identify the true (T) and false (F) statements:



A. Over the past 7 years, the number of foreign tourists has steadily increased

B. In 2019, the tourists who visited Bulgaria increased by $\frac{1}{4}$

C. The number of foreign tourists in 2020 is two to three times smaller than in previous years

.....

D. The Covid-19 pandemic has had a severe impact on international tourism

2. Based on the meaning of the sentences, determine the factor influencing tourism:

Foreign tourists identify the level of service as a problem

Guests of the Black Sea resorts refrain from travelling inland because of the state of the road infrastructure

.....

Many of the accommodation facilities in the hotels that have not been renovated remain vacant

.....

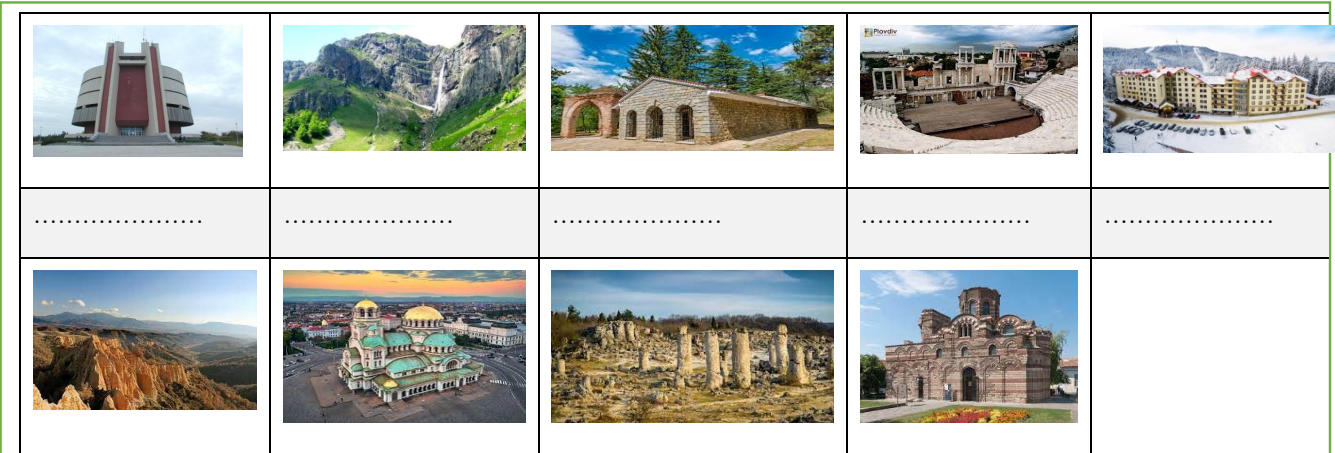
Foreign tourists say they would have visited more historic sites if they had had information about them in advance

3. Group the listed tourist resources and write them in their corresponding positions.

Belogradchik Rocks, Tsari Mali Grad, Ivanovo Rock Monasteries, Baba Vida Fortress, Zheravna Folk Costumes Festival, Cape Kaliakra, Arbanassi, Sofia Rock Fest, Raysko Praskalo

Natural resources	
Historical and archaeological	
Architectural and ethnographic	
Cultural and historical	

4. Identify the landmarks. Write their names in the table next to the tourist area in which they are located:

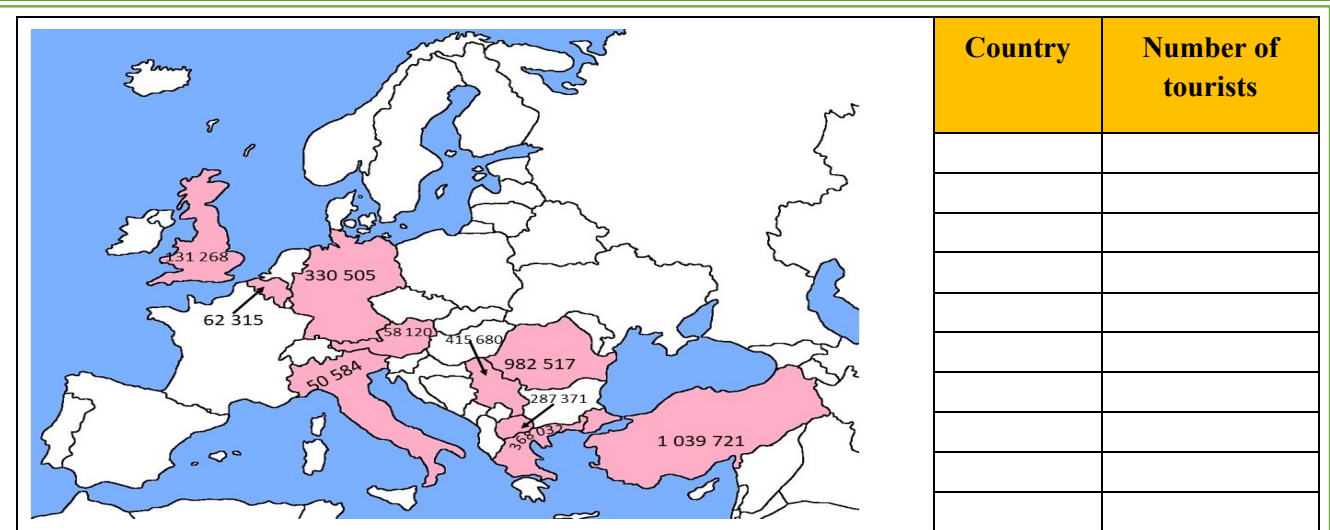


<i>Tourist region</i>	Landmark	Tourist region	Landmark
<i>The Danube Plain</i>		The Balkan Mountains Region	
<i>The Valley of Roses</i>		Thrace	
<i>The Rhodopes Region</i>		The Rila-Pirin Region	
<i>The region of Sofia</i>		The region of Varna	
<i>The region of Burgas</i>			

5. Tourists holidaying in Sunny Beach want to get acquainted with non-traditional forms of tourism in Bulgaria. Prepare a route for a day trip in the region of Burgas with visits to places offering rural, wine and eco-tourism.

.....

6. The map shows the countries from which the most tourists visited Bulgaria in 2019. Write them in descending order in the table. Try to determine the reasons for the popularity or unpopularity of Bulgaria as a tourist destination among European countries.



7. You are young specialists in the field of tourism who have just graduated. You have decided to start developing rural tourism in the Balkan Mountains. Divided into teams of four, think about the answers to the guiding questions:

What preconditions should your choice of place meet?

Which target group is the offered tourist service aimed at?

What other conditions should you consider when drawing up your business plan?

To which institutions and how will you present the activities you intend to provide to tourists?

1. *What preconditions should your choice of place meet?*

2. *Which target group is the offered tourist service aimed at?*

3. *What other conditions should you consider when drawing up your business plan?*

4. *To which institutions and how will you present the activities you intend to provide to tourists?*

5. *How will you promote the uniqueness of the service you offer?*

REGIONAL GEOGRAPHY. PLANNING AREAS

Regional geography studies territorial units which are different in size. The division of a territory into regions is a method of analysis, synthesis and explanation of natural and social structures – regions including the natural area, population, settlement network, and agriculture. The first economic division of the country was done by Atanas Beshkov in 1934.

The division of Bulgaria into planning regions is in accordance with the requirements of the general classification of territorial units for statistical purposes applied in the European Union (NUTS – from French:

Nomenclature des unités territoriales statistiques / Nomenclature of territorial statistical units).

One of these requirements is that each level 2 region has a population of not fewer than 800 000 people and by 2020 the country is divided into 6 districts – South-West Region (includes the following districts: the city of Sofia, Sofia, Pernik, Kyustendil, and Blagoevgrad), South Central Region (Plovdiv, Pazardzhik, Smolyan, Haskovo, and Kardzhali), South-East Region (Burgas, Sliven, Stara Zagora, and Yambol), North-East Region (Varna, Dobrich, Targovishte, and Shumen), North Central Region (Veliko Tarnovo, Gabrovo, Ruse, Silistra, and Razgrad) and North-West Region (Vidin, Montana, Vratsa, Lovech, and Pleven).

Algorithm for region characteristics:

1. Determination and assessment of the geographical location.
2. Characteristics and assessment of the natural resource potential.
3. Characteristics and assessment of the demographic potential.
4. Analysis of the current state of the economy.
5. Defining the administrative regions.
6. Outlining problems and prospects for development.

34. SOUTH-WEST REGION

The South-West Region is characterised by a favourable geographical position. It is one of the largest regions in area in the country (second place after the South Central Region). This is the only region that borders three countries and numerous checkpoints are built along the borders.

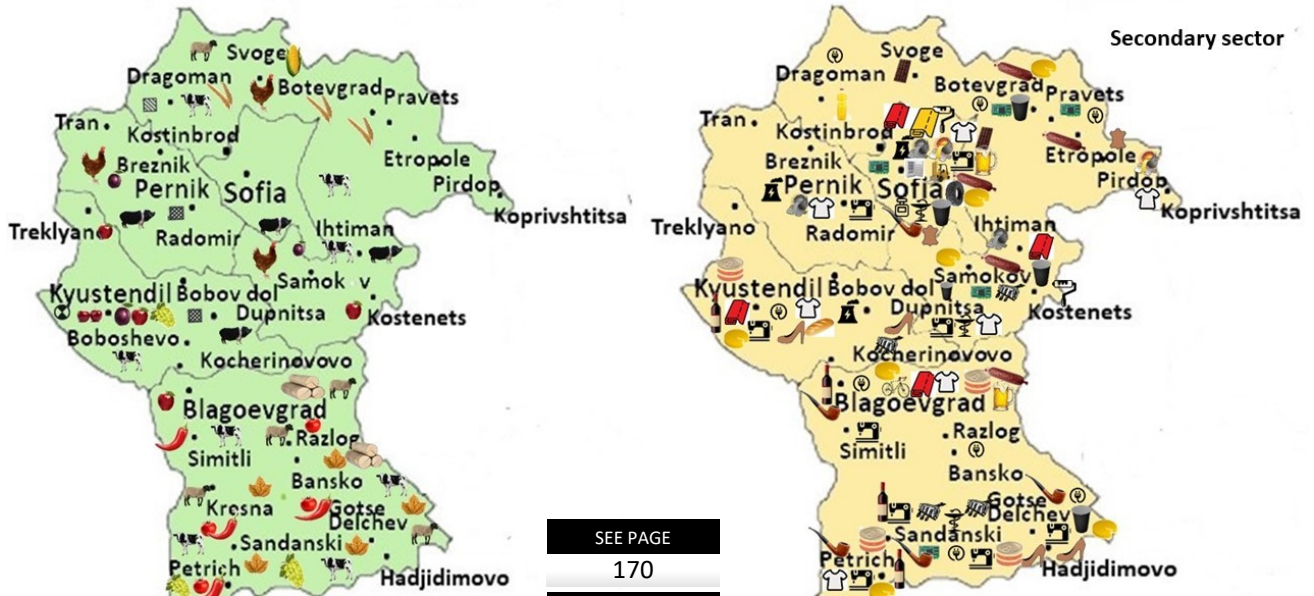
About 75% of the area of the region is occupied by mountains and the rest – by valleys.

A variety of raw materials have been discovered on the territory of the South-West Region, and they are an important prerequisite for its economic development. The climate and soils are diverse. The region has significant water resources. About 40% of its territory is occupied by forests dominated by deciduous ones, and in Rila and Pirin – by conifers (about 30% of the coniferous forests in the country).

The South-West Region is characterised by the best demographics among the other regions. It comes first in population and is highly urbanised (84% urban population). The population is unevenly distributed, the average density is about 104 people/km², well above the national average.

According to a number of economic indicators, the region comes first in Bulgaria and the main part of GDP is provided by the tertiary and secondary sectors.

South-West Region



The South-West Region includes the districts of Sofia city, Sofia, Pernik, Kyustendil and Blagoevgrad (p. 171). The largest city (Sofia) and the smallest town (Melnik) in Bulgaria are located in this region.

A number of demographic and environmental problems are characteristic of the region.

TRAINING SECTION

1. Put “T” for the true and “F” for the false statements about the nature of the South-West Region:

- A. The hollow relief occupies 3/4 of the territory of the region.
- B. All rock pyramids in Bulgaria (Melnishki, Stobski and Kutinski) are on the territory of the region.
- C. The South-West Region is the only region with four different types of climate.
- D. The three longest rivers in Bulgaria rise from the mountains in the South-West Region.
- E. The region has deposits of ores and coal, but only fuels are of economic importance.
- F. Most national parks are located in the three highest mountains, Rila, Pirin and Vitosha Mountain.

2. The South-West Region is first in different natural and demographic characteristics, as well as economic specialisations. Fill in the gaps with some of them.

NATURAL	DEMOGRAPHIC	ECONOMIC

3. Identify and write the names of the mountains (1-4) and the valleys (5-8) :



1.
2.
3.
4.
5.
6.
7.
8.

4. Assess the resource potential of the South-West Region. Give examples of its application:






Resource	Assessment	Example of application
<i>Relief</i>		
<i>Climate resources</i>		
<i>Water resources</i>		
<i>Biological resources</i>		

5. The South-West Region dominates strongly in the socio-economic life of Bulgaria. Comment on the economic benefits and problems arising from this fact.

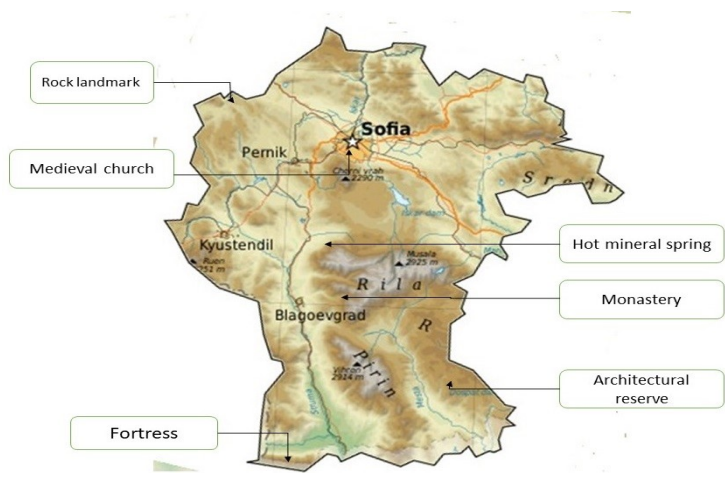
.....

.....

6. The photos show five leading specialisations of the South-West Region. Identify them and write down the centre of specialisation.

				
.....

7. Compose a text advertising a tourist trip in the South-West Region. In the text, you must include the six sites shown on the map and specify the types of tourism you offer.



.....

.....

.....

.....

.....

8. Identify the towns marked with a numeric code. Draw the highways in the area.



1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

35. SOUTH CENTRAL REGION

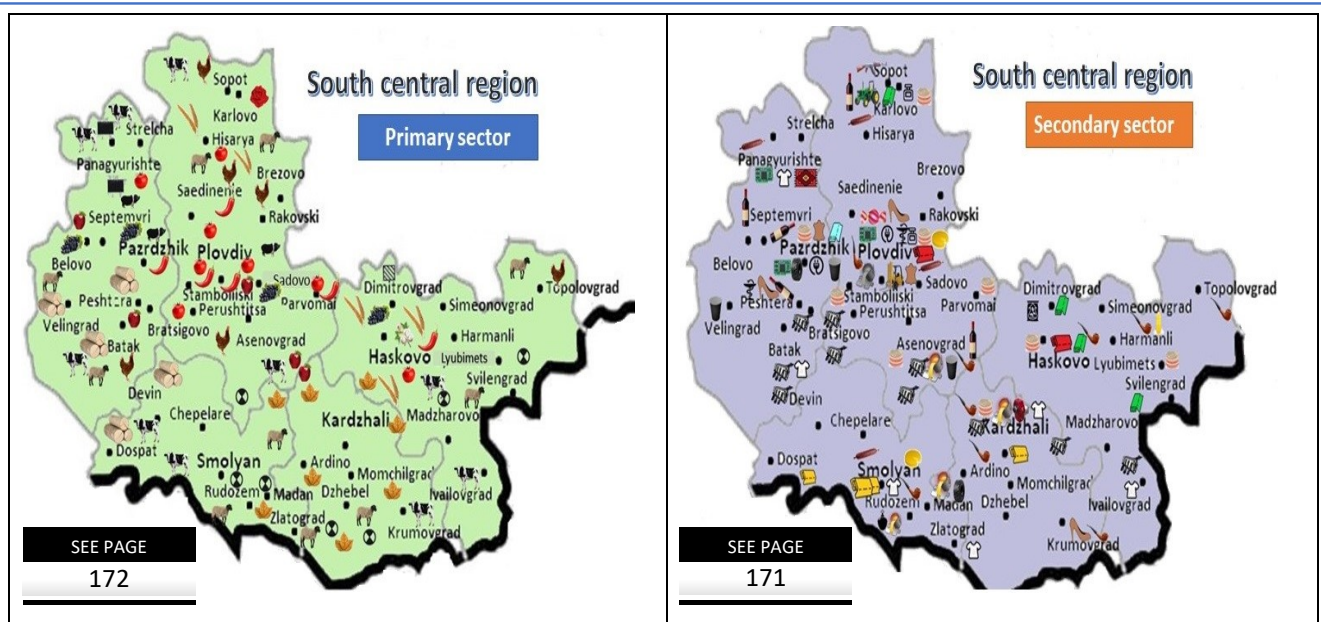
The South Central Region has a favourable crossroads location. It has the largest territory, it is located near the Aegean Sea and four trans-European corridors pass through it.

The relief of the area is diverse – mountains, hollows, lowlands, and river valleys. The South Central Region is rich in raw materials, which is a factor in the development of a number of industries. The climate varies from transitional continental to continental-Mediterranean and mountainous. The water resources in the area are significant (1/3 of the surface water and groundwater drainage in Bulgaria), there is also a variety of soil types. The forests in the South Central Region cover about 40% of its territory. Deciduous forests are preserved, and the area ranks first in the country by coniferous woodland areas.

The South Central Region has the second largest population. The population is unevenly distributed – the average density is 63.4 d./km². The age structure follows the trend in the country for an ageing population. The urban population prevails (about 68%).

The South Central Region is second in GDP after the South-West Region. Agriculture is well-developed in the area. Soil and climate conditions are suitable for growing industrial crops, vegetables, orchards and developing viticulture. Cattle, sheep and goat farming are specialised branches of animal husbandry.

Among the branches of the secondary sector, hydropower industry (70% coming from HTPs), non-ferrous metallurgy, mechanical engineering, chemical, pulp and paper, and food industries have a structurally defining role. Transport is well developed except for the southernmost parts of the region, and there are also great opportunities for tourism to flourish.



Administrative map of South Central Region



The region includes the districts of Plovdiv, Pazardzhik, Smolyan, Kardzhali, and Haskovo.

This area is characterised by socio-economic disparities between the northern and southern parts, as well as some environmental problems.

TRAINING SECTION

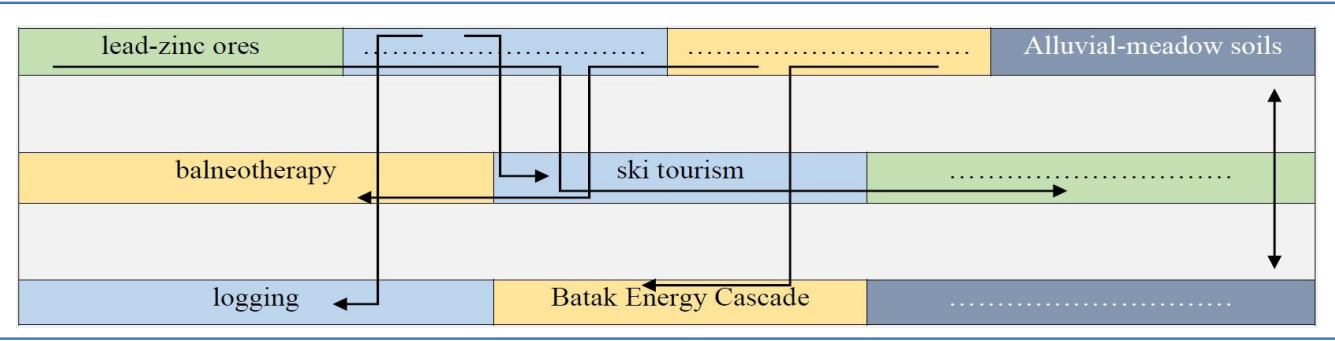
1. Write “T” for the true statements and “F” for the false statements about the geographical location of the South Central

- A. The area borders three neighbouring countries
- B. Along the border with Greece, there are checkpoints at Gotse Delchev, Rudozem and Zlatograd
- C. Corridor 10 connecting Europe and Asia passes through the area
- D. Zlatograd is the Bulgarian town which is at the shortest distance from the Aegean Sea
- E. The region is a crossroads between two of the European corridors

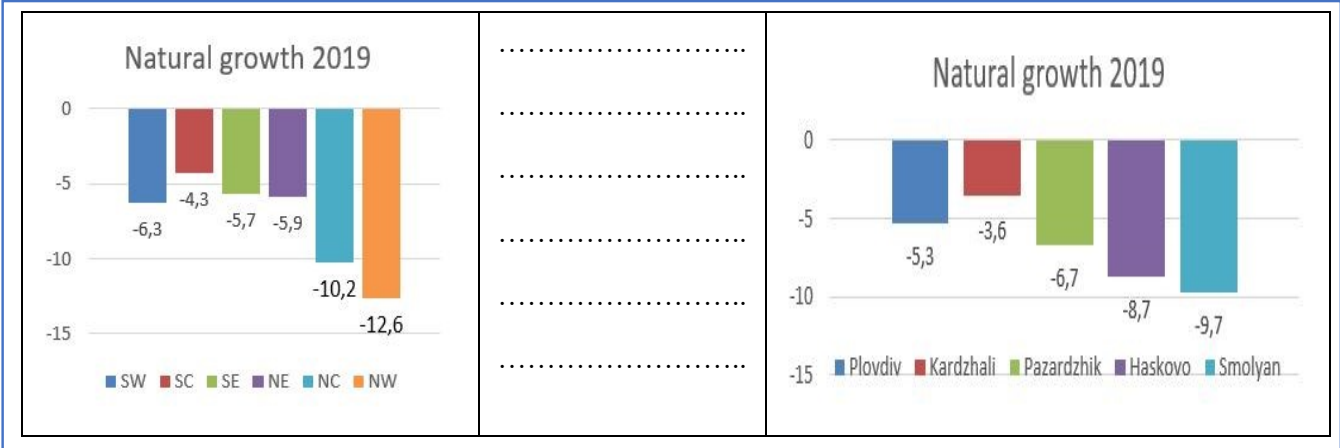
2. Fill in the table:

Three large forms of relief	
Three types of raw materials which are of economic importance	
Three types of climate	
Three large rivers	
Three types of soils of economic importance	



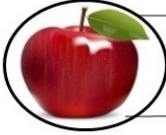
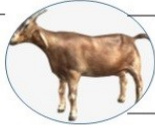
3. Fill in the scheme illustrating the resources and specialisation of the South Central Region.




4. Study the natural growth charts. Draw conclusions.










5. Look at the pictures. Write agricultural crops and livestock breeding sub-branches for which the South Central Region has leading positions.

Industrial crops	Vegetables	Perennials	Animal husbandry
			

6. The map shows industrial centres in the South Central Region. Identify them and write down one national specialisation of industry for each of them.

	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 8. 9.
---	---

7. Identify the tourist attractions:

						
.....
<p>Write four types of tourism related to these attractions.</p> <p>.....</p>						

8. Identify the tourist attractions:

Plovdiv District – Laki, Karlovo, Belovo, Harmanli, Asenovgrad

Pazardzhik District – Batak, Panagyurishte, Peshtera, Parvomai, Krumovgrad

Haskovo District – Momchilgrad, Topolovgrad, Ivaylovgrad, Velingrad

Smolyan District – Dzhebel, Devin, Zlatograd, Madan, Simeonovgrad

Kardzhali District – Ardino, Madzharovo, Nedelino, Madan, Chernoochene

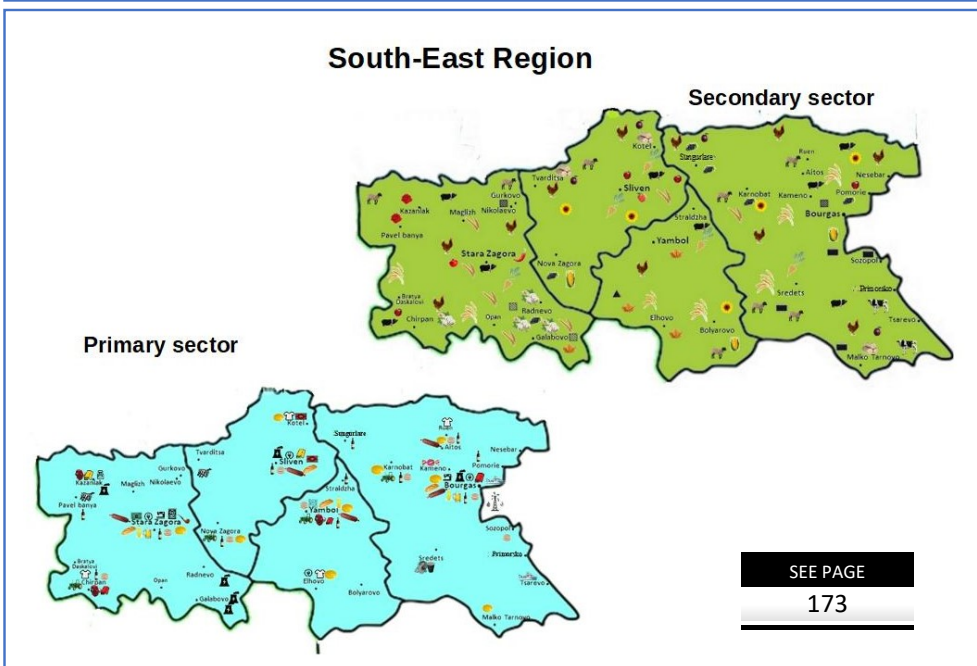
9. Taking into account the natural potential, demographics and economic traditions, make an estimate in which economic specialisations the South Central Region will have national positions in the future.

36. SOUTH-EAST REGION

In the South-East Region, there are socio-economic contrasts, depopulation in Strandzha and significant environmental problems in the Burgas Bay and in the Maritsa Iztok area.

The South-East Region covers the southeastern parts of Bulgaria and to the east it has a wide outlet to the Black Sea.

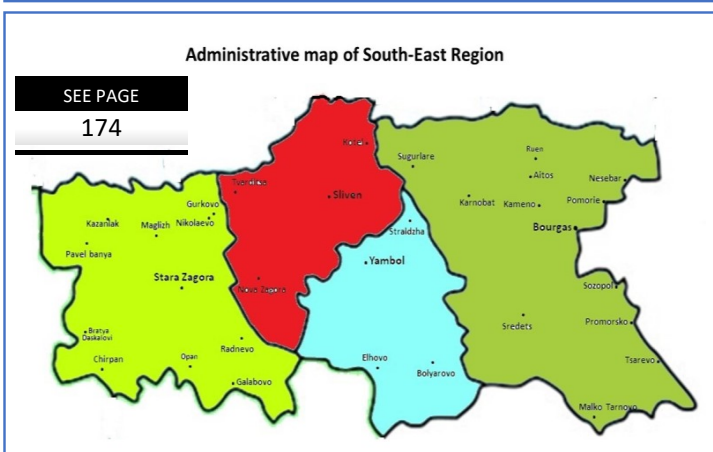
The South-East Region has great natural resource potential. The relief is diverse and includes valleys, lowlands and mountains. The area is rich in raw materials. The climate to the north is transitional continental, to the south – continental-Mediterranean, and along the coast – Black Sea climate. The water resources are limited. The main soil types are rendzina, cinnamon and brown forest soils. The forests, which cover about 52% of the territory of the area, are mainly deciduous (oak, beech), as well as swamp forests.



The population of the region is 1 020 000 people. The average population density is lower than the national average (52.5p./km²). The birth rate is the highest compared to the other regions in Bulgaria. The degree of urbanisation is 73%.

The region ranks third in GDP.

The development of the economy benefits from the geographical location of the region. The region specialises in growing cereals and industrial crops, viticulture (about 1/3 of the grapes in the country), growing orchards and vegetables; cattle breeding, pig farming, poultry farming are also developed.



Coal mining, energy, the petrochemical and food industries are of great economic importance. Transport is a branch of regional specialisation. Tourism (marine, educational and balneotherapeutic) is also rapidly developing.

The South-East Region includes the districts of Burgas, Yambol, Sliven and Stara Zagora.

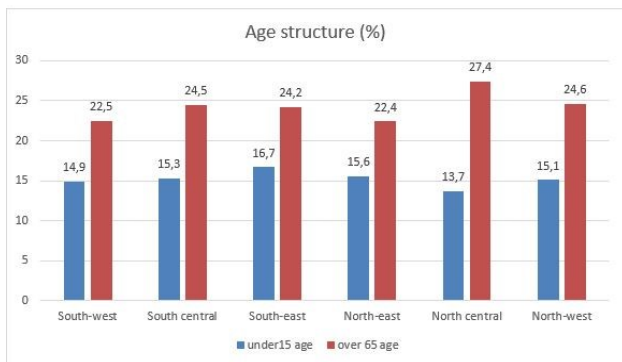
1. Assess the natural potential of the South-East Region and write down two advantages for:

Geographical location	
Relief	
Climate	
Water resources	
Soil resources	

2. Fill in the gaps:

The South-East Region has an excellent geographical location. Its outlet to the Black Sea is a prerequisite for three leading economic specialisations of the region:..... The area has only one interstate border with..... The border connections with it are made through the andcheckpoints. The area is dominated by low relief, which, combined with the warm climate, provides excellent conditions for the development of The seaside lakes are a real asset for the region, most of which are..... The only lagoon is Lake from which.....is extracted. Forests with species which are rare for our country are preserved mostly in the mountain, where the oldest reserve,, is located.

3. Analyse the population charts and answer the questions:



What distinguishes the age structure of the South-East Region from other regions?.....








What is the reason for the highest share of young population in the South-East Region?

What are the demographic differences between the municipalities in the Eastern Balkan Mountains and Strandzha?






4. Fill in the table with the national specialisations and their centres in the South-East Region.

Branch	National specialisation	Centres
Energy		
Mechanical engineering		
Chemical industry		
Light industry		
Food industry		

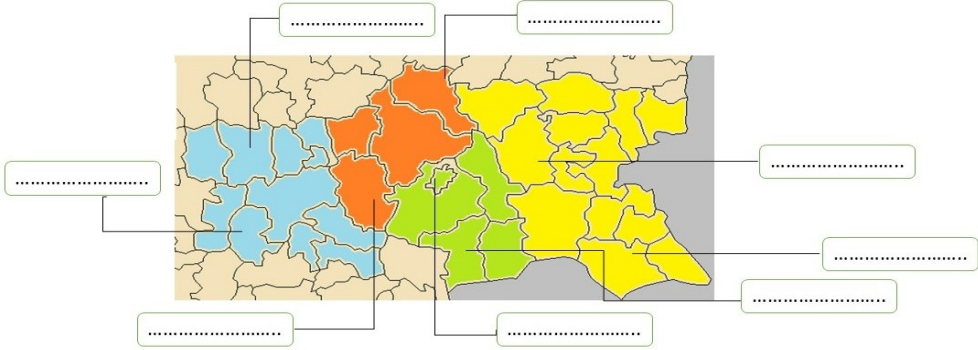
5. The images show primary sector specialisations, for which the South-East Region has a leading position. Identify them. Write the numeric code from the photo on the area where it develops.

		
		
		
<p>1.</p> <p>2.</p> <p>3.</p>	<p>4.</p> <p>5.</p> <p>6.</p>	

6. Gather more information about the tourist attractions displayed. Write a text in which you represent lesser-known types of tourism.

				
<p>Ethnographic complex Damascene</p>	<p>Pomorie</p>	<p>Jeravna</p>	<p>Balgari Village</p>	<p>Zaara Estate</p>
<p>.....</p>				

7. Identify the municipalities and write down the names of the cities that are their centres.



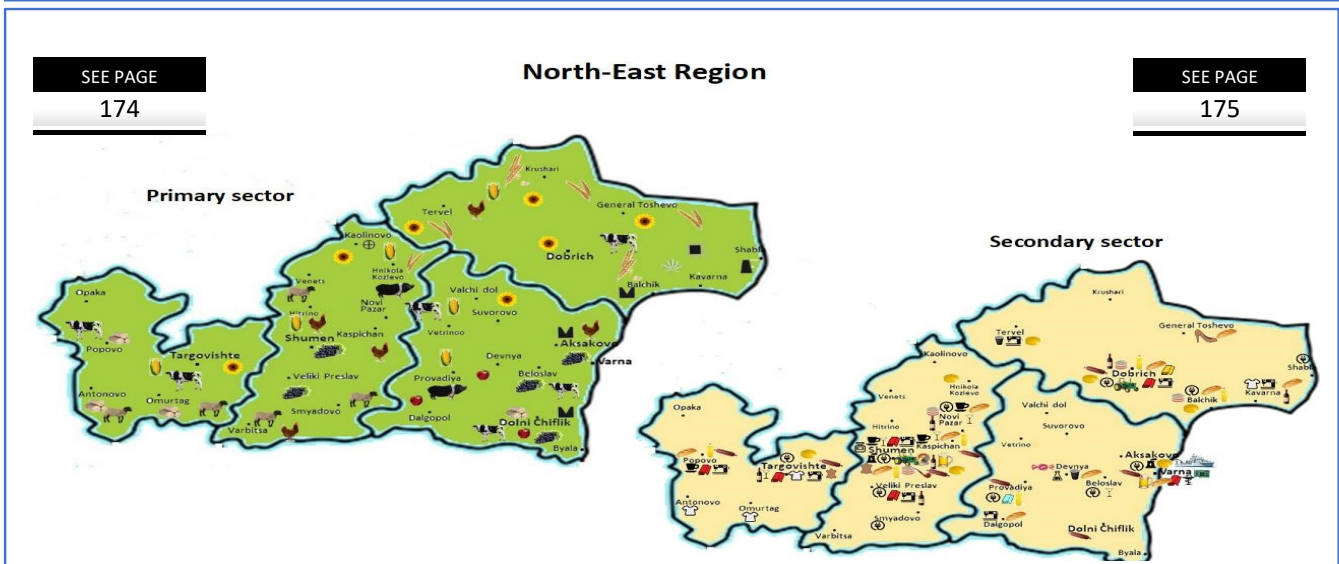
8. Taking into account the current economic and demographic situation, choose five municipalities that are in danger of seriously falling behind the others. What are the worst problems these municipalities have to deal with?

37. NORTH-EAST REGION

With a population of 922,230 people, the North-East Region has the highest population of the three districts in Northern Bulgaria. Its average density is slightly above the national average. The urban population is about 73%, with about 60% of the population living in the four regional cities.

The North-East region is the smallest by area of all regions in Bulgaria (13% of the country's territory). It is located in the northeastern part of the country and has a wide outlet to the Black Sea.

The relief is lowland-hilly, and its characteristic feature is that the altitude increases from north to south. The raw materials in the region are diverse, the deposits of non-metallic mineral resources are more significant. The agro-climatic resources in the North-East Region are suitable for the development of agriculture. The climate is temperate continental, transitional continental and with Black Sea influence. The water resources in the area are limited. Varna Lake and Beloslav Lake, connected by a navigable canal, are of great economic importance. The forest resources in the region are insufficient and are represented mainly by deciduous species and swamp forests along the Kamchia Valley. The land resources are the main assets. About 69% of the territory of the region is occupied by agricultural land with chernozem soils.

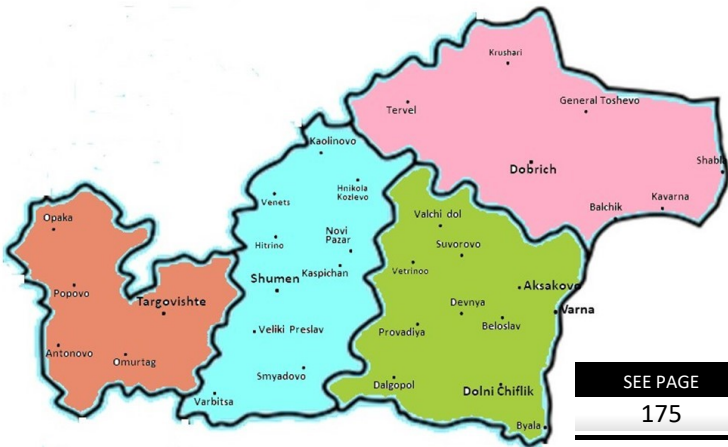


The North-East Region is first among the regions in Northern Bulgaria in terms of the indicators of GDP and GDP per capita. The prerequisites for the development of the economy are the outlet to the Black Sea, the agro-climatic and land resources, as well as the location of Port Varna. The specialised (economic) branch is agriculture (cereals and industrial crops; pig breeding, poultry and cattle breeding). The leading branches of the secondary sector are the chemical and food industries.

The gas pipeline from Russia passes through the North-East Region. The largest airport for Northern Bulgaria operates near Varna. Different types of tourism have been developed.

The North-East Region consists of four districts – Varna, Dobrich, Shumen, and Targovishte.

Administrative map of North-East Region



SEE PAGE
175

The problems in the North-East Region are the socio-economic differences between the agglomeration of Varna-Devnya and the other towns in the region, as well as some environmental problems. The completion of the Hemus and Black Sea motorways is also important.

TRAINING SECTION

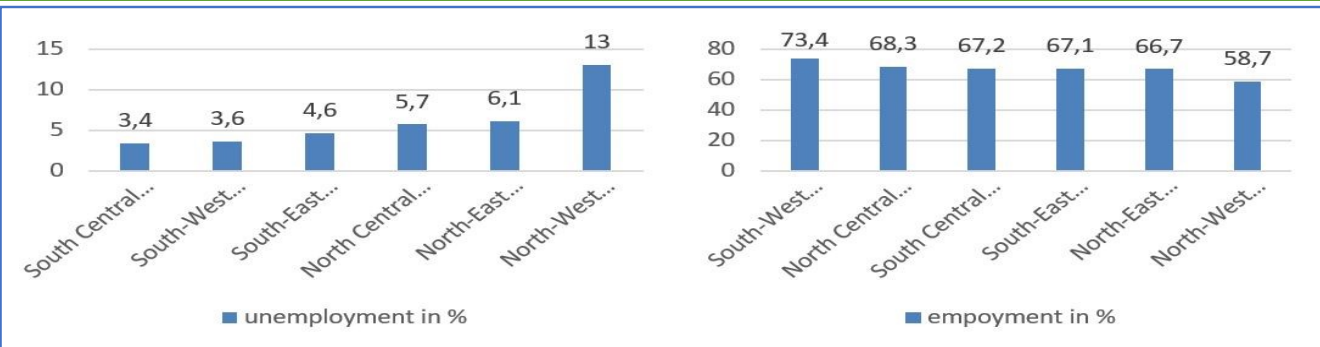
1. Mark the true (T) and false (F) statements.

The North-East Region has a crossroads geographical location.	
The sea outlet is a major advantage of the geographical location.	
The region connects with Romania by the land border at Durankulak and Yovkovo checkpoints.	
The relief includes the highest part of the Danube plain.	
It is connected with the South-East Region by the low Varbishki and Rishki passes.	
Despite the influence of the Black Sea, the climate doesn't exhibit great variability.	
The quality of soil resources is among the major problems of the natural environment.	
The region has the richest forest resources in Northern Bulgaria.	

2. Connect the natural resources with the economic specialisations of the South-East Region:

Chernozem soils	Shipbuilding
Kaolin extraction	Wind energy production
Outlet to the Black Sea	Cereal production
Extraction of limestone and stone	Porcelain and earthenware industry
Black Sea climate	Soda production




3. Look at the charts and draw conclusions about employment in the North-East Region:



4. Write the similarities in the economic specialisations of the specified cities from the South-East and North-East Regions:

Devnya	.....	Kameno	Burgas	.....	Varna
Karnobat	.....	V. Preslav	Albena	.....	Sunny beach
Shumen	.....	Sredets	Dobrich	.....	Yambol

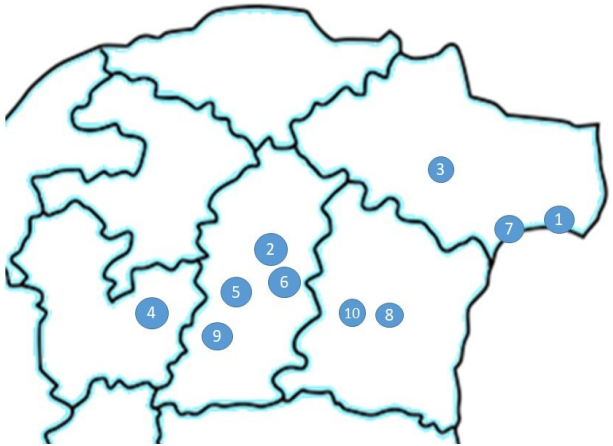
5. Write the corresponding number of national specialisations for plant farming, livestock breeding and services in the North-East Region:

 Plant farming	 Animal husbandry	 Services
---	---	--

6. Compose a text for secondary sector specialisations in the North-East Region. Use supporting words and phrases from those suggested below:

from Dobrudzha; porcelain-earthenware industry; Devnya; rich cereal crop; production of sea and ocean ships; Dobrich, Balchik and Kavarna; sole producer in Bulgaria; the largest centre of the chemical industry; kaolin mining; processing; Black Sea outlet; new market, Shumen and Kaspichan; Varna; mill plants; production of soda and fertilisers; “Alkumet” Shumen

7. Identify the towns. Write the names and the numbers from the map.



	City/town	№
A town near Cape Kaliakra		
An old Bulgarian capital		
Centre of Dobrudzha		
Centre of a district and glass industry		
Centre of non-ferrous metallurgy		
A railway station and centre of porcelain		
A town famous for its large botanical		
A large centre of the chemical industry		
A historical centre and wine producer		
The city produces a saline solution and kitchen appliances.		

8. Express your opinion on the potential and development of the North-East Region:

Natural geographical advantages.....

Demographic difficulties.....

Economic opportunities.....

Environmental risks.....

38. North Central Region

The North Central Region has a favourable geographical position, which is determined by its connection with the Danube river and the bridge connecting Ruse and Giurgiu (Romania). The trans-European corridors passing through it are strategically important for its development.

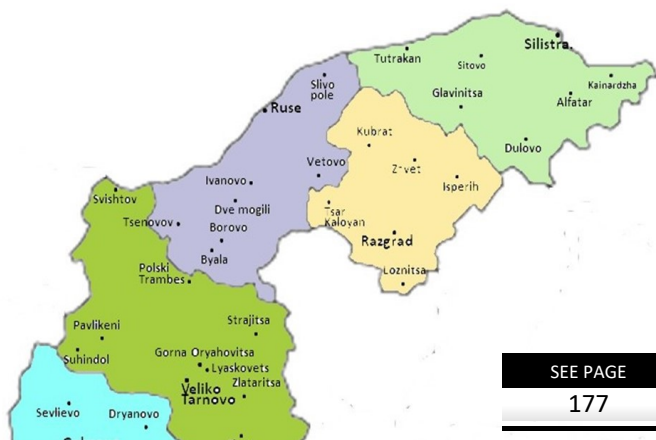
For the most part, the relief is lowland-hilly, which favours the development of transport and agriculture. The energy and mineral resources are in limited quantities, the deposits of non-ores are of economic importance. The climate in the area is temperate continental and mountainous – cold winter with low temperatures, snowdrifts, and frost; hot summer with a small amount of precipitation. The region has enough water resources; the water resources are insufficient only in Dobrudzha and Ludogorie, the rivers have an erratic flow regime and dry up in the summer. There are chernozem and gray forest soils, the arable land covers about 1/2 of the territory of the region. The wood resources, mainly oak (the Pre-Balkan) and beech (the Balkan Mountains), are insufficient for consumption.

The population of the region is 765 000 people. The demographic situation in the area is unfavourable. Negative natural and mechanical increase, ageing of the population and depopulation of small mountain villages are characteristic of the region. The population is unevenly distributed, the density is below the national average. The degree of urbanisation is 67%.



The North Central Region is ahead of only the North-West Region by GDP, – it provides 8% of the country's GDP. Cereals, industrial crops (sunflower) and vegetables are grown; orchards (4/5 of the apricots in Bulgaria are grown in Silistra) and viticulture, as well as pig and poultry production are developed. The important industries are food industry, mechanical engineering, light and chemical industries, as well as the building materials industry. All types of land and river transport are developed in the region. Gorna Oryahovitsa is the most important railway station in Northern Bulgaria, and Ruse is the largest Danube port in the country. The region has great potential for tourism development – Veliko Tarnovo, Gabrovo, Tryavna, etc.

Administrative map of North Central Region



The North Central Region includes the districts of Silistra, Razgrad, Ruse, Veliko Tarnovo and Gabrovo.

For the economic development of the area, it is necessary to build another bridge over the Danube in order to exploit its potential, as well as to complete the construction of Hemus highway. Economic activities lead to environmental problems such as deforestation, air, soil and water pollution which need to be tackled.

TRAINING SECTION

1. Compare the geographical location of the North Central and North-East regions. Fill in the table and draw the appropriate conclusions.

	North Central Region	North-East Region
Border checkpoints		
Duty-free zones		
Transport corridors		
Balkan Mountain Passes		
What are the advantages of the geographical location of each of the regions		
.....		

2. Fill in the information about the natural potential of the North Central Region:

..... relief prevails in the North Central Region. It is favourable for the development of The region is poor in raw materials. There are significant deposits of, which support the development of the porcelain-earthenware industry. The region's river network is not dense. The only longer rivers are and The and dams, which are used for irrigation, are built on the rivers. The riverside Lake, which is home to a lot of, is unique to the nature of the region.





3. Look at the scheme and comment on the demographic situation in the region.




4. Fill in the primary sector specialisation table for the North Central and North-East regions:

	North Central Region	North-East Region
Cereal crops		
Industrial crops		
Vegetables		
Fruit trees		
Vineyards		
Comment on the similarities and differences.		

5. Write down types of production of national importance from those industries:

Porcelain industry	Chemical industry	Light industry	Food industry
			
.....

6. Identify the industrial centres of the North Central Region using the description.

	Description	Centre	№
	A veterinary medicines plant		
A motor oils and lubricants manufacturer			
Sugar factories			
Bathroom fixtures production			
An artificial fibre factory			
Famous for its meat and dairy products			
A small river boats factory			
Latex production			

7. You are a participant in a Balkan tourism forum where you need to present a short advertising presentation about the tourist opportunities in the North Central Region. The focus is on the history and culture preserved in the region. Write a short text (up to 7-8 sentences) presenting landmarks from three historical eras. Include monuments of architectural, archaeological and religious significance.

8. Look at the map. The locations of ten settlements are wrong. Write the correct location.



1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

9. Comment on the strengths and weaknesses in the economic development of the North Central Region.

39. North-West Region

The region occupies the northwestern parts of Bulgaria. The Danube, the *New Europe Bridge* built at Vidin, as well as the trans-European corridors that cross it, are of great importance for its economic development.

Although small in area, the North-West Region is characterised by a diverse relief. Its territory includes parts of the three natural geographical regions in Northern Bulgaria – the Danube Plain, the Pre-Balkans and the Balkan Mountains.

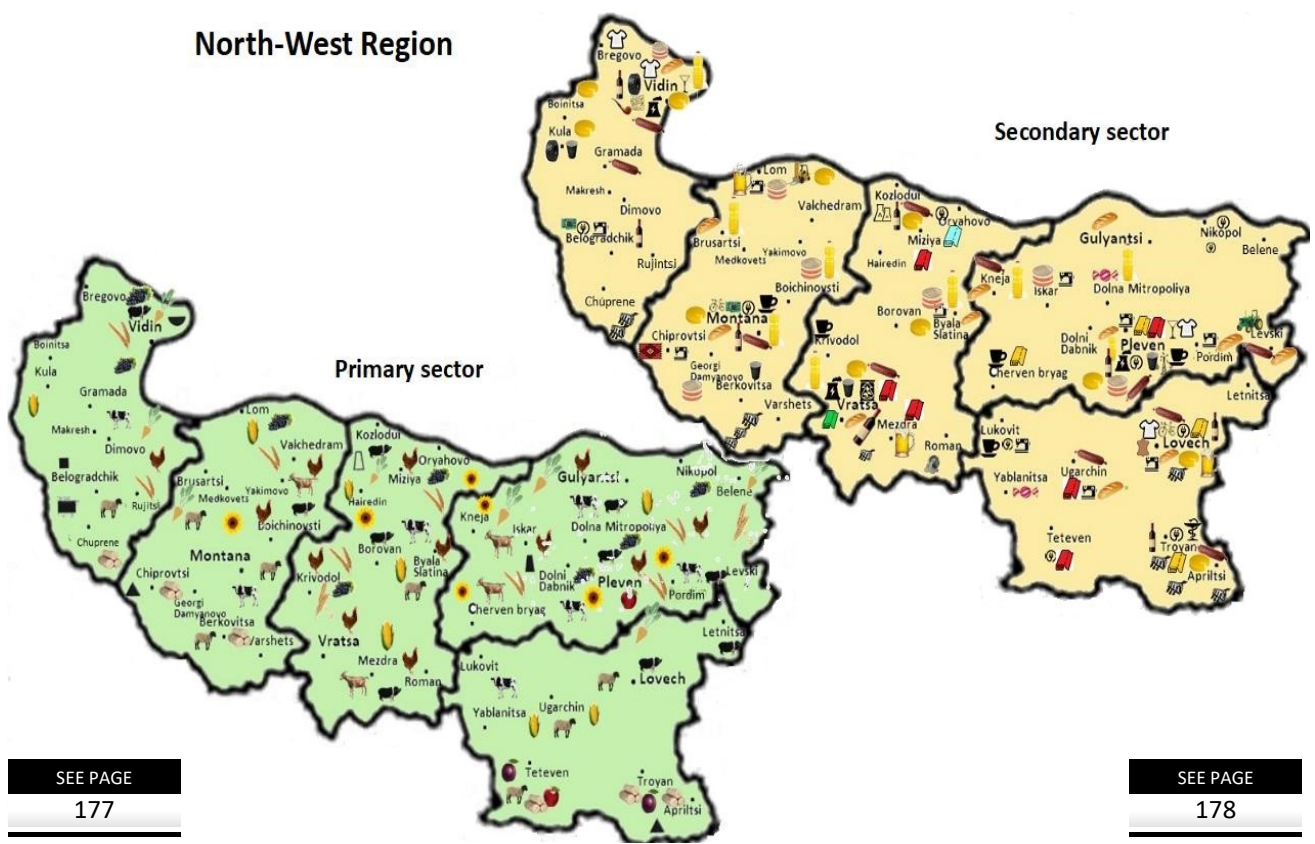
The energy and mineral resources are relatively diverse, but in limited quantities. Non-metallic mineral deposits predominate. The largest gypsum deposit in the country is in Koshava (Vidin). The climate is temperate continental, and in the mountains, it is mountainous. In summer, the rainfall is insufficient, and in winter a lasting snow cover and sleet form. The water resources are used for water supply, irrigation, electricity generation, fishing, and shipping (the Danube River). The soils are diverse – chernozem, alluvial-meadow, gray and brown forest, mountain-meadow soils. The forest resources are mainly represented by deciduous forests; the meadows and pastures are a prerequisite for the development of pasture-based farming.



The area has extremely weak demographic potential. The North-West Region ranks last in terms of population (720 172 people). The average density (40p/km²) and the share of the urban population (63%) are below the national average.

The region has the least economic potential and by a number of economic indicators it ranks last in the country (6% of GDP). Agriculture and energy play a key role in its development. The region has the largest areas of agricultural land per resident. Cereals and industrial crops (the Danube Plain), fruit-growing and viticulture are developed mainly in the Pre-Balkan area. Livestock breeding is widespread, but it is mostly extensive. The industries developed in the region are mechanical engineering, building materials industry, food and light industry.

North-West Region



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SEE PAGE

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The energy sector is of national importance –the only nuclear power station in the country, Kozloduy, which provides about 40% of the electricity production, is located here. The poorly developed transport system is the cause of the region’s economic decline. One of the largest railway hubs in the country, Mezdra, is located in the North-West Region. Part of the country's gas transmission ring passes through the area. The tourist potential of the area is not fully exploited.

Districts of North-West Region



SEE PAGE

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The North-West Region includes five districts – Vidin, Montana, Vratsa, Plevan and Lovech.

The North-West Region has the biggest socio-economic problems in the country – high levels of unemployment, migration and depopulation. The region is not attractive for investment. The economic activity causes damage to the natural environment.

1. Compare the geographical location of North Central and North-West regions by filling in the table:

	North Central Region	North-West Region
Borders with neighbouring countries		
Transport corridors		
Border checkpoints		
Duty-free zones		
Passes to Southern Bulgaria		

What are the advantages of the geographical position of the North-West Region compared to the North Central Region?

What are the disadvantages of the geographical position of the North-West Region compared to the North Central Region?

2. Write down:

The three longest rivers in the North-West Region –

Three caves developed for visitors –

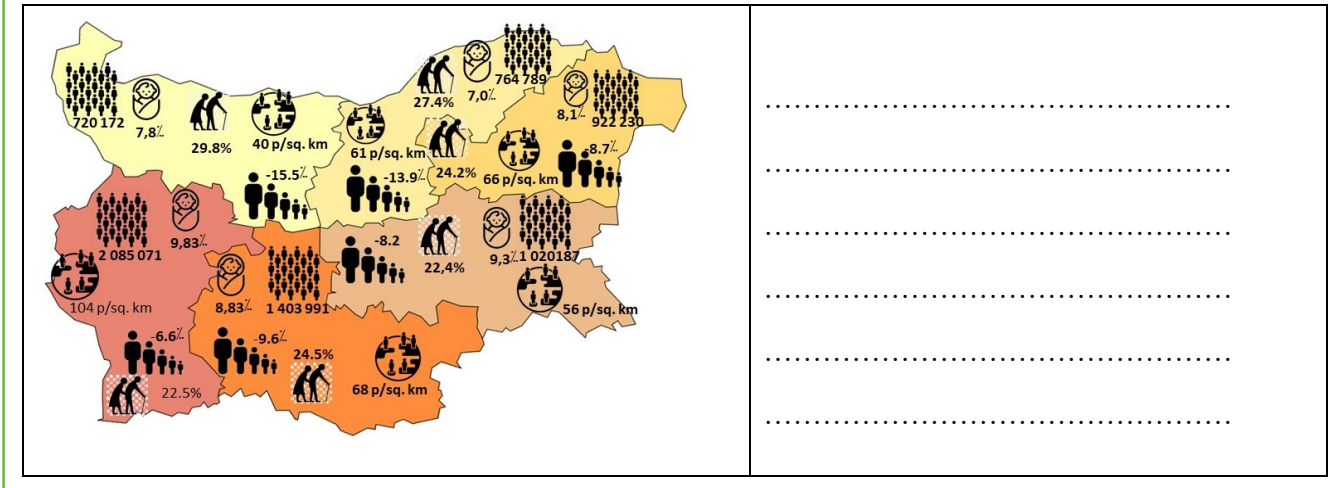
Three mountains over 2000 meters high –

Three mineral springs important for resort development –

3. Combine each natural resource with its characteristics and economic importance:

1	RAW MATERIALS	2	MOST BALKAN MOUNTAIN RIVERS FLOW THROUGH THE REGION	3	USED IN HPPS
4	Soil resources	5	All types are available, but in small deposits	6	Developed crop farming
7	River resources	8	Concentrated in the Balkan Mountain part of the region	9	Extraction of building materials
10	Forest resources	11	Distinguished by high fertility	12	Wood processing is developed
1 –		4 –		7 –	
				10 –	

4. Study the infogram. Comment on the demographic situation in the North-West Region compared to the other regions. What evidence of the crisis is shown?











5. For each agricultural crop, indicate up to three areas with the strongest specialisation.

	Pleven	Lovech	Vratsa	Montana	Vidin
wheat					
maize					
sunflower					
plums					
grapes					

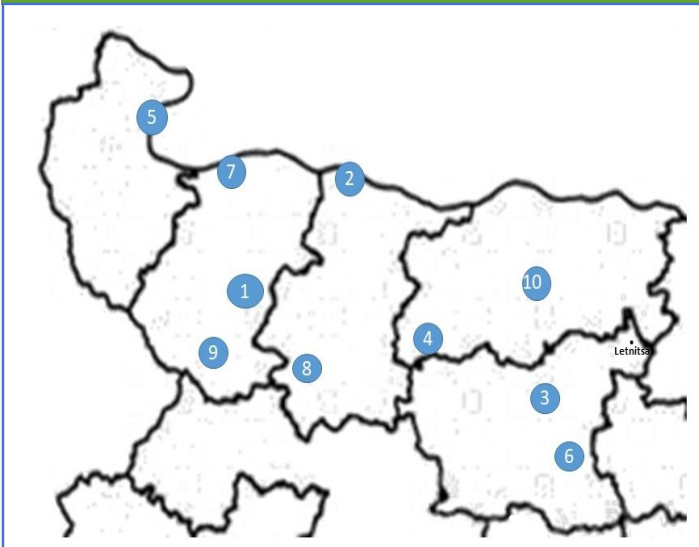
6. Write down the names of the industries specialised in the North-West Region. Connect the industrial products to the centres where they are produced.

							
Kozlodui	Dolna Mitropolia	Pleven	Montana	Troyan	Vidin	Lovech	Chiprovtsi

7. Identify the tourist attractions in the North-West Region. Draw up two itineraries for excursions involving visits to these sites:

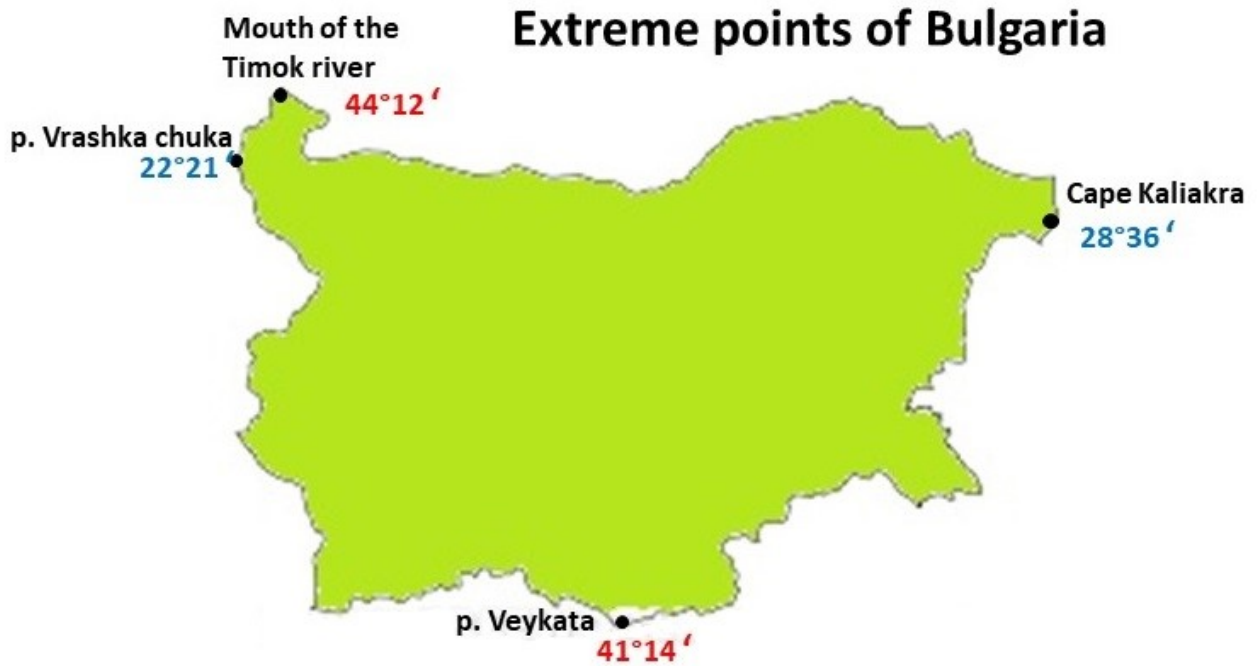
			
			

8. The designations of the ten largest cities in the North-West Region are on the map. Fill in their names in the table:

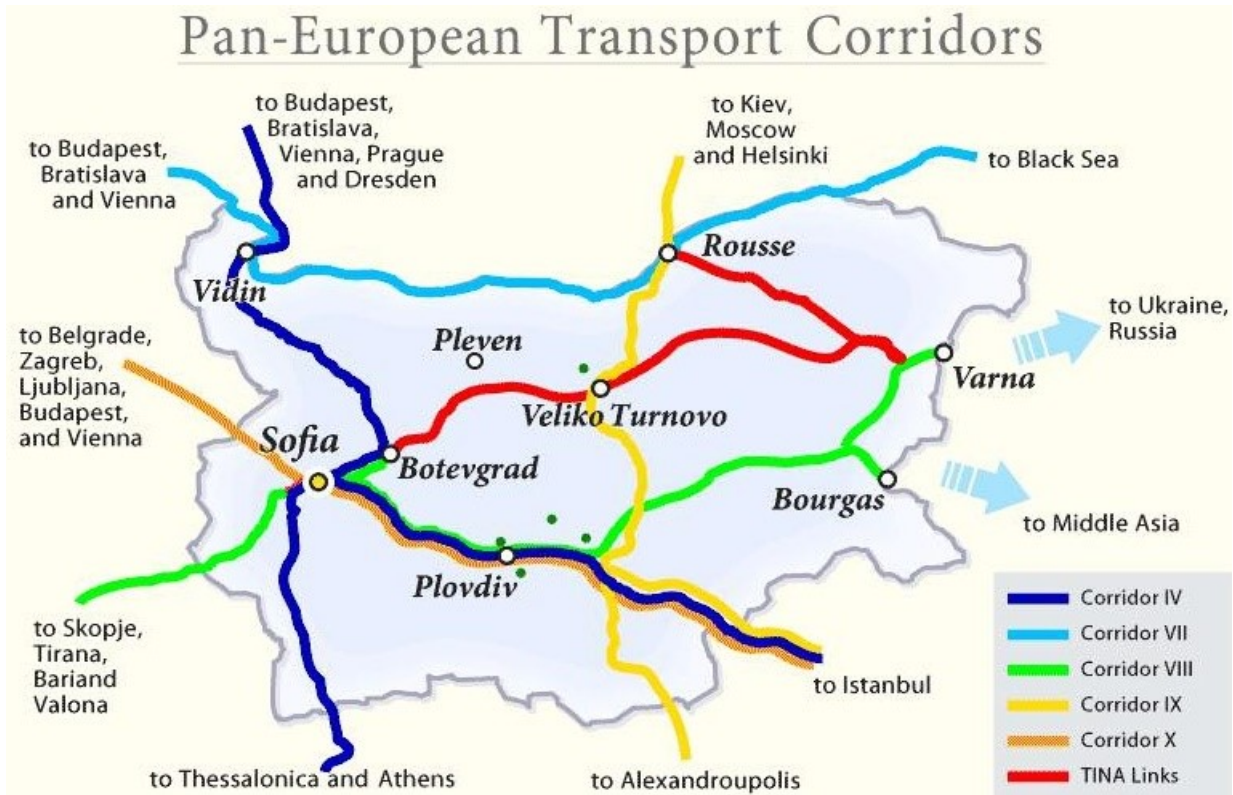


№	City	Population numbers
10		94 626
8		51 020
5		41 415
1		37 122
3		30 353
7		19 033
6		18 889
4		14 083
9		11 668
2		11 552

1. The outermost points of Bulgaria



2. European transport corridors



3. The San Stefano Treaty



4. The Berlin Congress

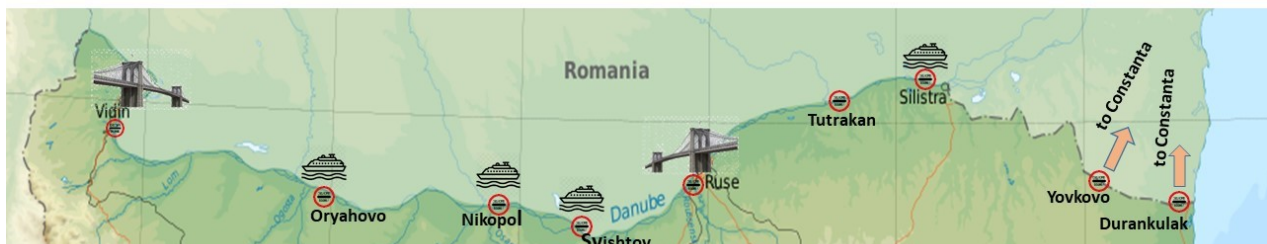


7. The Neuilly Treaty



8. Northern border

Northern border of Bulgaria



LEGEND

Border crossing point

Bridge

Ferry

Ruse – Giurgiu
Vidin - Calafat

Oryahovo – Beckett
Nikopol – Turnu Magurele
Svishtov – Zimnich
Silistra - Calarash

9. Eastern border



Legend



Border crossing point



Ferry

- Varna – Chernomorsk
- Varna – Poti/Batumi
- Burgas – Novorusiisk
- Burgas - Batumi

10. Southern border



Legend



Border crossing point

Southern border of Bulgaria

11. Western border

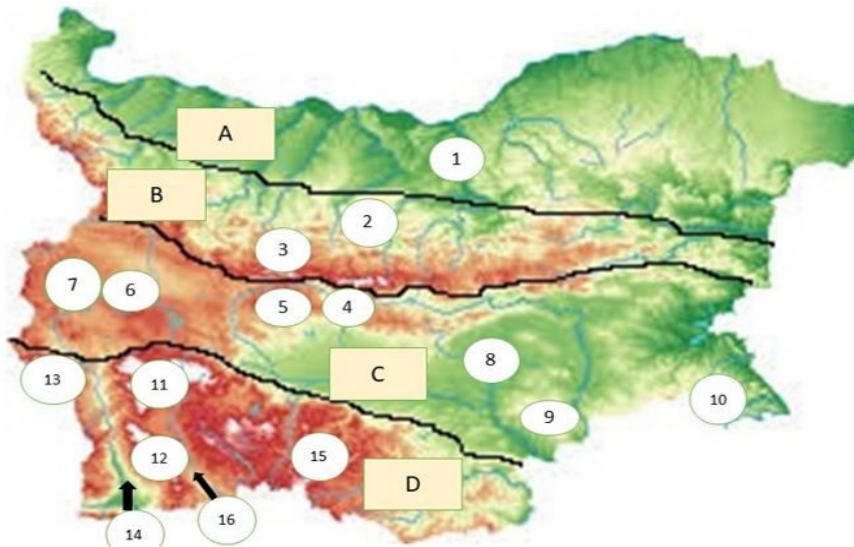


Western border of Bulgaria

12. The exogenous processes

Process	Typical Formations		
Weathering	 <u>The Melnik Earth Pyramids</u>	 Stone rivers	 The Belogradchik Rocks
Erosion	 <u>The ravine of Kresna</u>	 The gorge of the Erma River	 <u>Kostenets Waterfall</u>
Abrasion	 <u>Bolata Bay</u>	 <u>Cape Shabla</u>	 <u>Sinemorets Beach</u>
Exaration	 <u>Ledeno ezero</u>	 <u>Kutelo Peak – karling</u>	 Moraines in <u>Pirin</u>
Karst	 <u>Saeva Dupka Cave</u>	 Surface karst landscape	 <u>Chudnite Mostove</u>

13. Geomorphological regions



A. The Danube Plain	B. The Balkan Mountains Region	C. Transitional mountain-valley region	D. The Rila-Rhodopes region
	2. The Pre-Balkan Region 3. The Balkan Mountains Chain	4. Sub-Balkan valleys 5. Srednogorie Region 6. Vitosha 7. Kraishite 8. The Upper Thracian Lowland 9. Sakar 10. Strandzha	11. Rila 12. Pirin 13. Osogovo-Belasitsa Mountain Group 14. The Struma River Valley 15. The Rhodope Mountains 16. The Mesta River Valley

14. The fossil fuels

Fuels minerals in Bulgaria

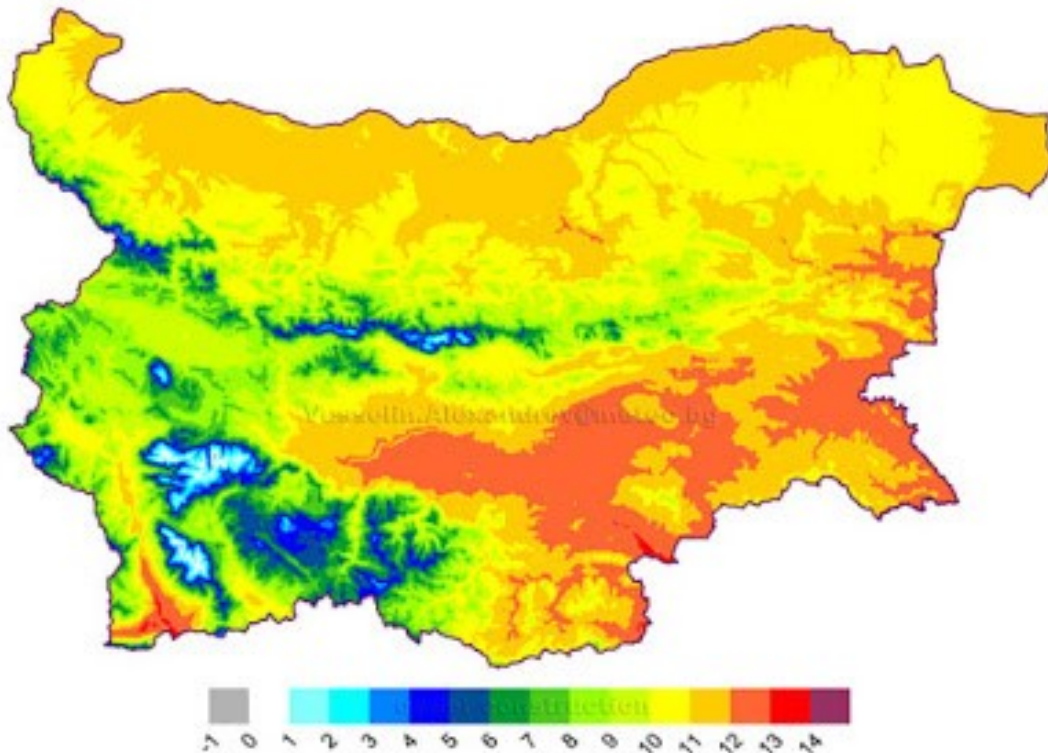


15. Ores

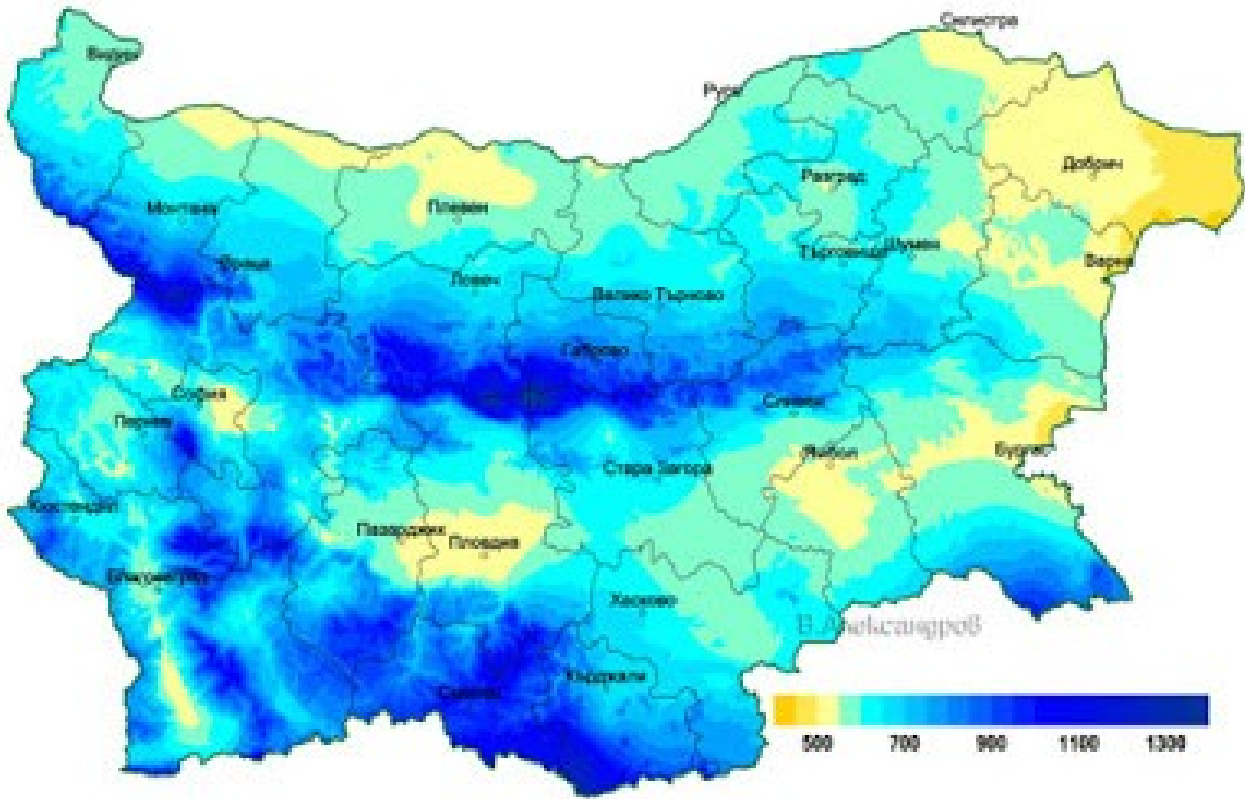
Ore and non-ore minerals



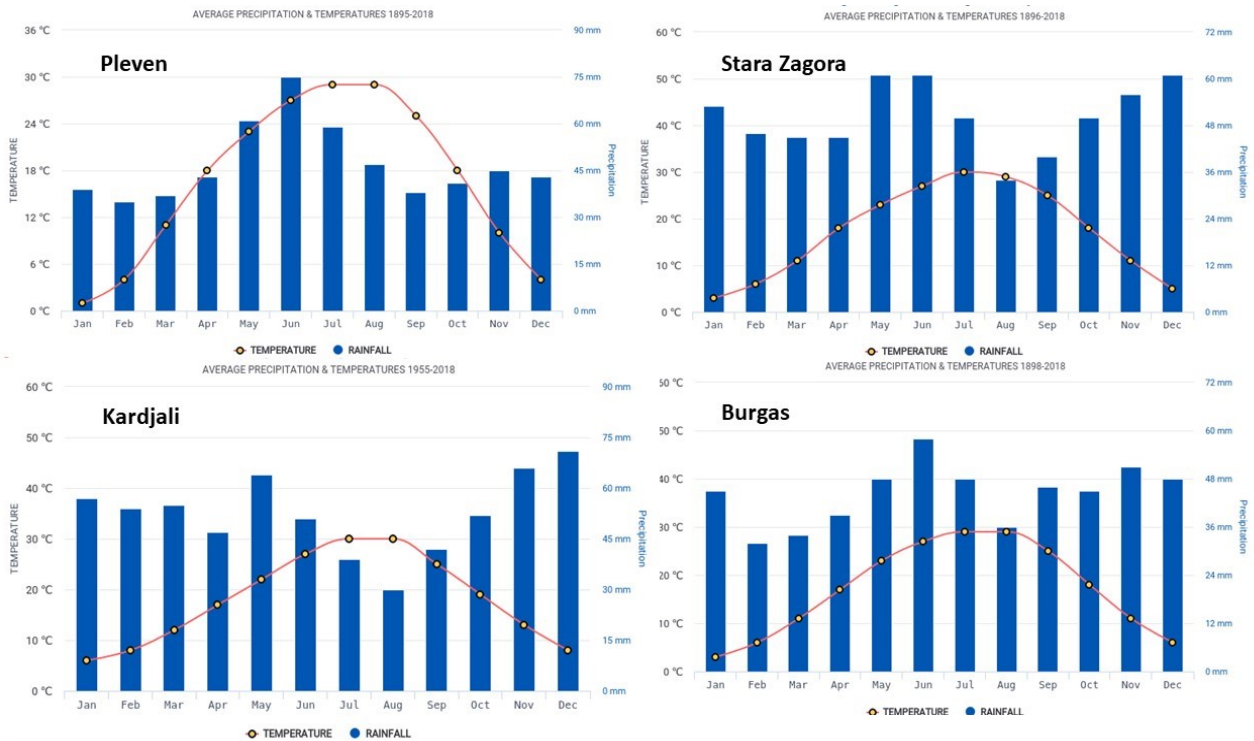
16. Average annual temperatures in °C



17. The average amount of precipitation in Bulgaria in mm

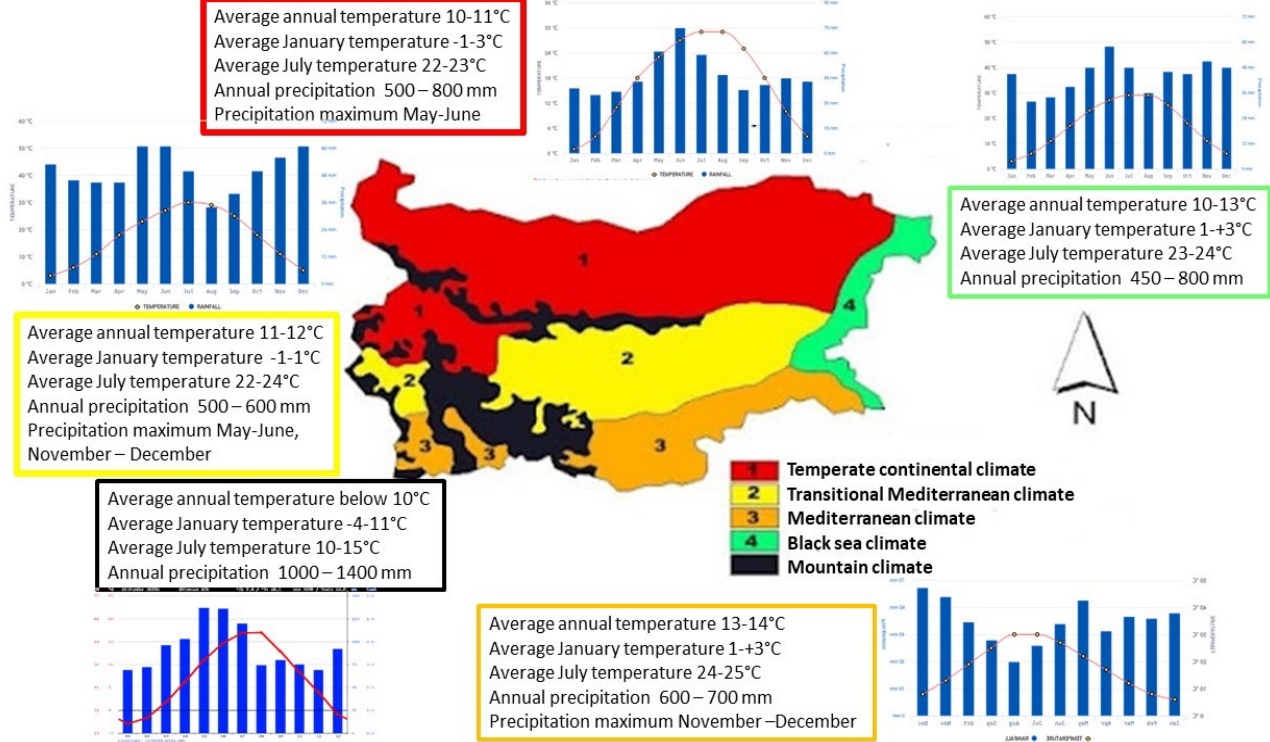


18. Types of climate



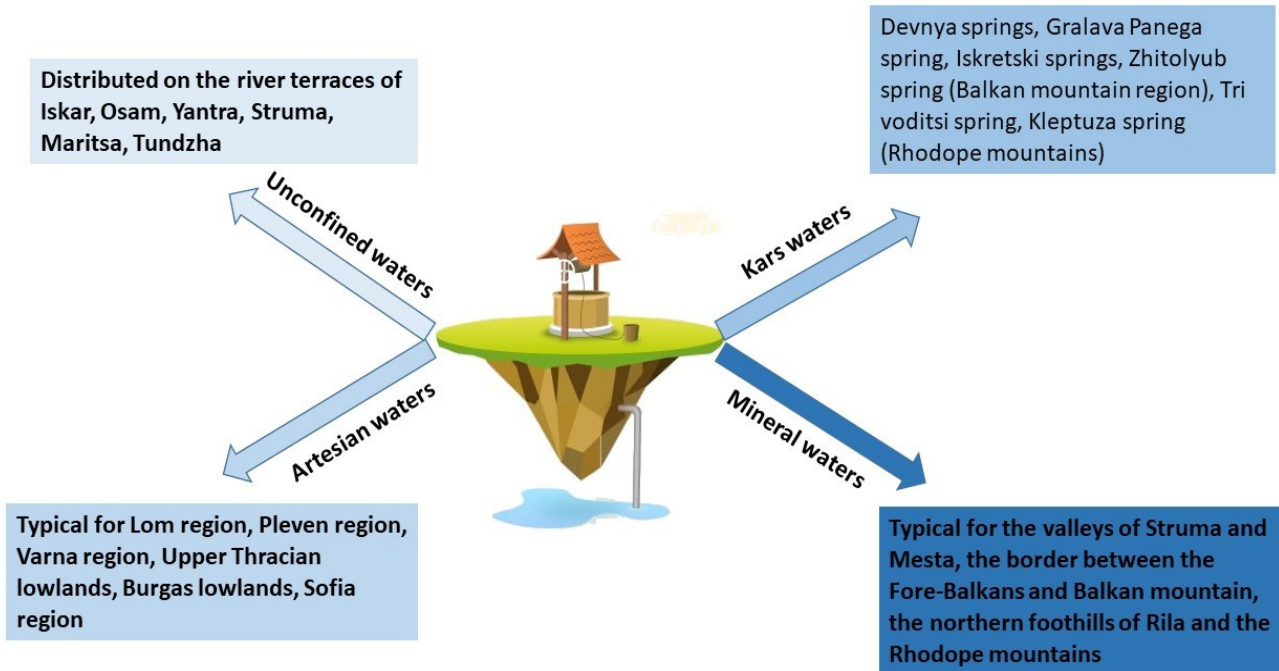
19. Five climatic areas

Climates of Bulgaria

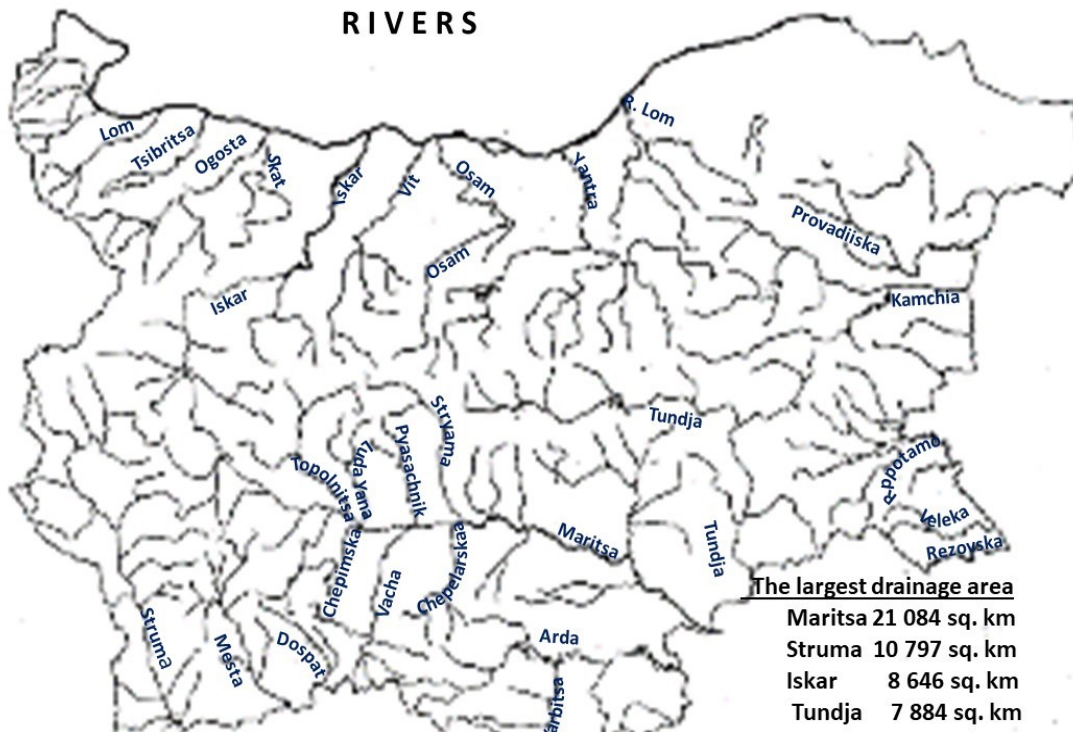


20. Groundwater

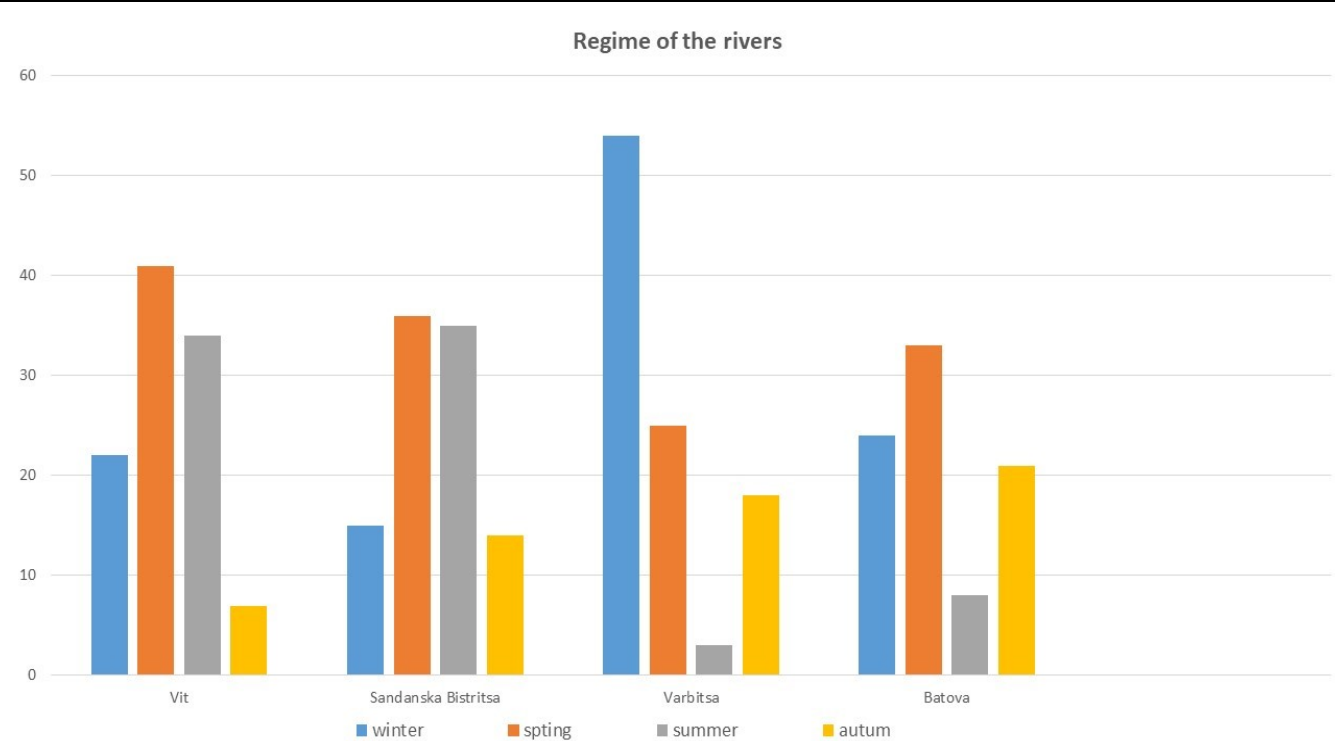
GROUND WATERS IN BULGARIA



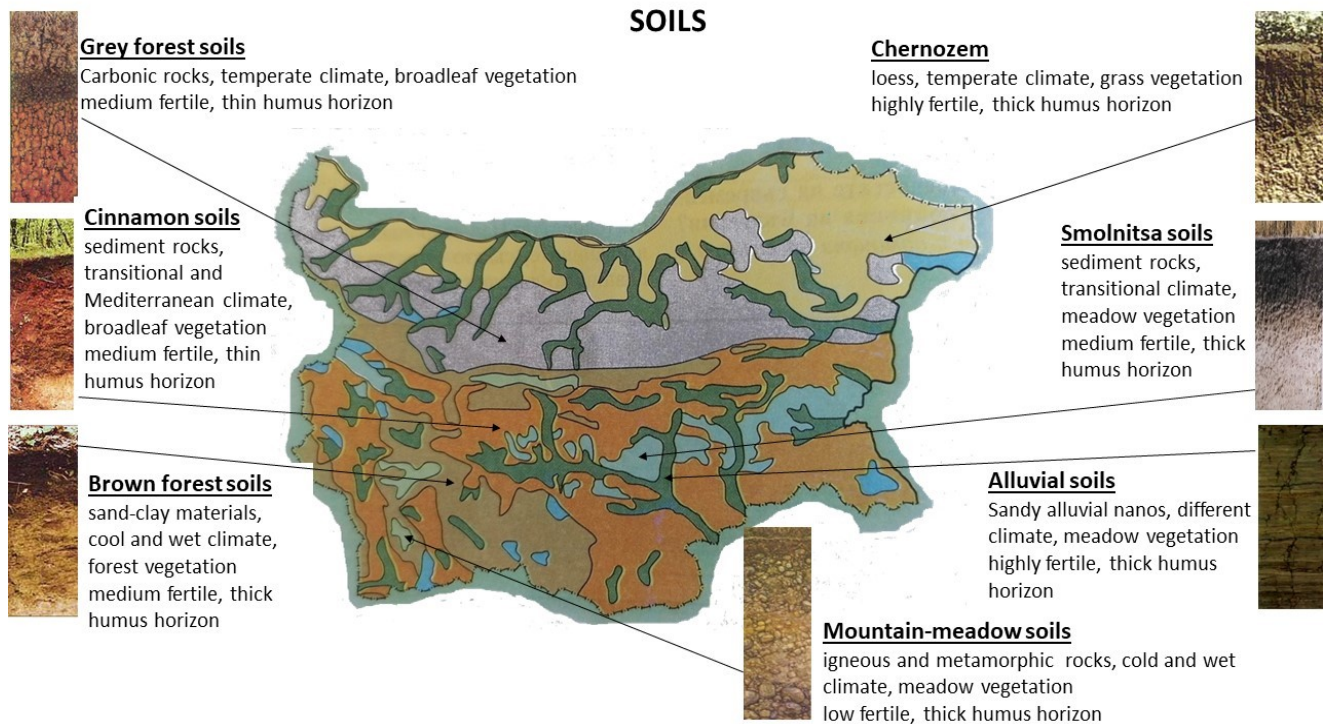
21. Rivers in Bulgaria



22. Regime of the rivers

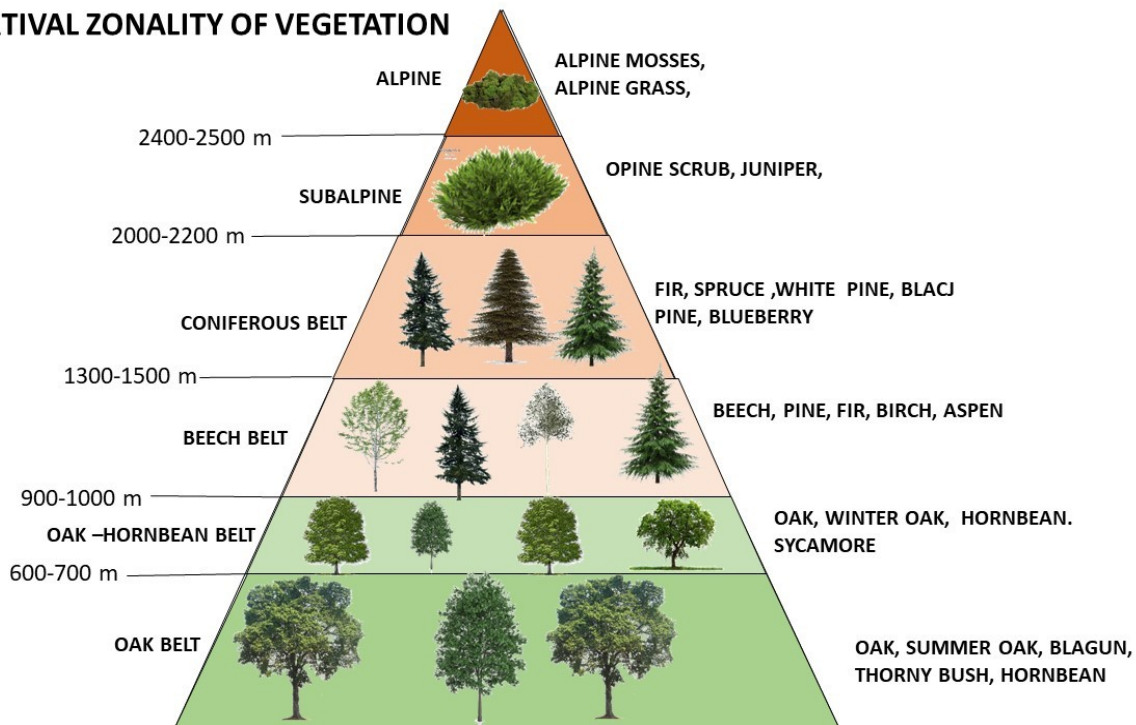


23. Soil



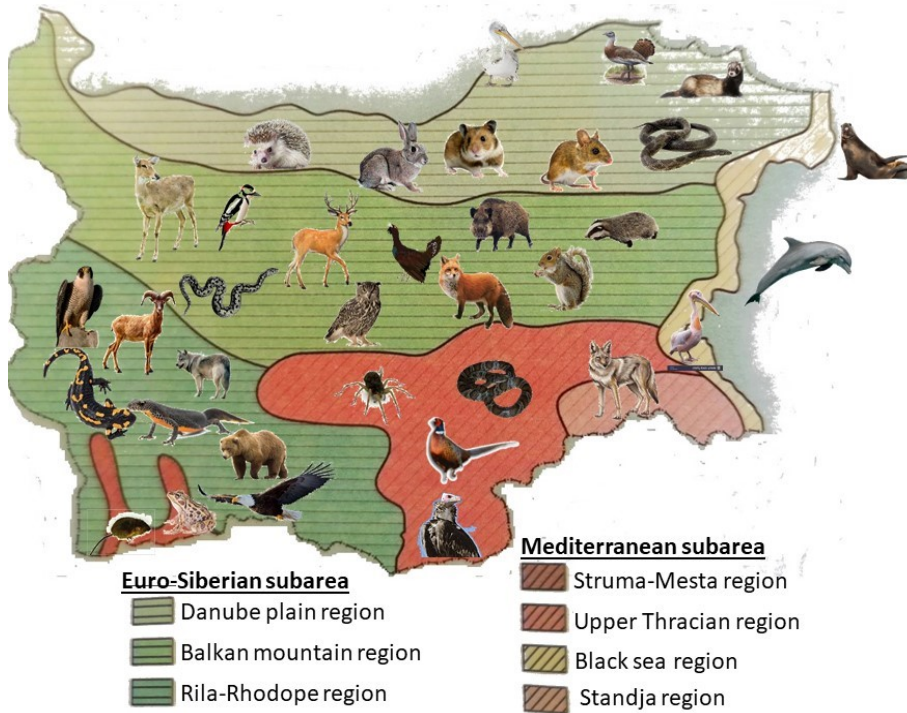
24, The vegetation in Bulgaria

VERTICAL ZONALITY OF VEGETATION



25. The animal world

FAUNA OF BULGARIA



Euro-Siberian animals

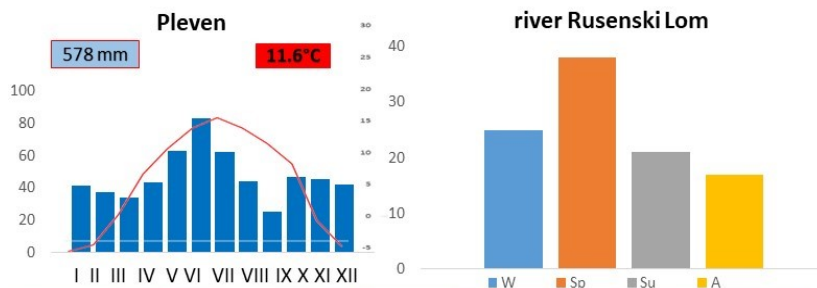
Hedgehog, hare, hamster, field mouse, bustard, grass-snake, polecat, deer, roe, woodpecker, snake, owl, fox, wild boar, wood-grouse capercaillie, badger, falcon, wild goat, wolf, alpine triton, lizard, eagle, bear

Mediterranean animals

Viper, colchid pheasant, white head vulture, venomous spider, jackal, pelican

26. The Danube Plain

DANUBE PLAIN



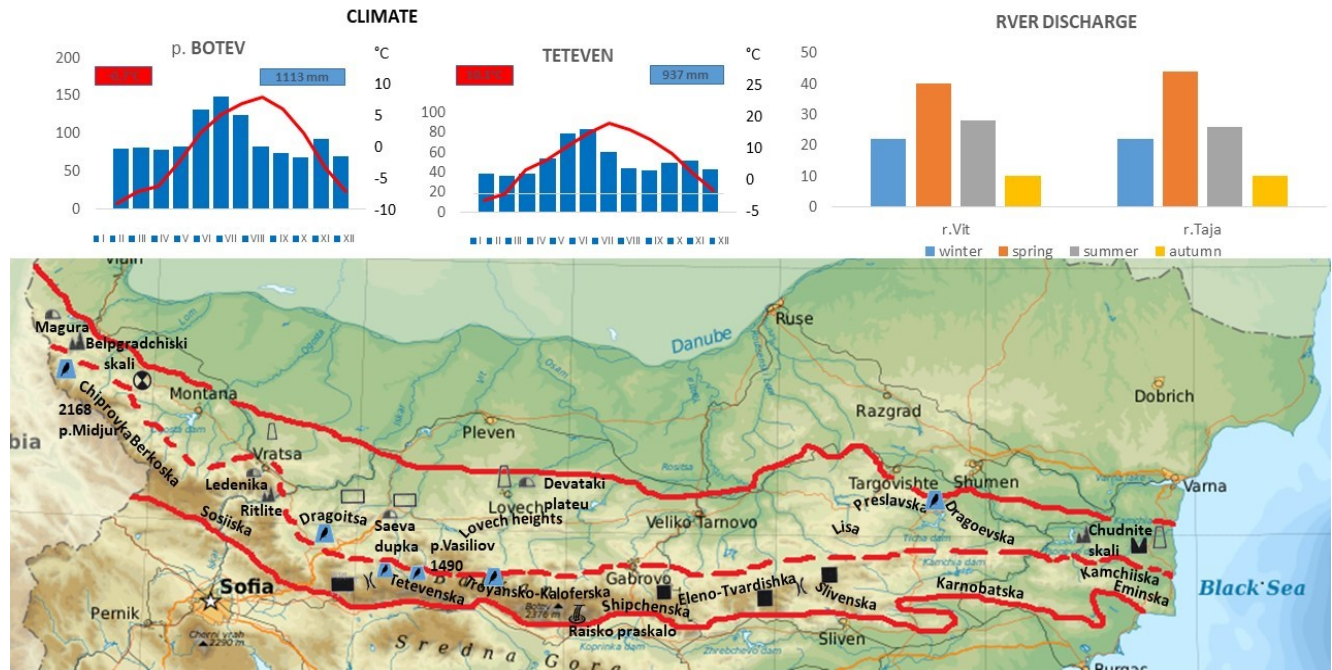
Typical features

Sedimentary rocks, loess
Karst relief, asymmetrical valleys and canyons
Chernozem soils, steppe vegetation and animals



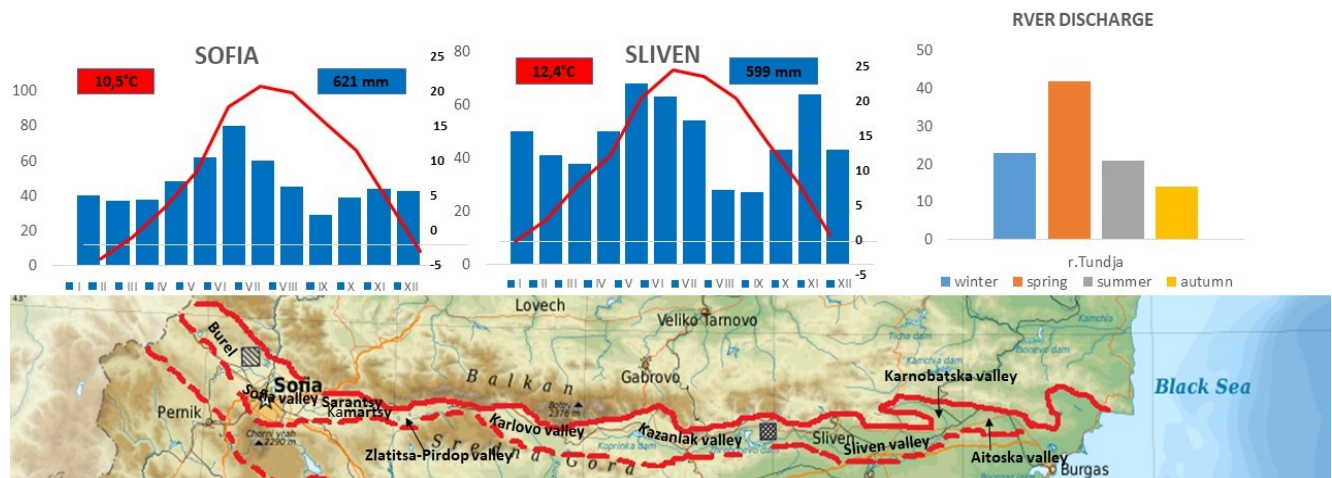
27. The Balkan Mountain region

STARA PLANINA REGION

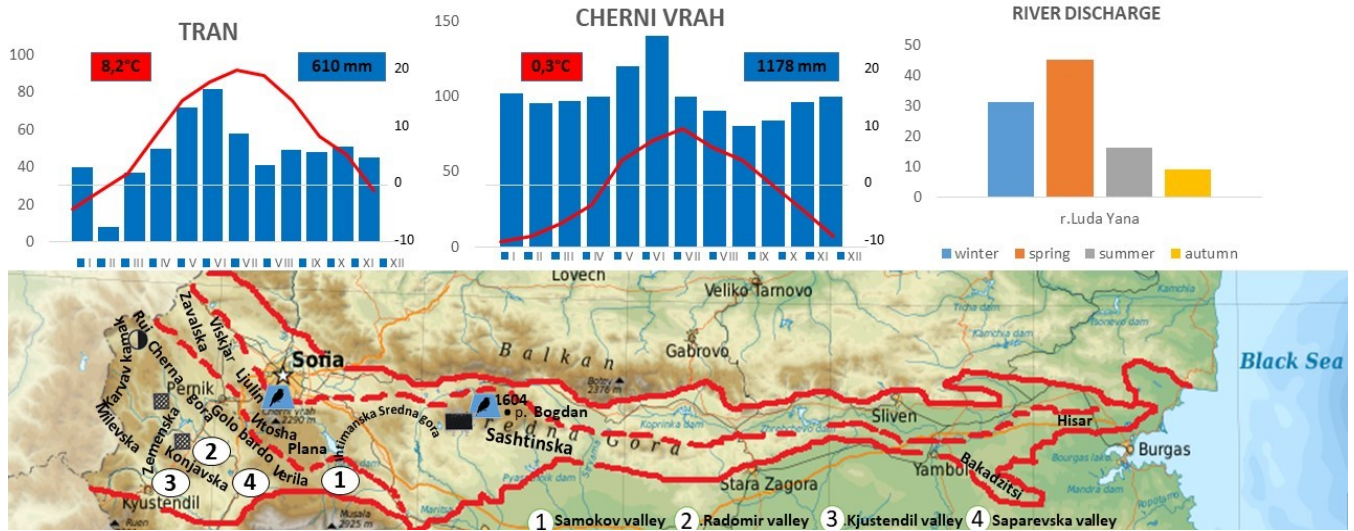


28. The Sub-Balkan valleys

SUB-BALKAN VALLEYS

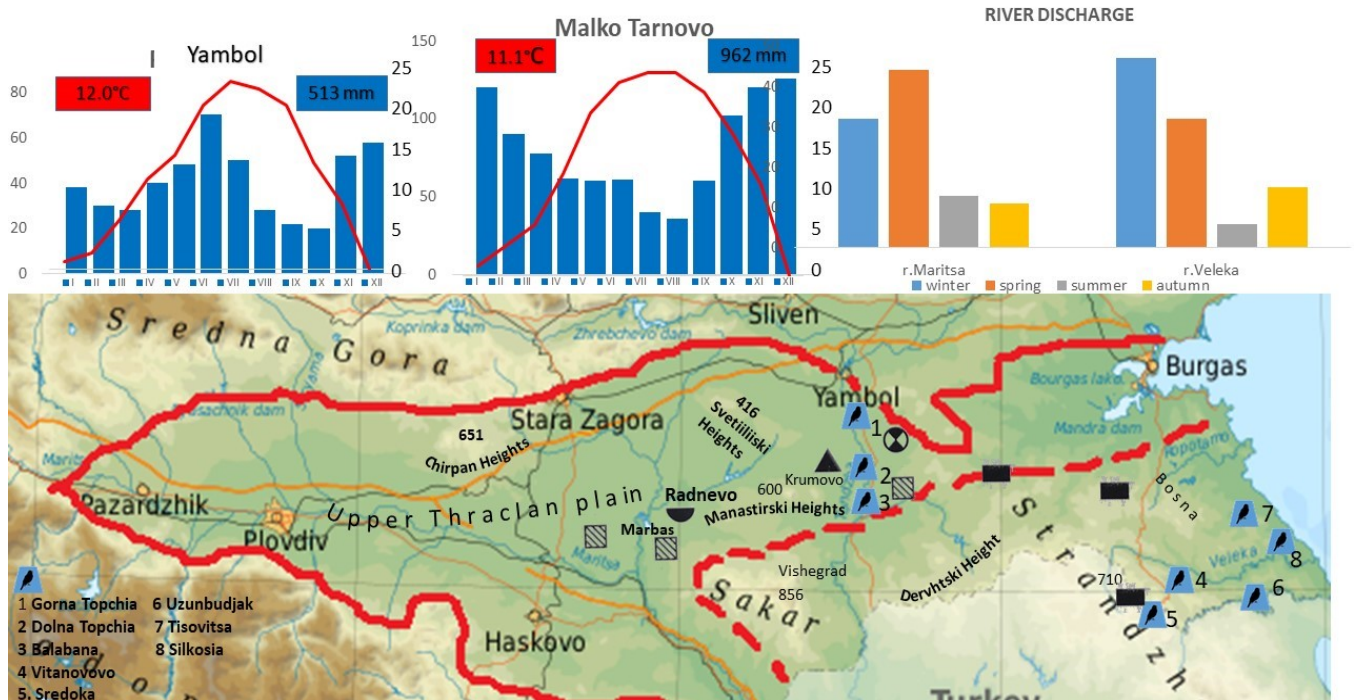


Kraishite – Srednogorie region



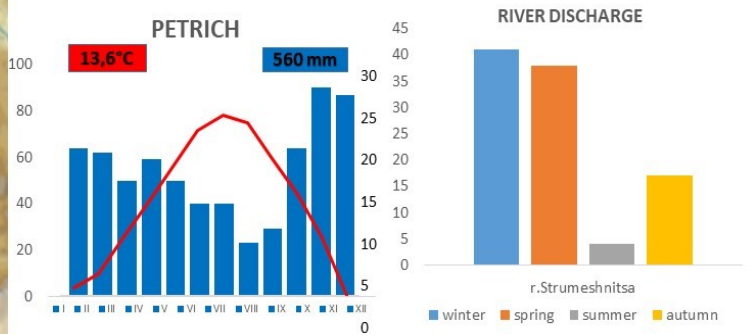
30. The Thrace-Strandzha region

THRACE – STRANDZHA REGION



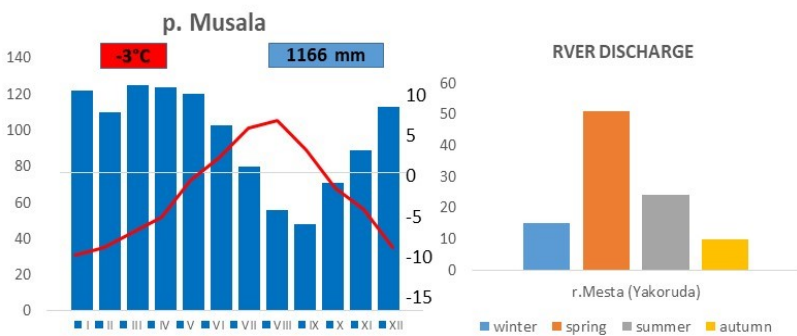
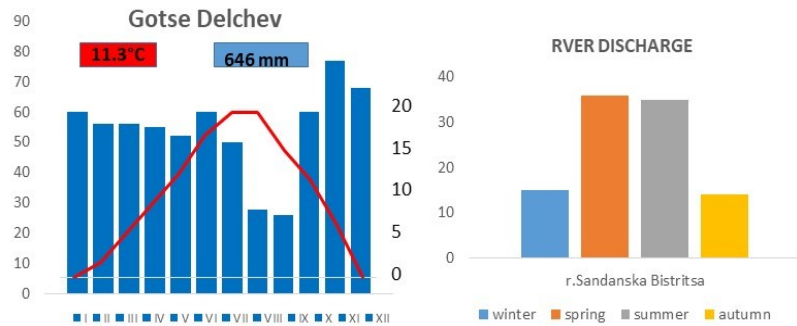
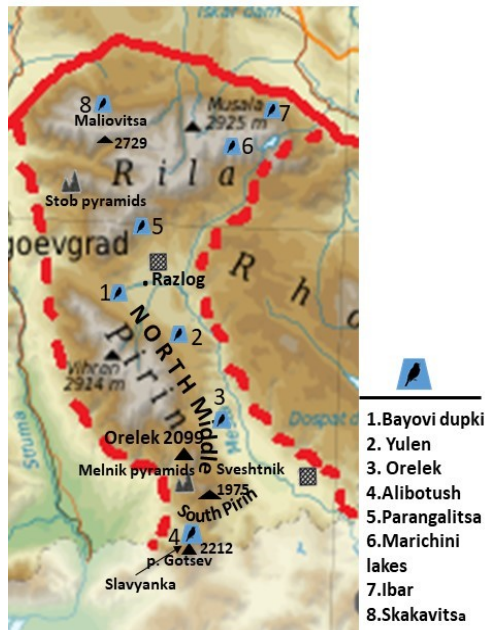
31. Osogovo-Belasitsa region

Osogovo-Belasitsa region



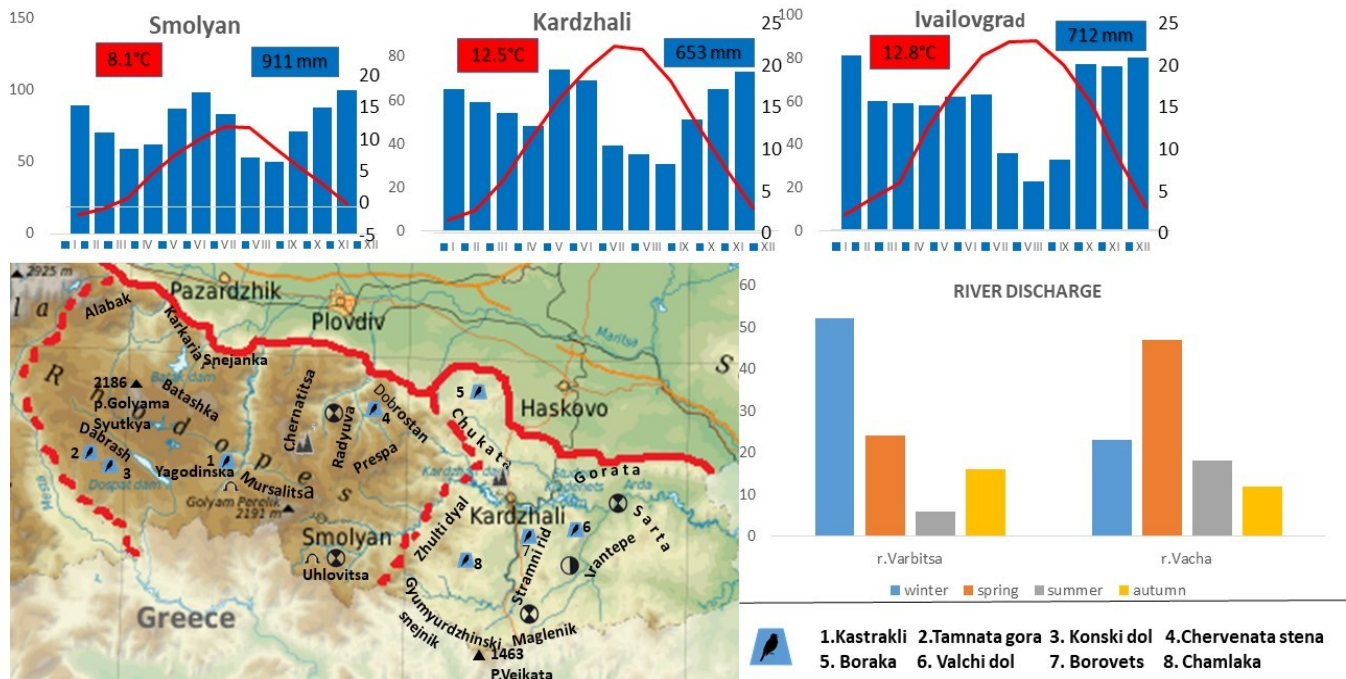
32. Rila and Pirin

Rila-Pirin sub-region



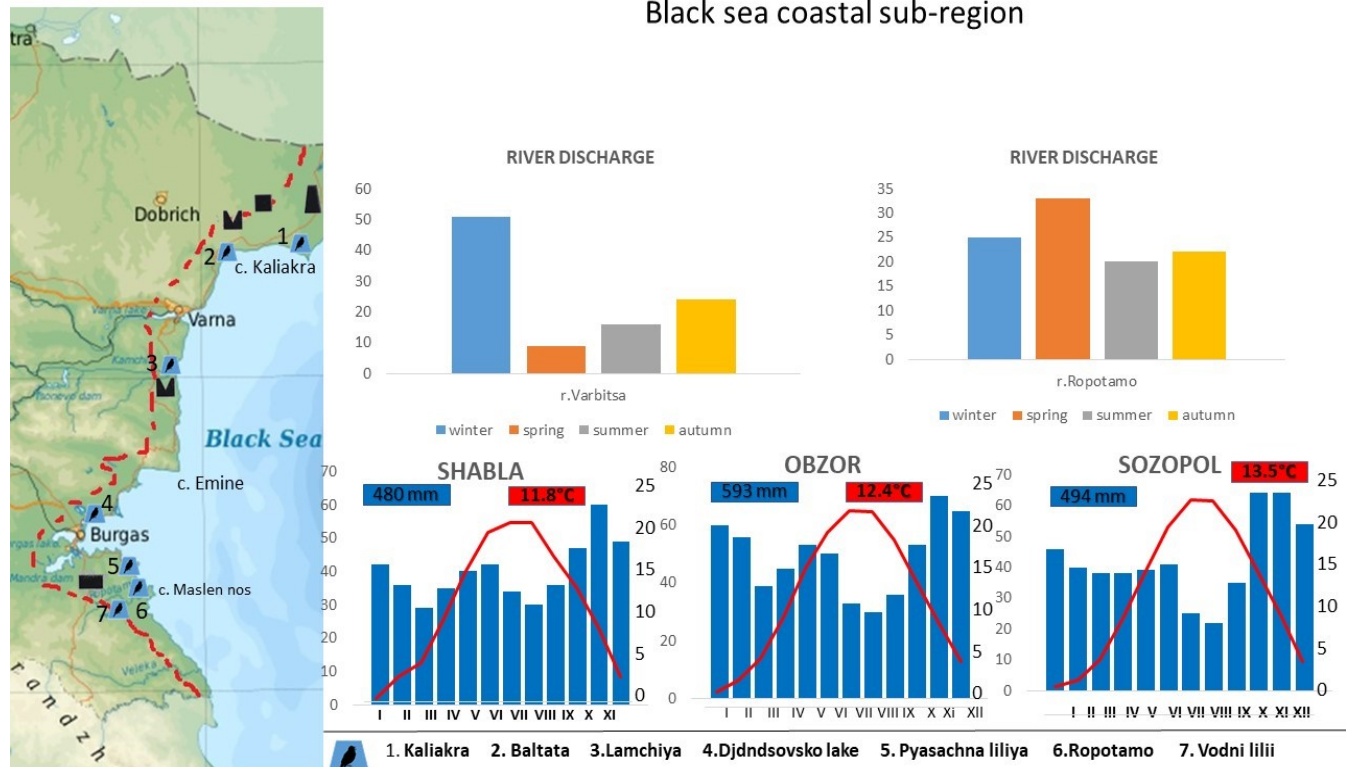
33. The Rhodope Mountains

RHODOPES

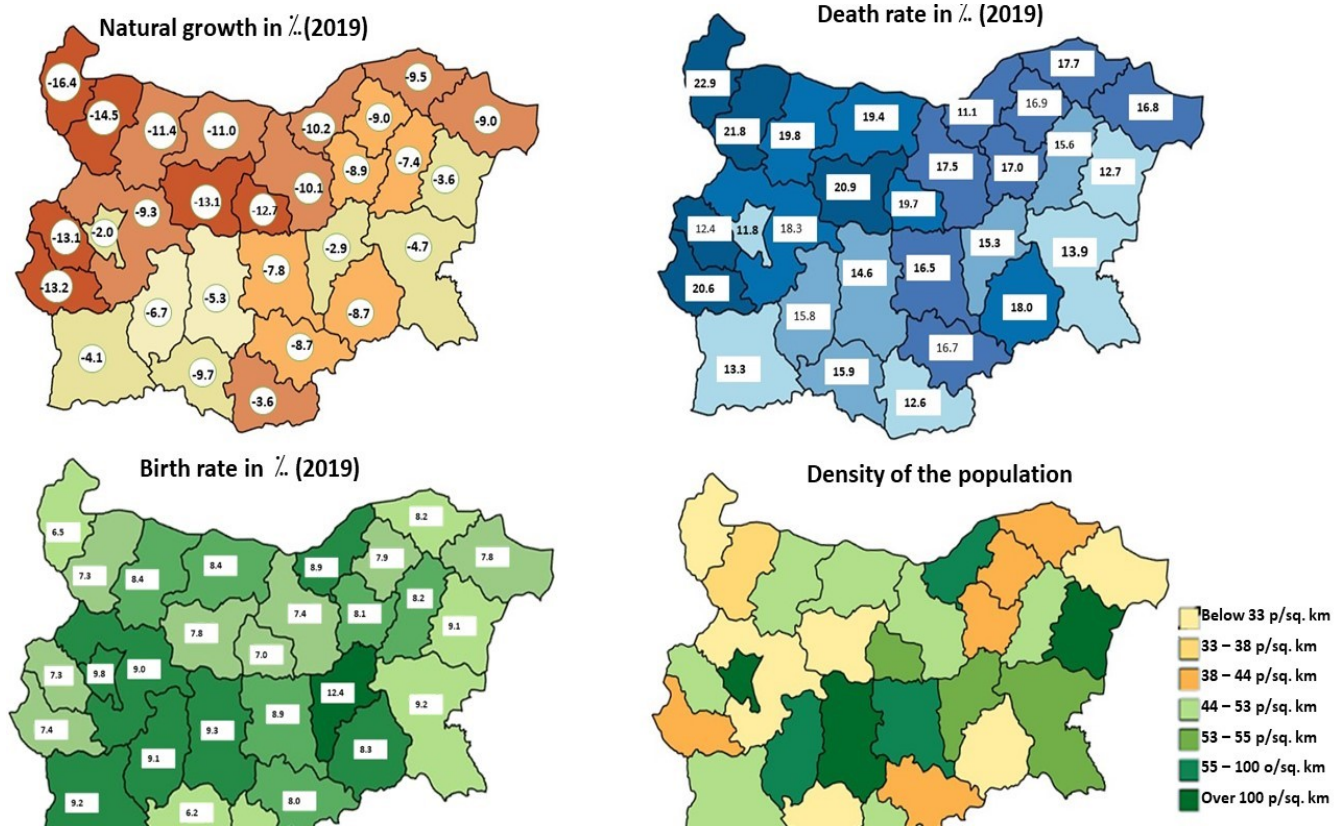


34. The Black Sea

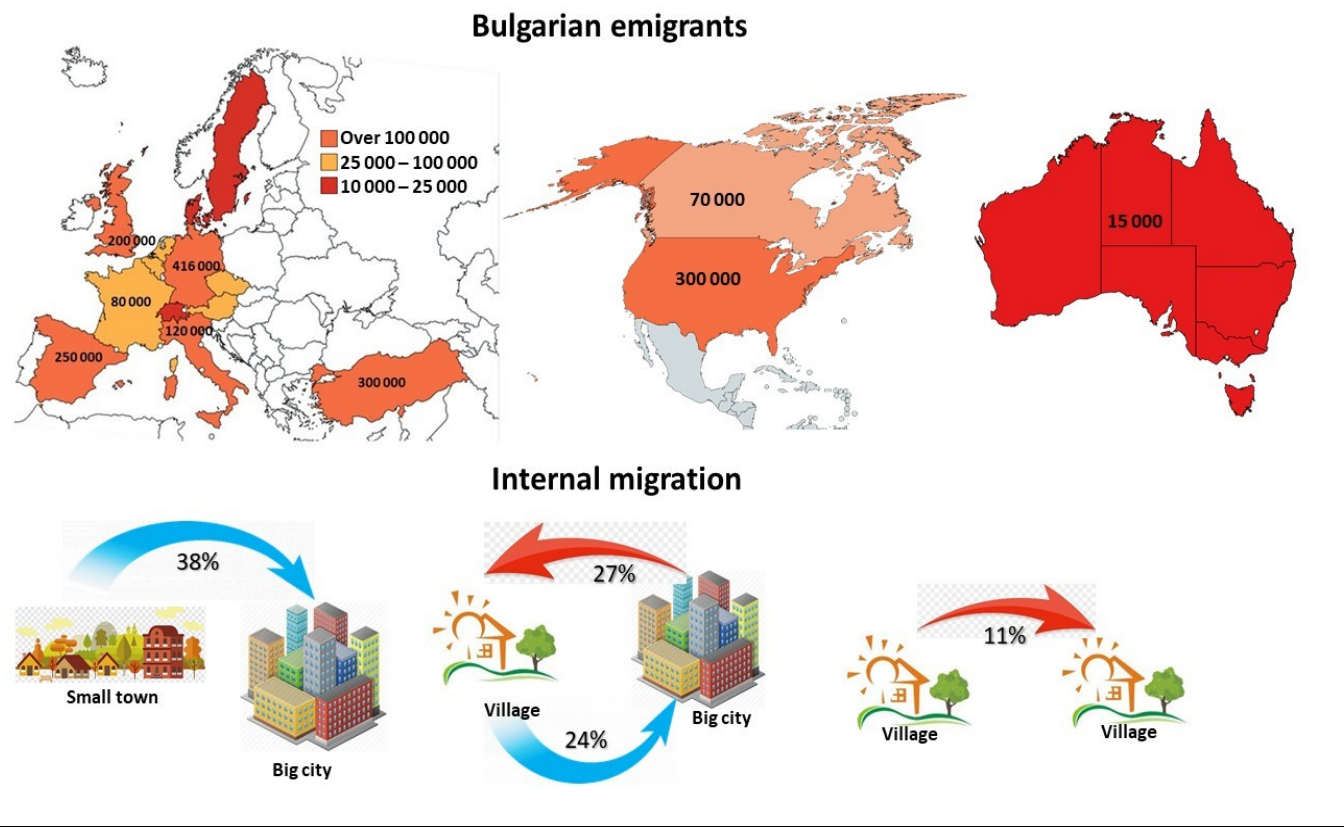
Black sea coastal sub-region



35. The population

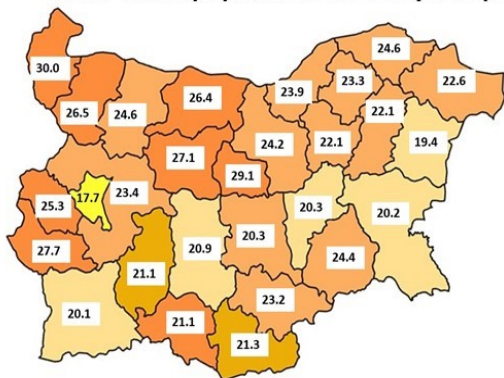


36. The mechanical movement

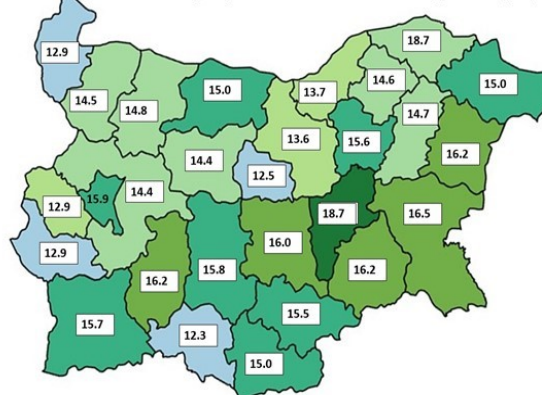


37. The structure of the population

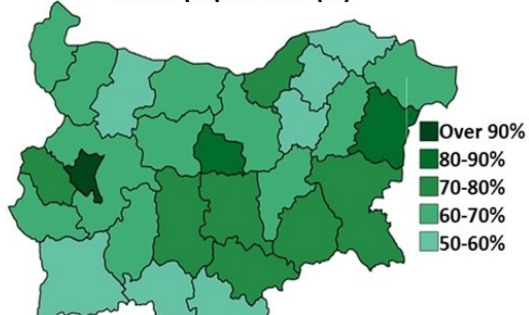
Share of the population over 65 years (%)



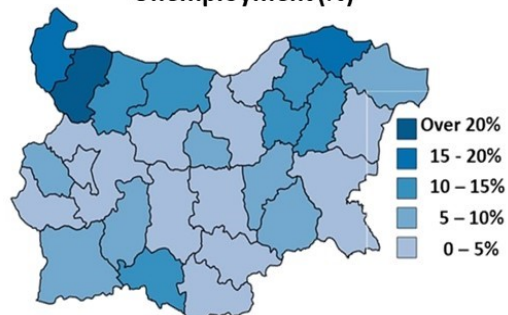
Share of the population under 16 years (%)



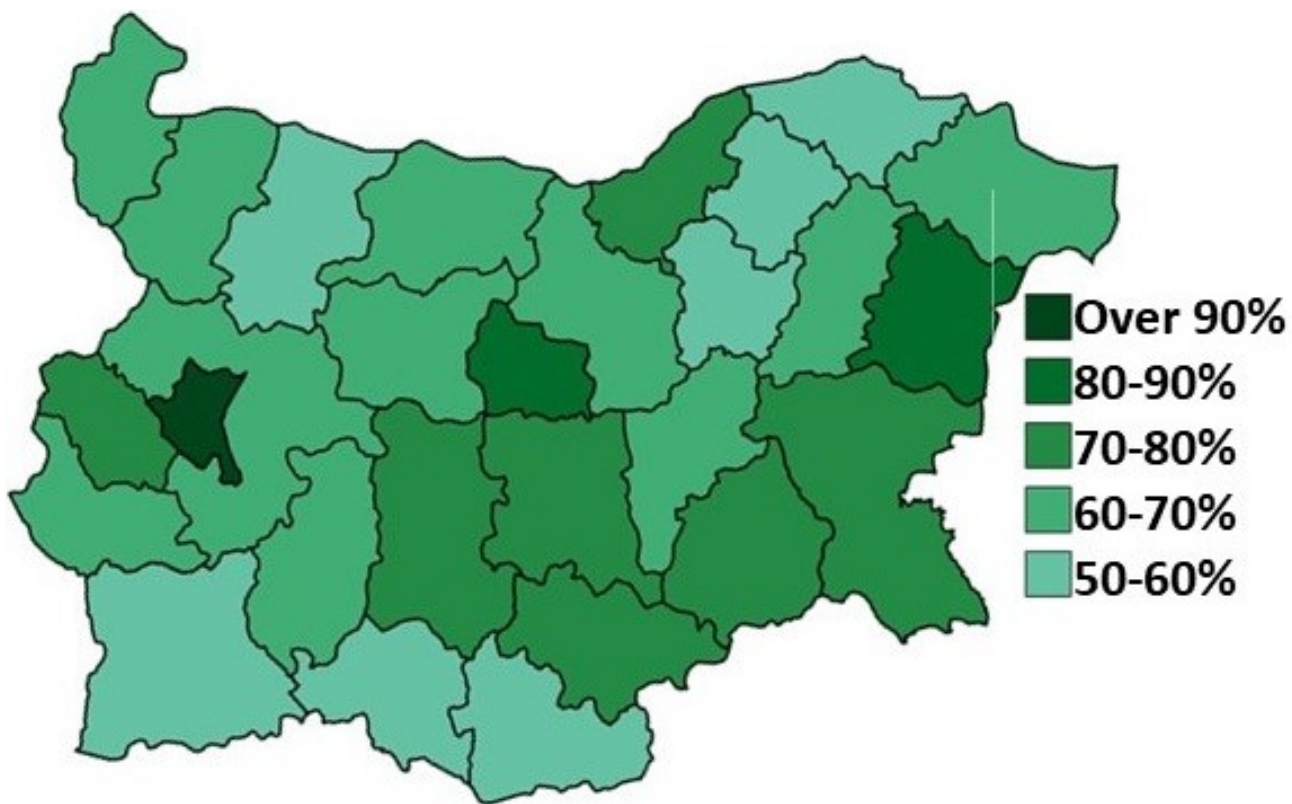
Urban population (%)



Unemployment (%)



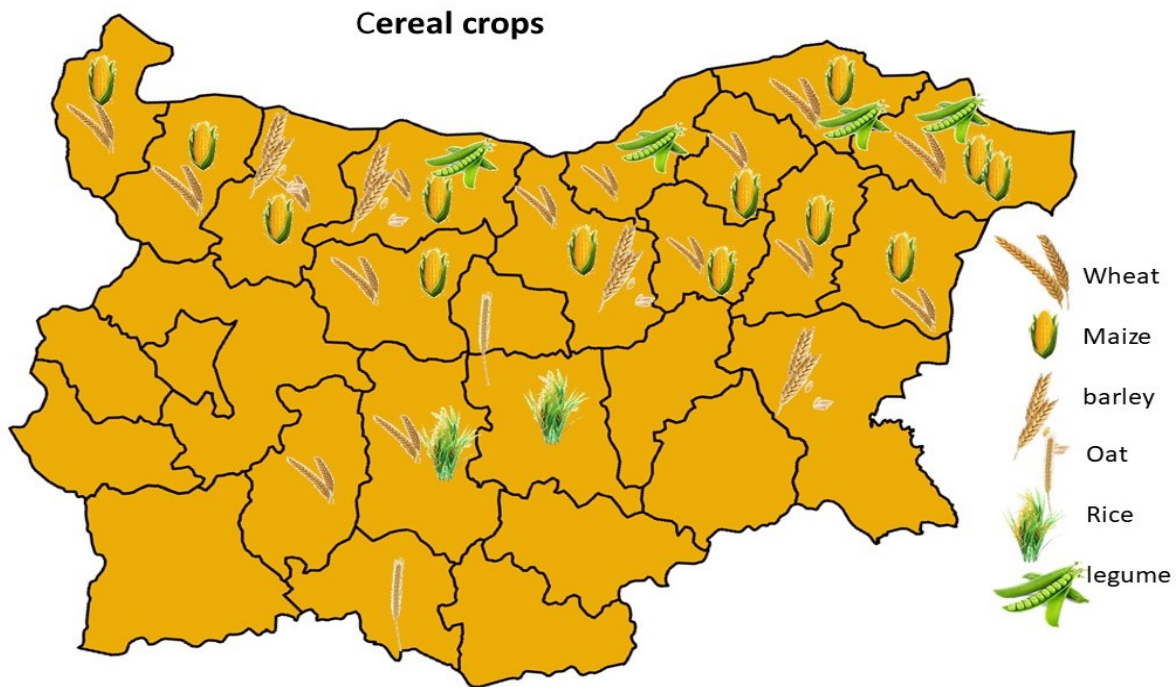
38. Urban population



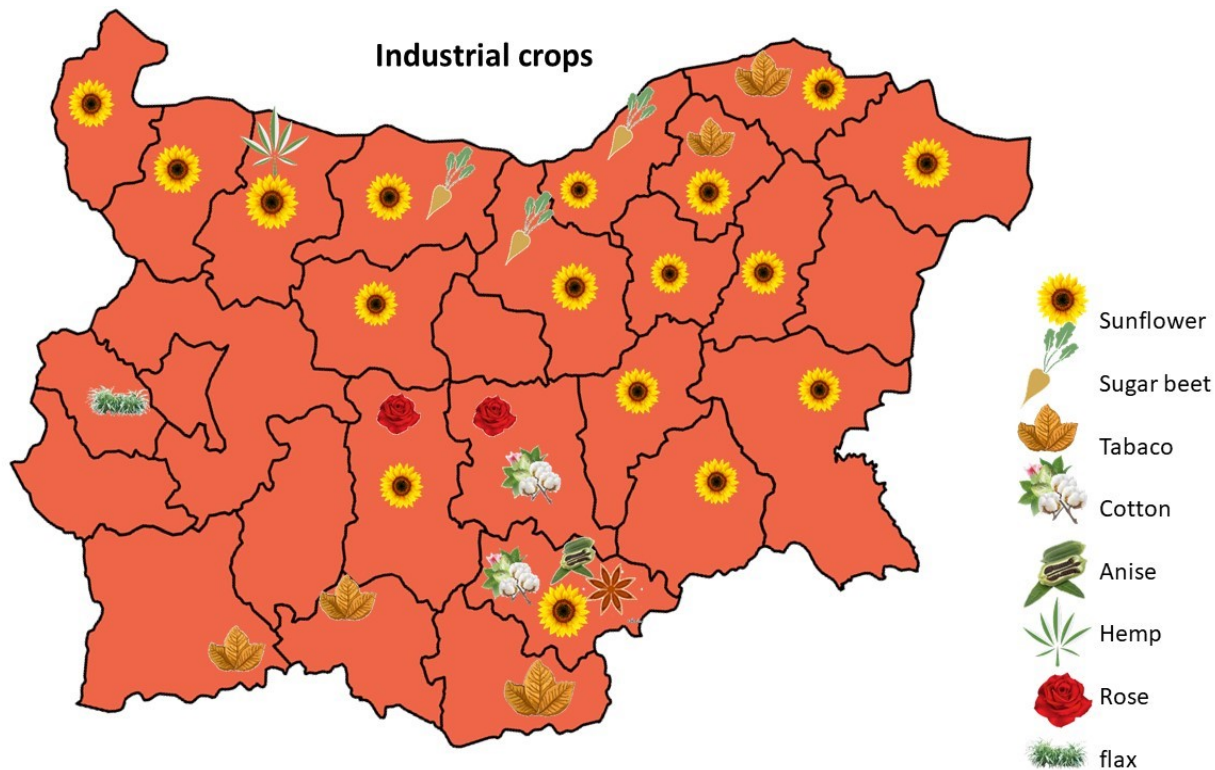
39. Population size settlements



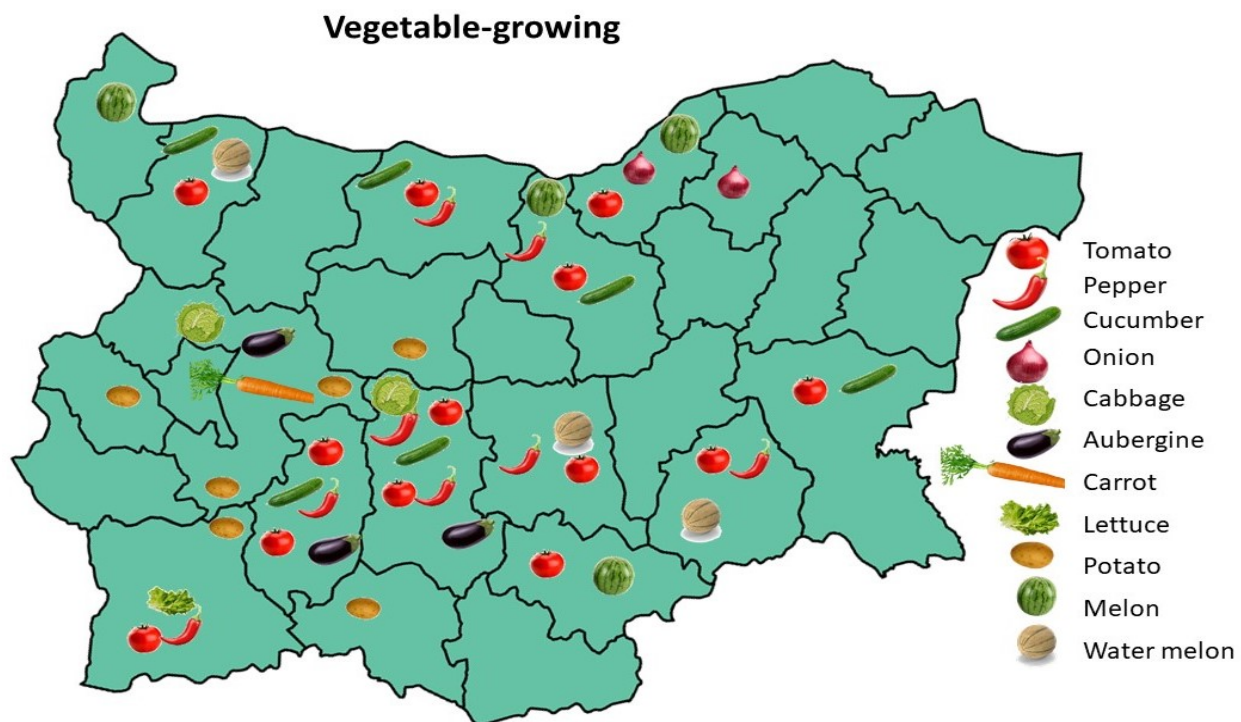
40. Grain production



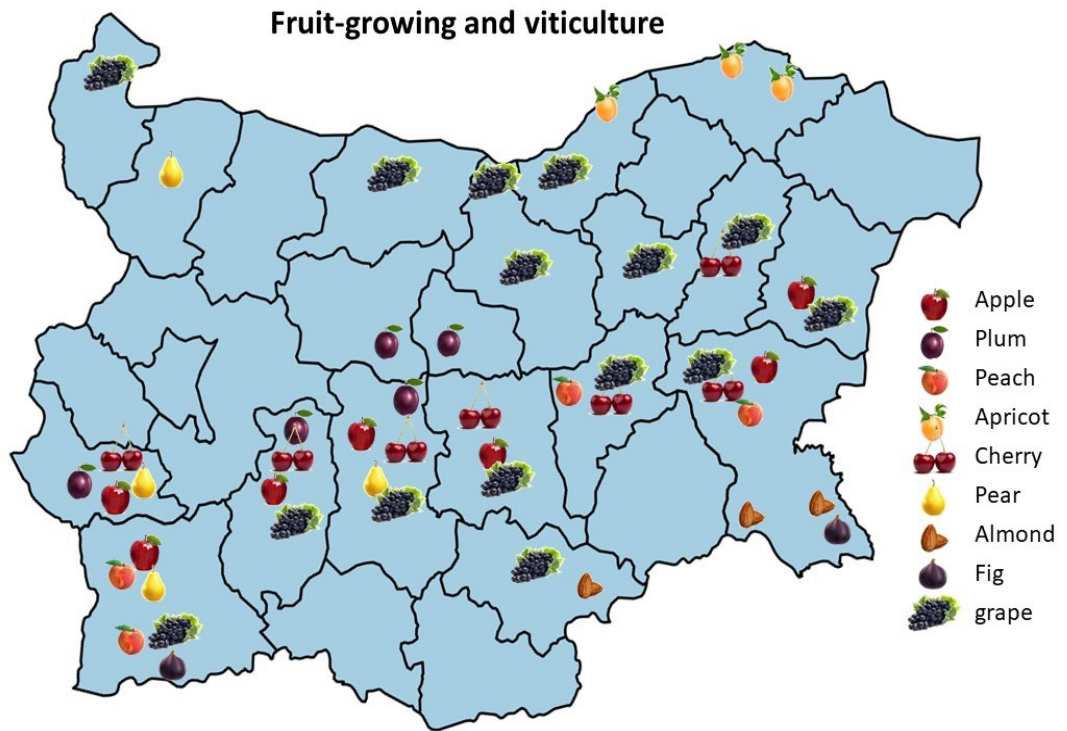
41. Industrial crops



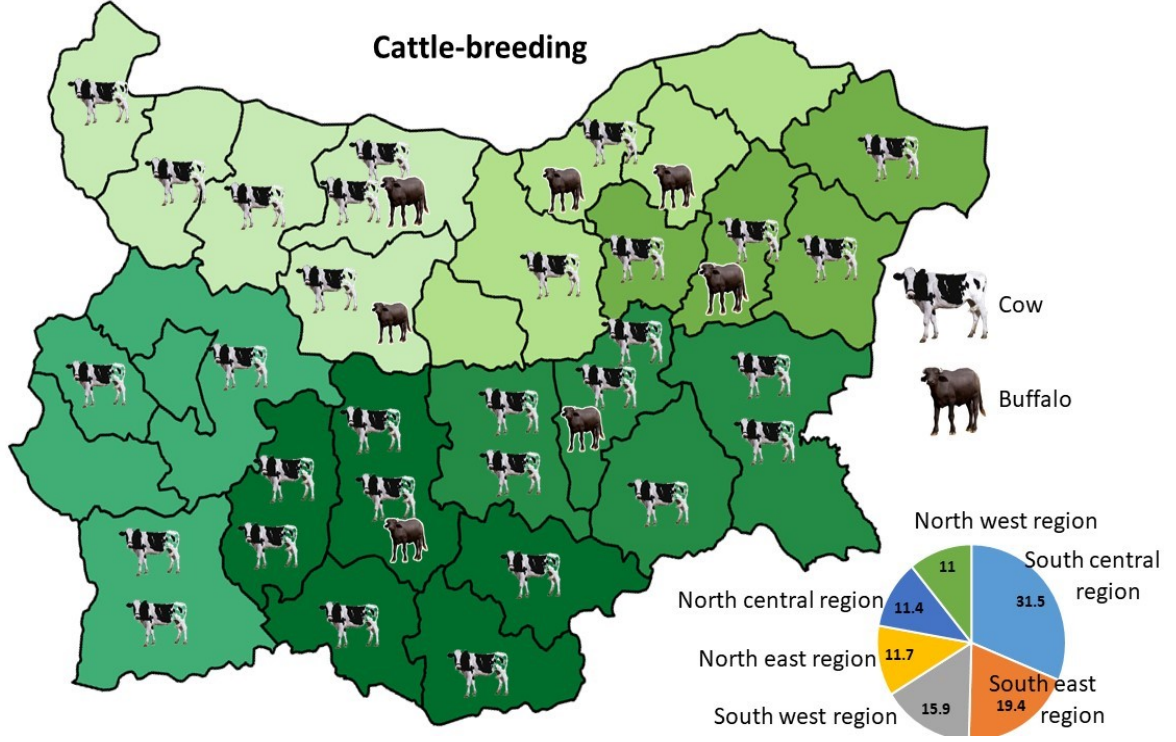
42. Vegetables



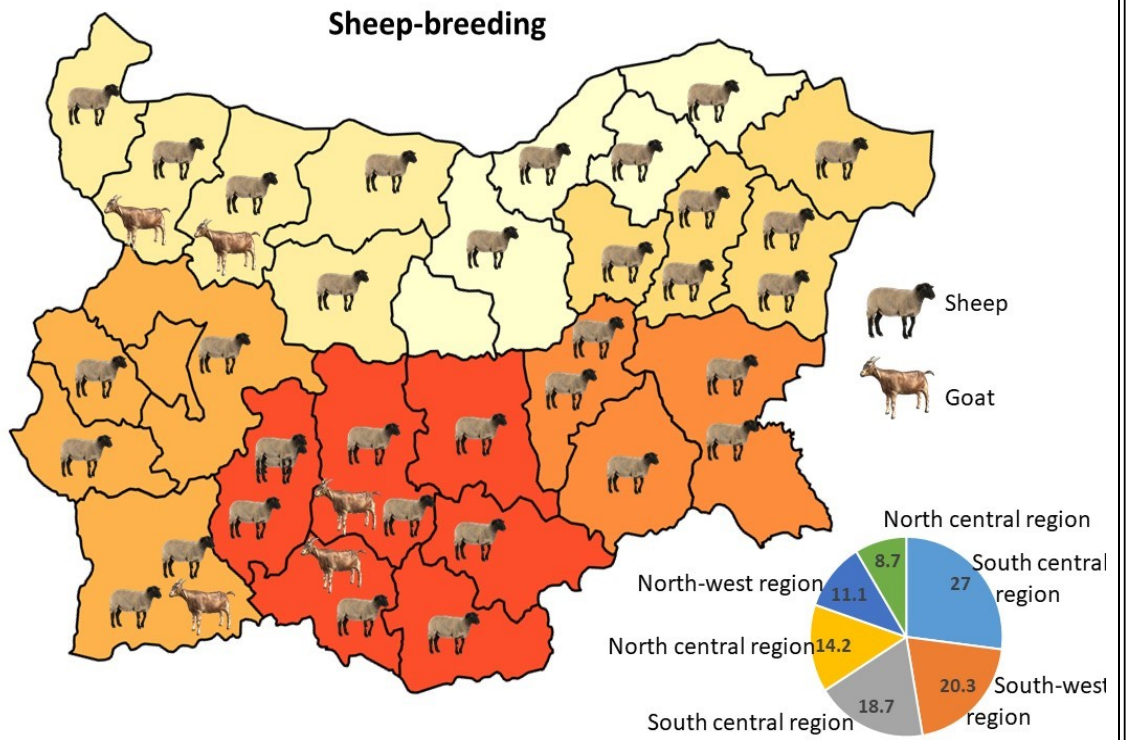
43. Orchard crops (trees)



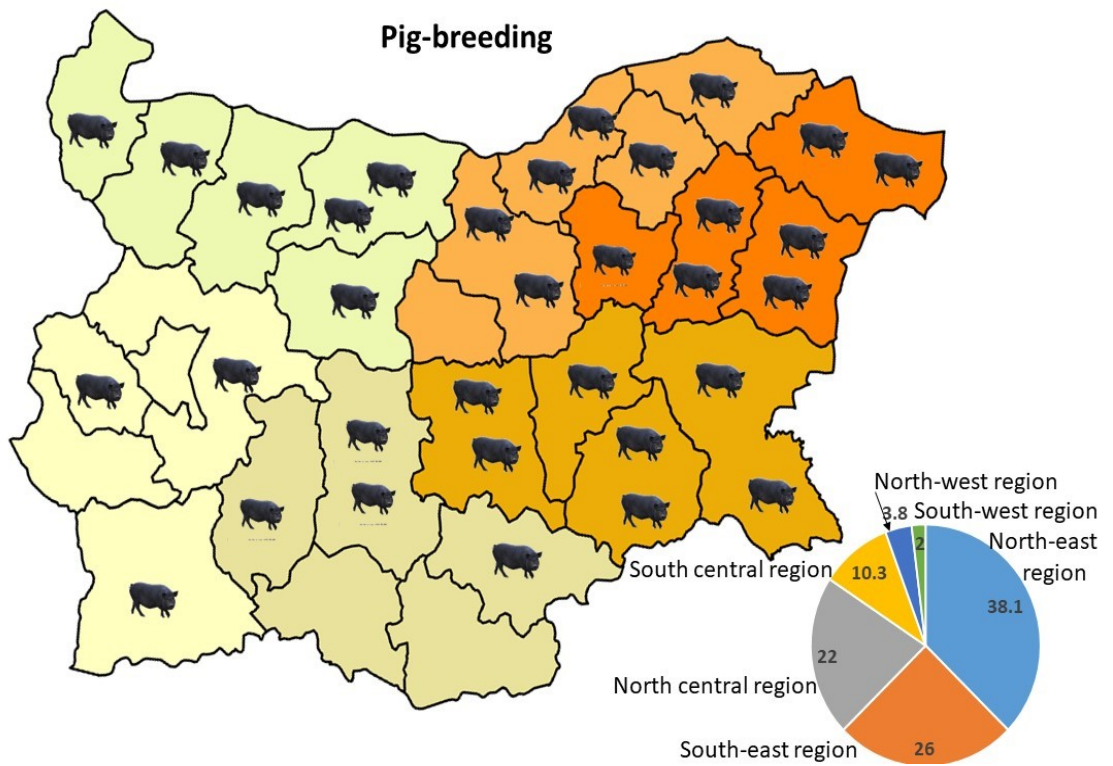
44. Cattle farming



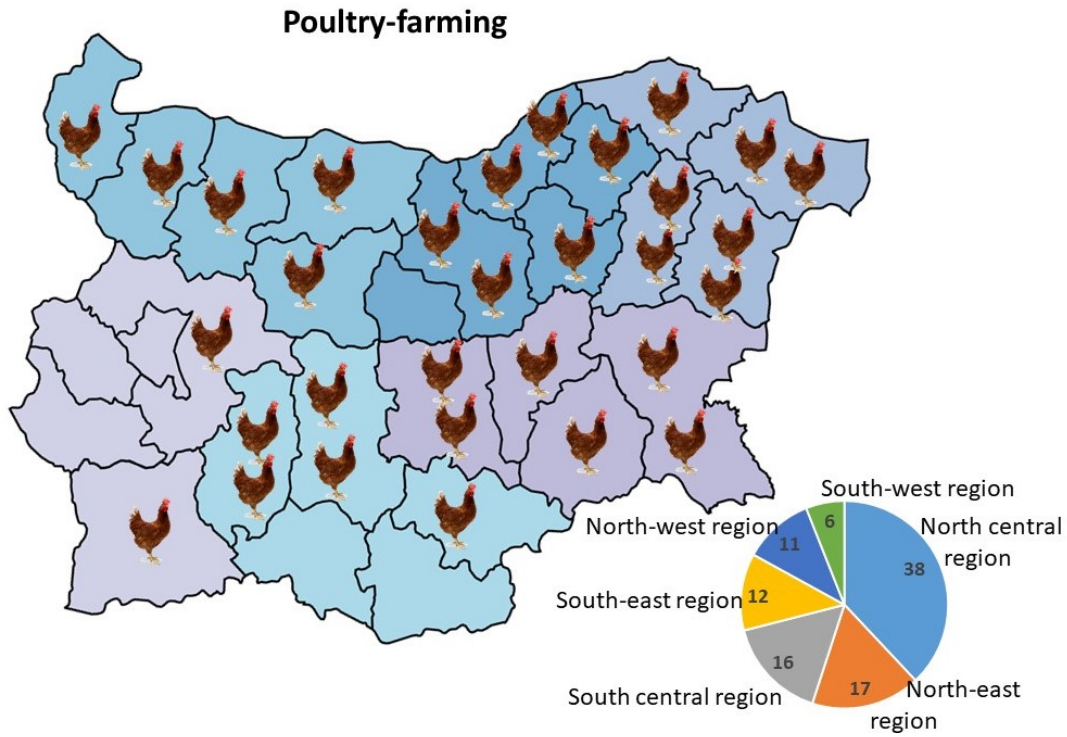
45. Sheep farming



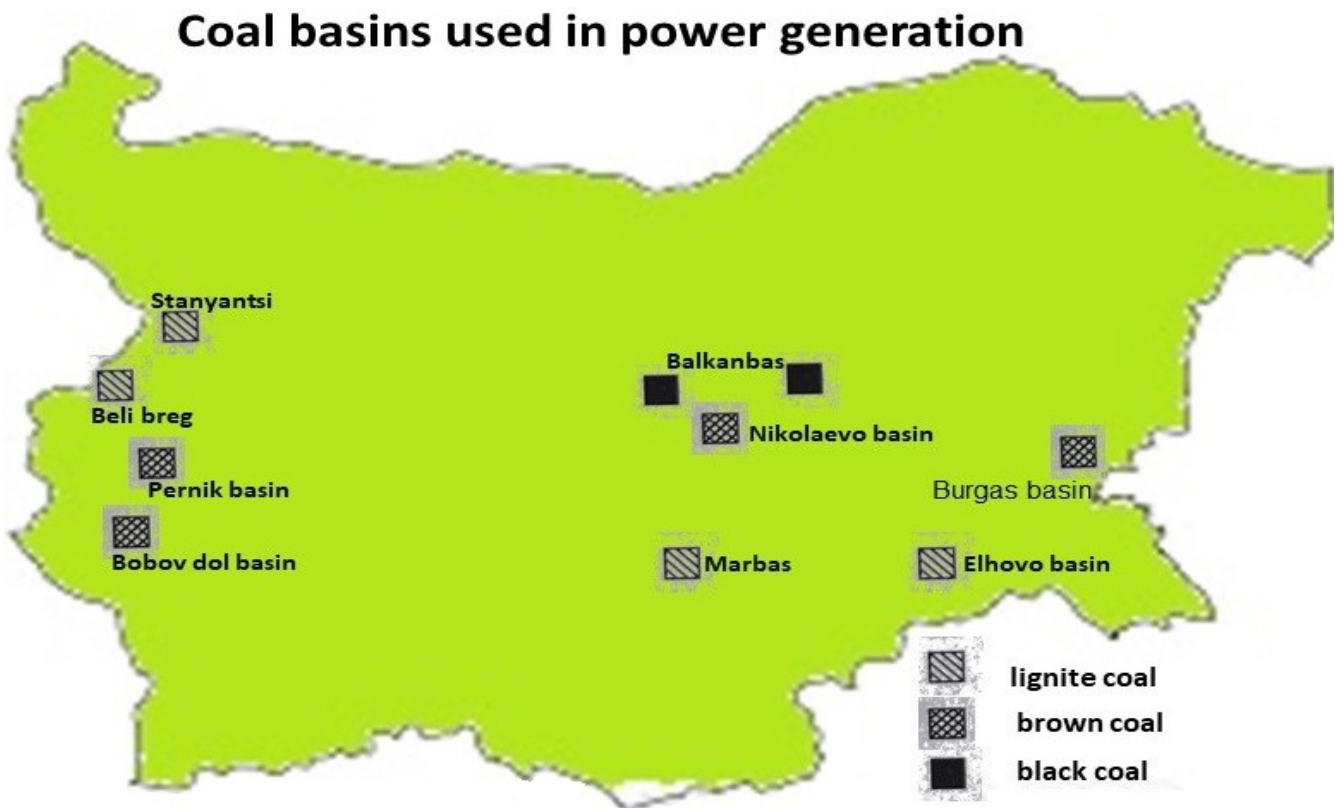
46. Pig farming



47. Poultry farming

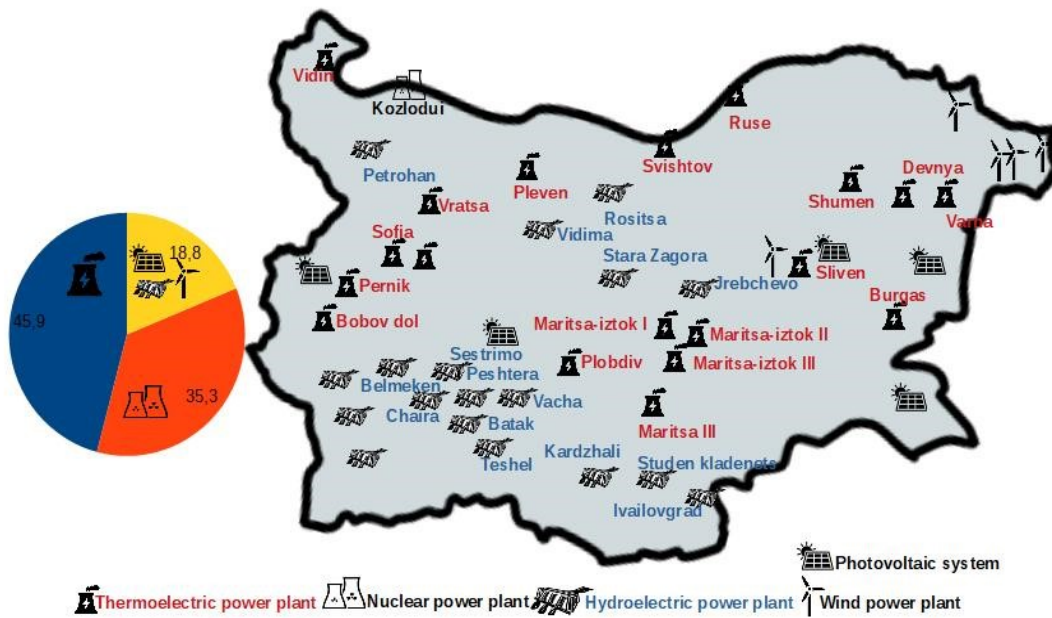


48. Coal basins



49. Energy industry

Energy industry



50. Energy industry



51. Metallurgy

Metallurgy

Ferrous metallurgy

„Kremikovtsi“ Sofia
Bankrupt

„Stomana industry“ Pernik
Resource: metal scrap
Products: steel, rolled iron

„Promet steel“ Debelt
Resource: imported materials
Products: steel, rolled iron

„Helios metalurg“ Plovdiv
Resources: imported materials
Products: steel

„Zhiti“ Ruse
Products: nails, wire, wire mesh

„Metizi“ Roman
Products: wire, steel ropes



Non – ferrous metallurgy

„Aurubis“ Pirdop
Resource: local and imported ores
Products: copper

„Kombinat za tsveni metali“ - Plovdiv
Resources: local and imported ores
Products: lead, zinc, silver, gold

„Olovno-tsinkov zavod“ Kardzhali
Bankrupt

„Alkomet“ Shumen
Resources: imported ores
Products: aluminium

„Kurilo metal“ Novi Iskar
Resources: scrap
Products: aluminium

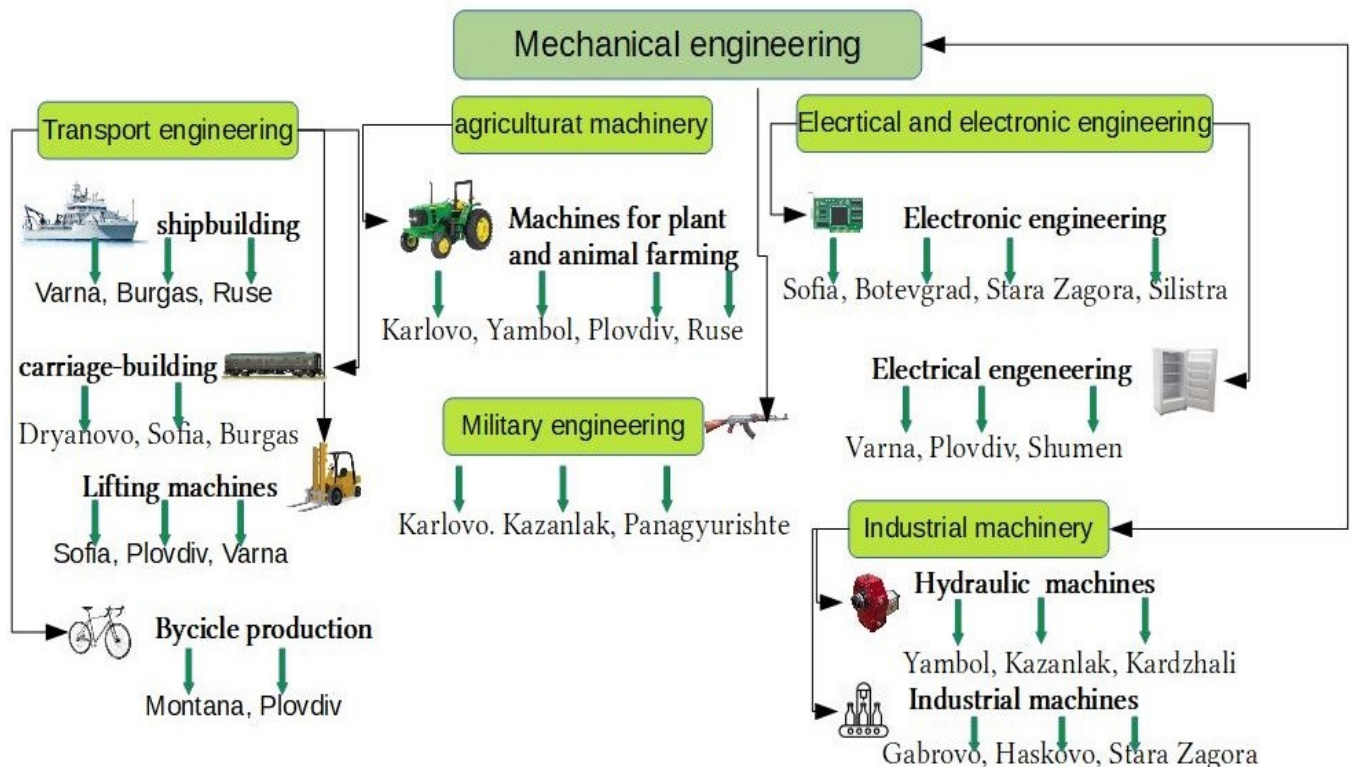


Ferrous metallurgy

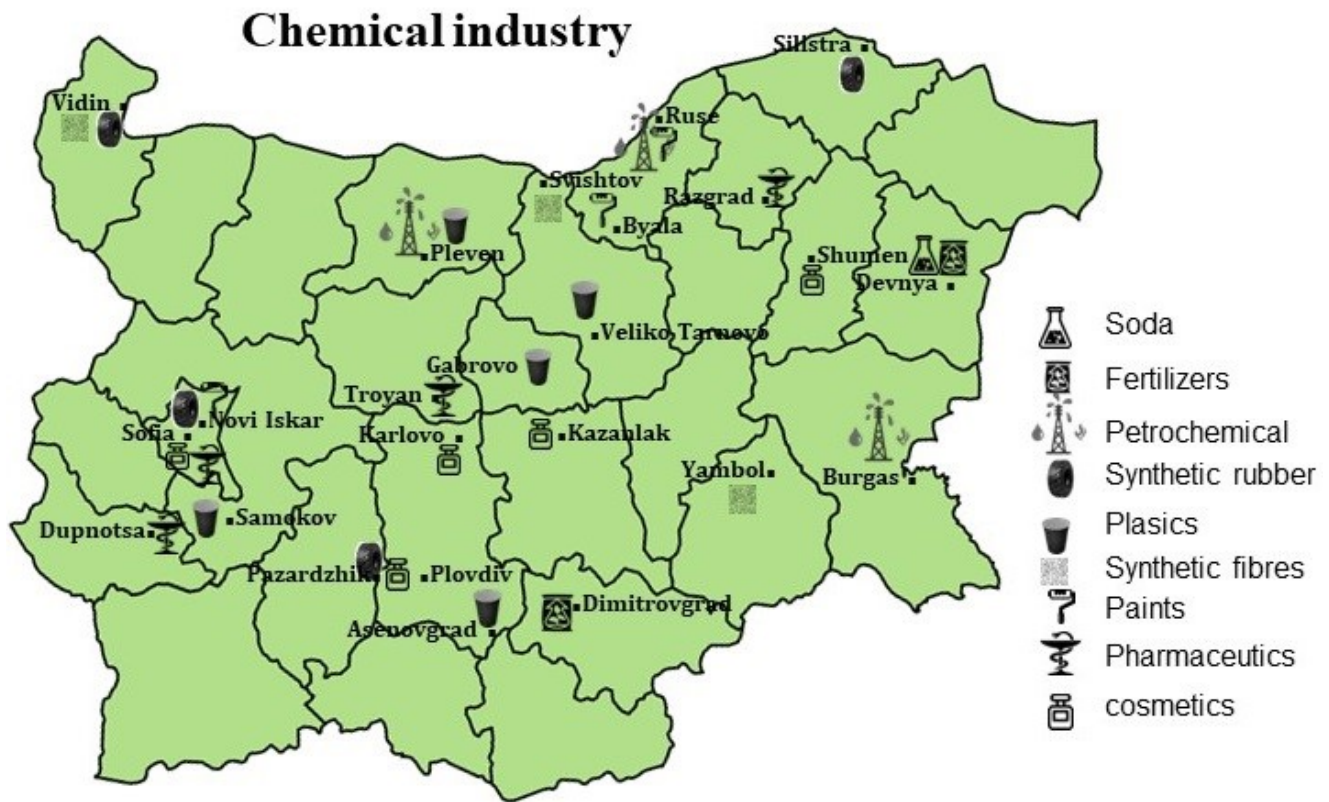


Non-ferrous metallurgy

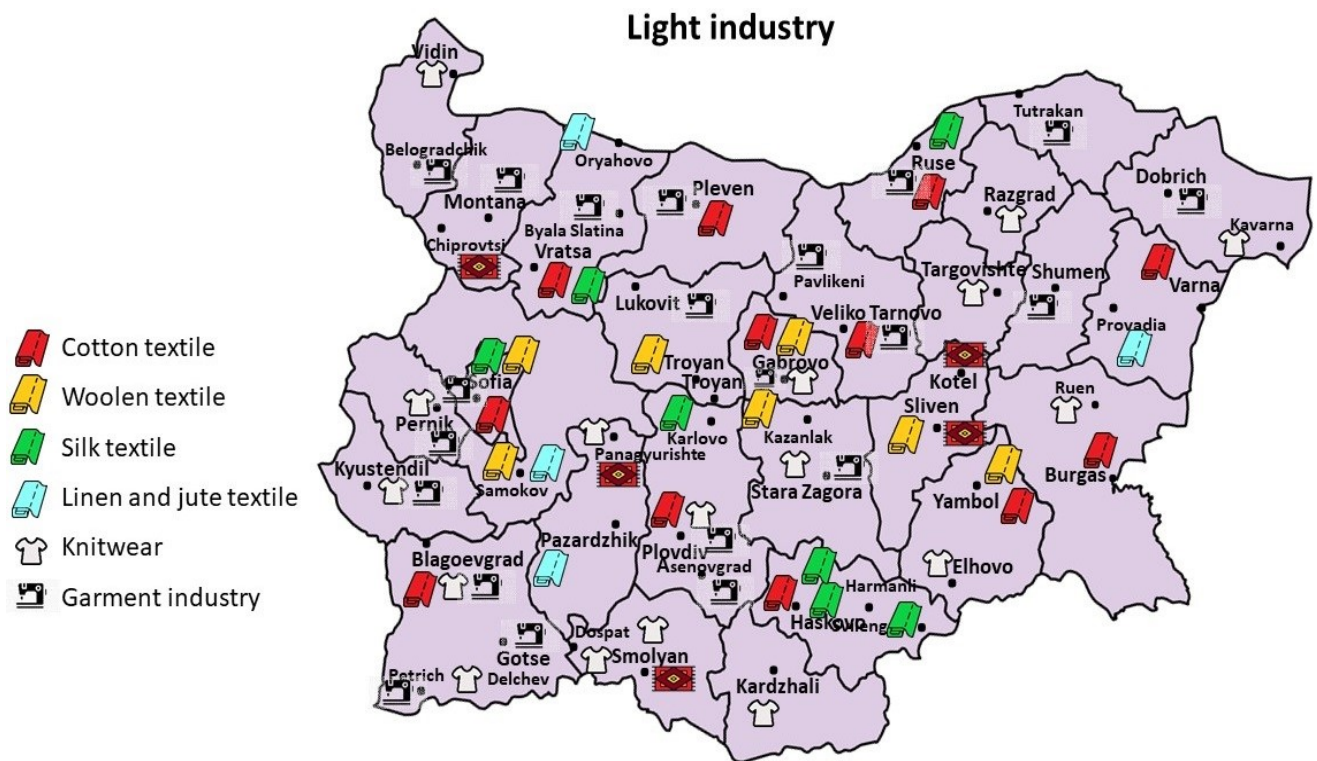
52. Mechanical engineering



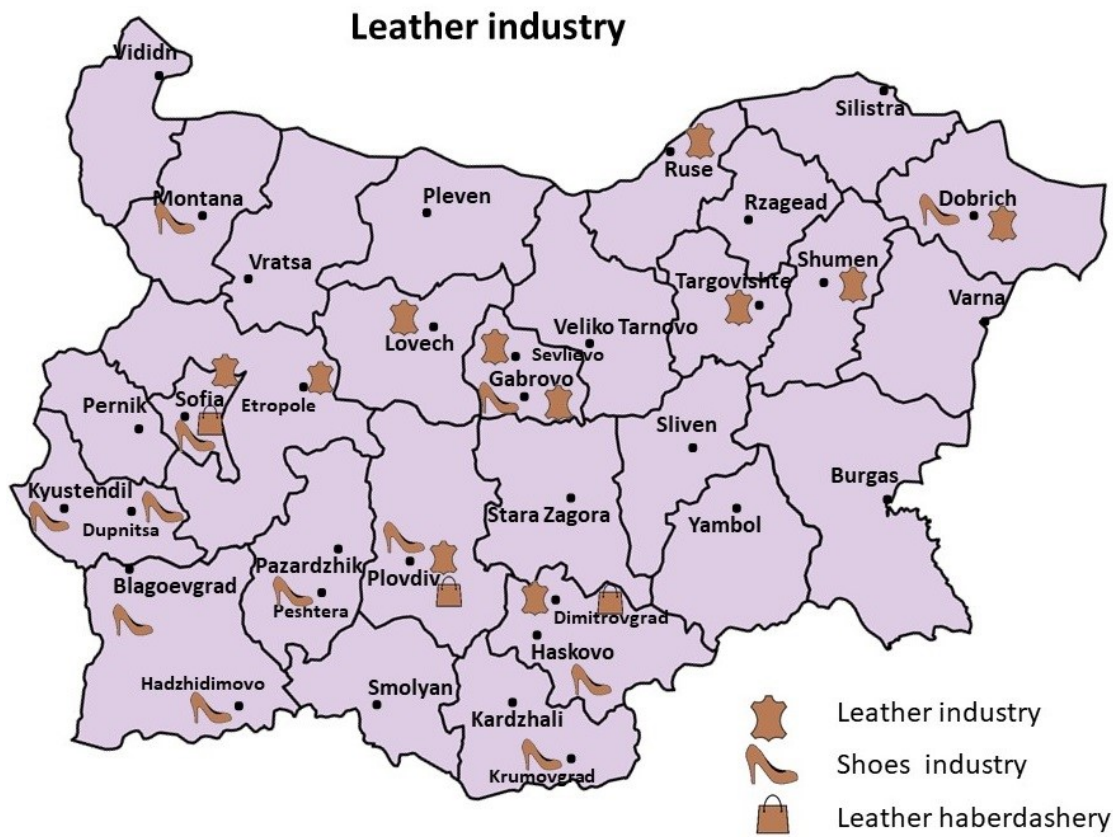
53. Chemical industry



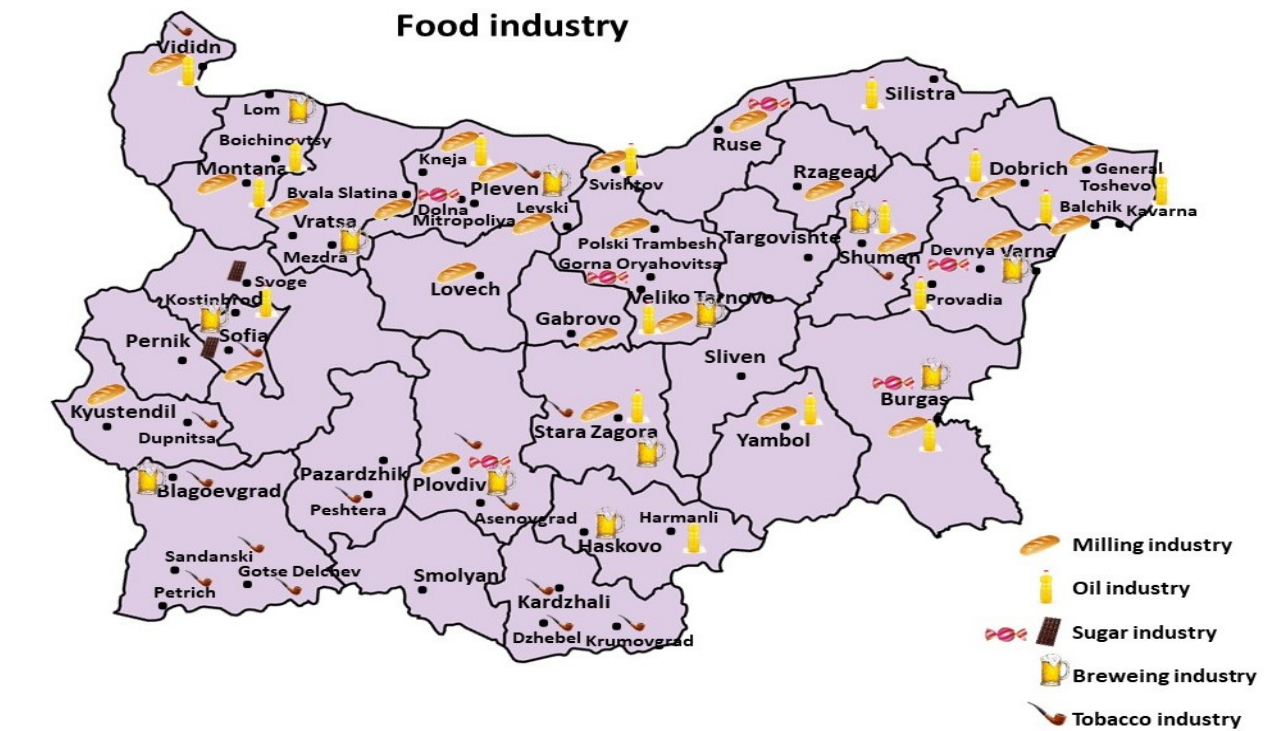
54. Light industry



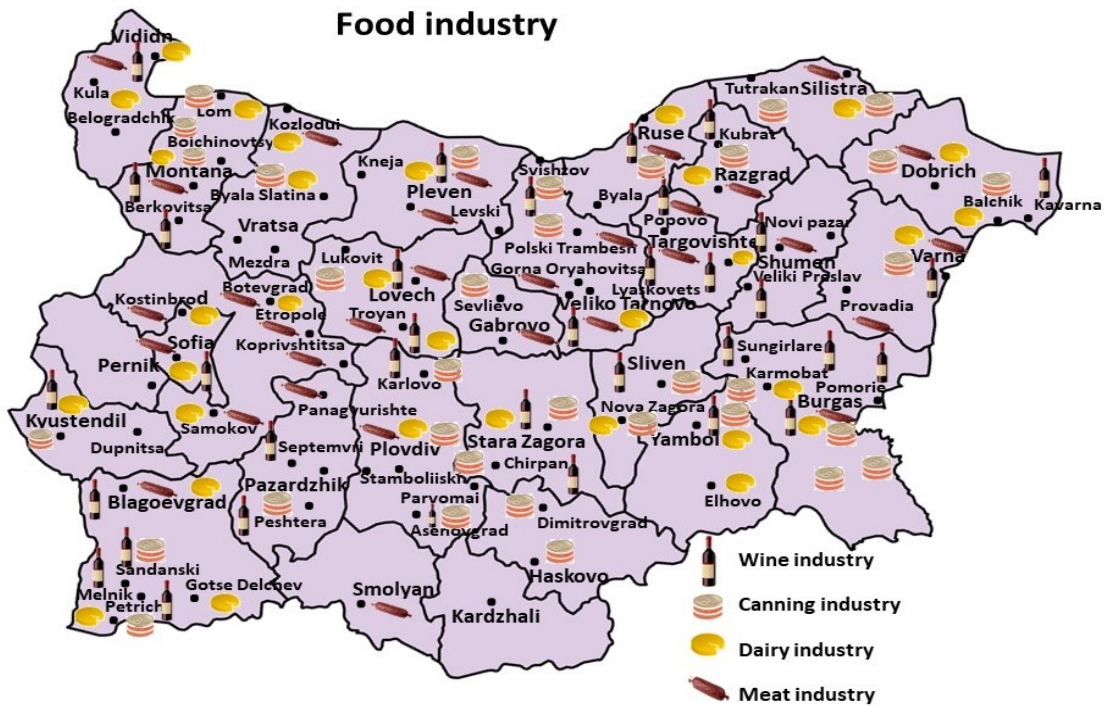
55. Leather industry



56. Food industry – part 1



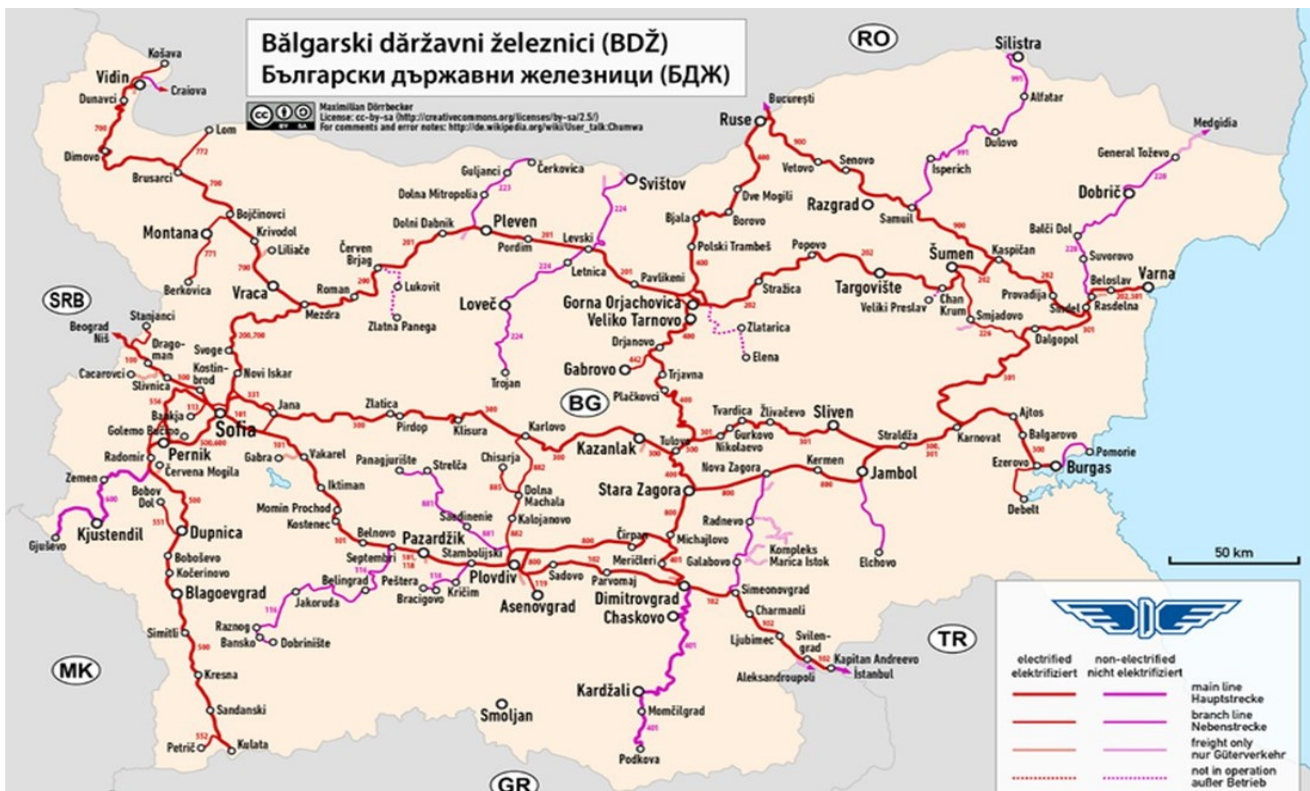
57. Food industry – part 2



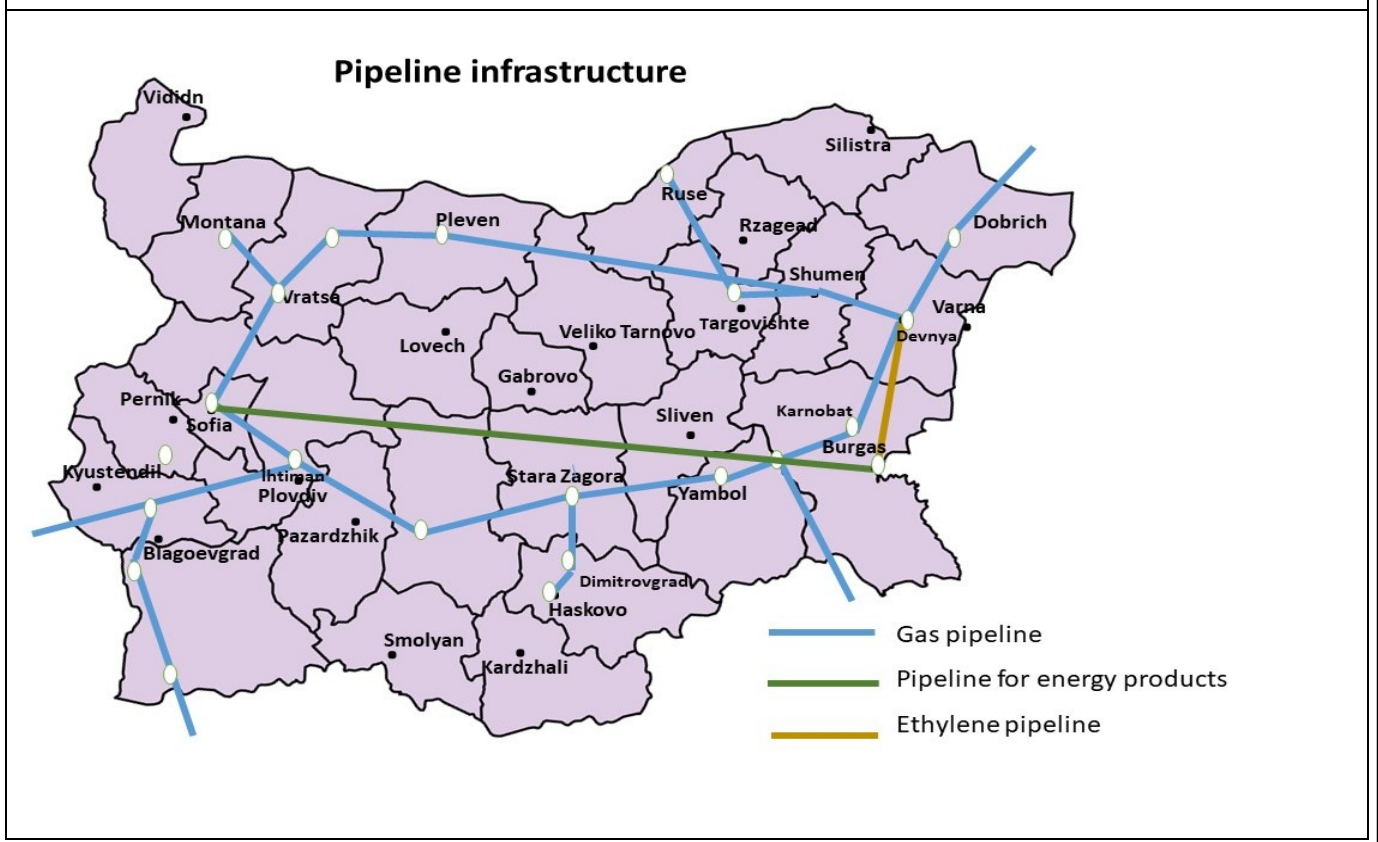
58. Road transport



59. Rail transport

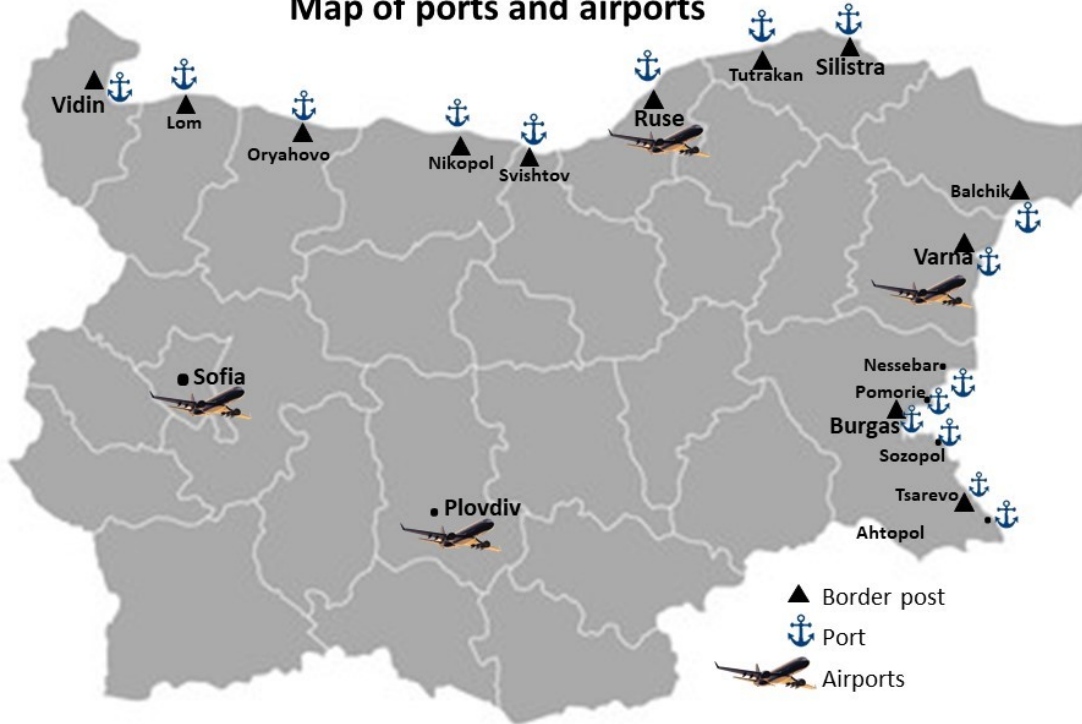


60. Pipeline transport



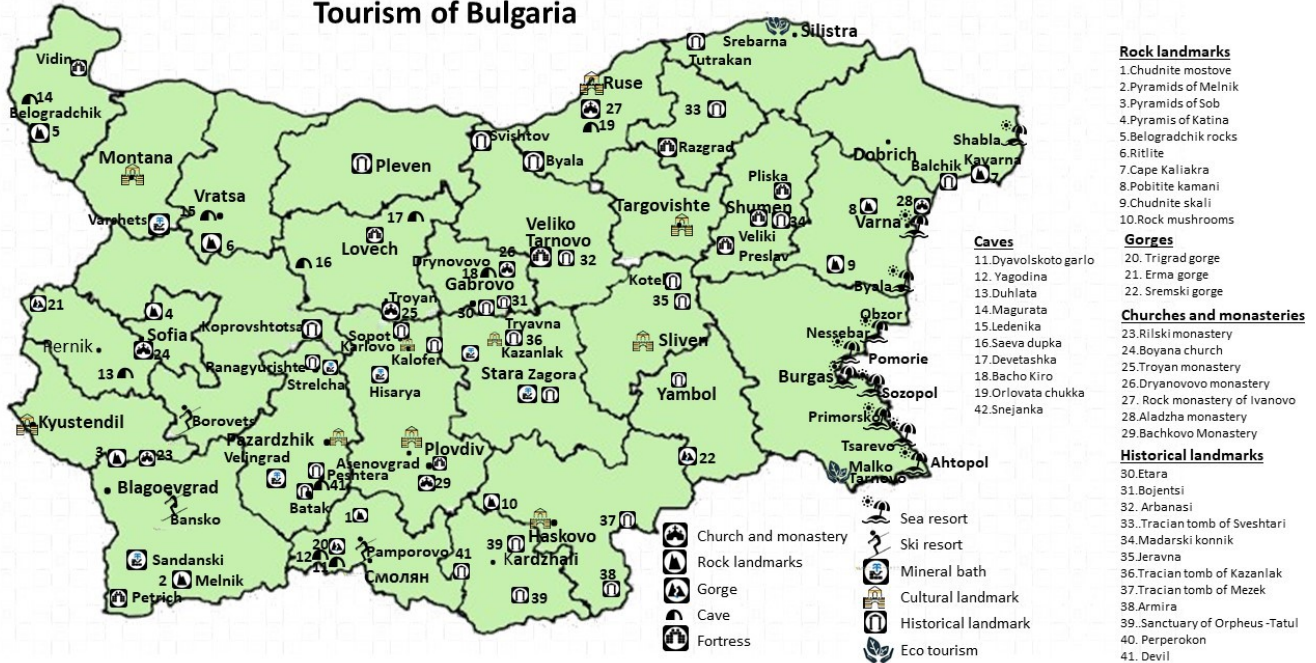
61. Maritime transport

Map of ports and airports



62. Tourism sector

Tourism of Bulgaria



63. The South-West Region primary sector



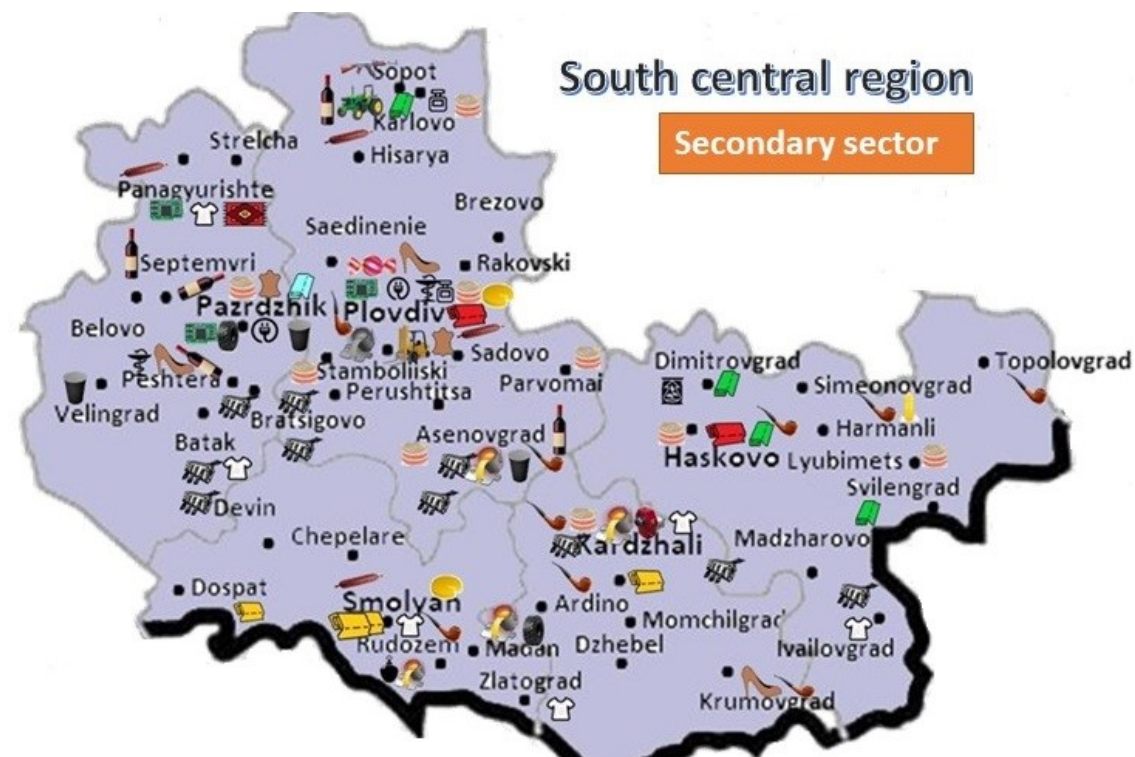
64. The South-West Region secondary sector



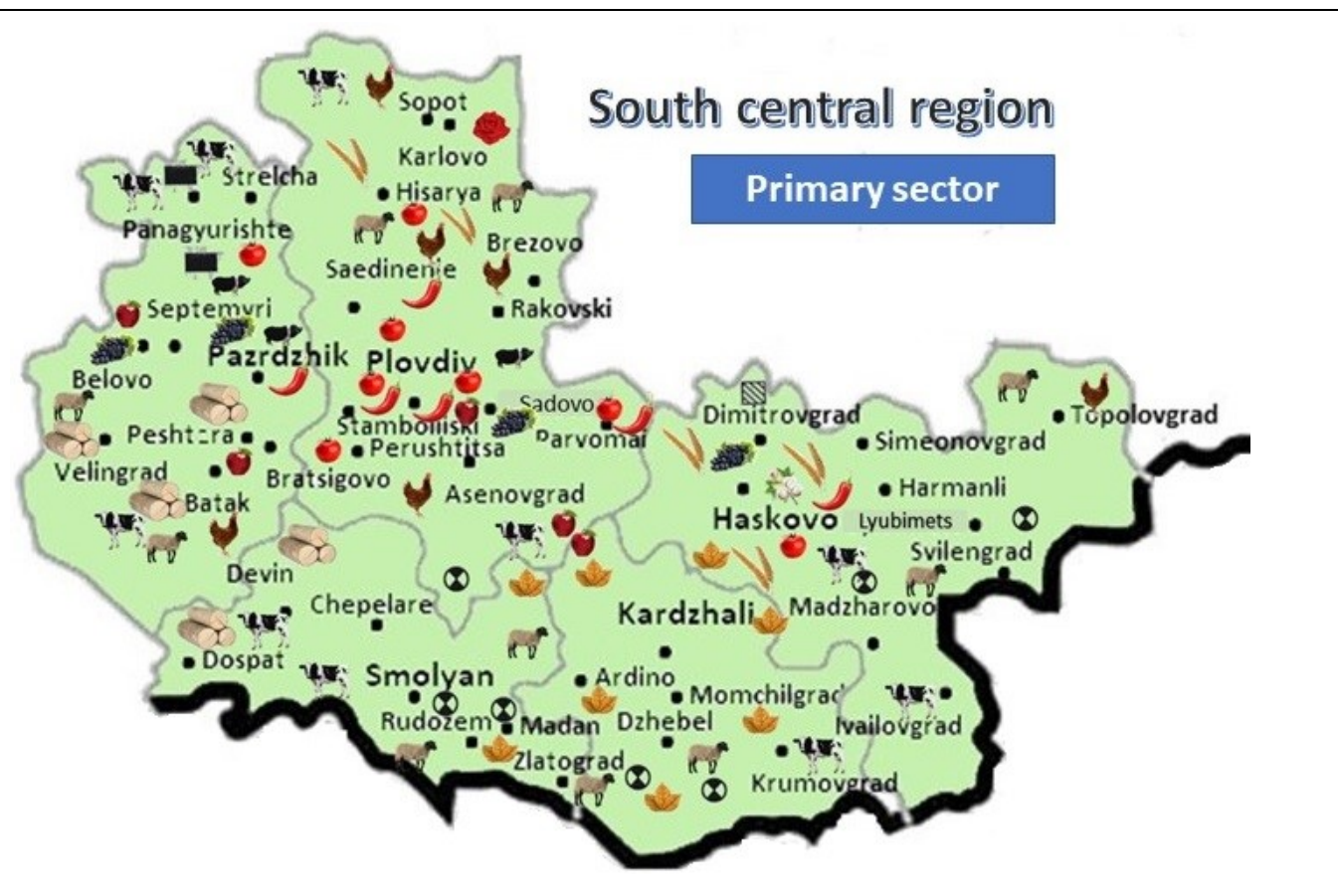
65. The South-West Region districts



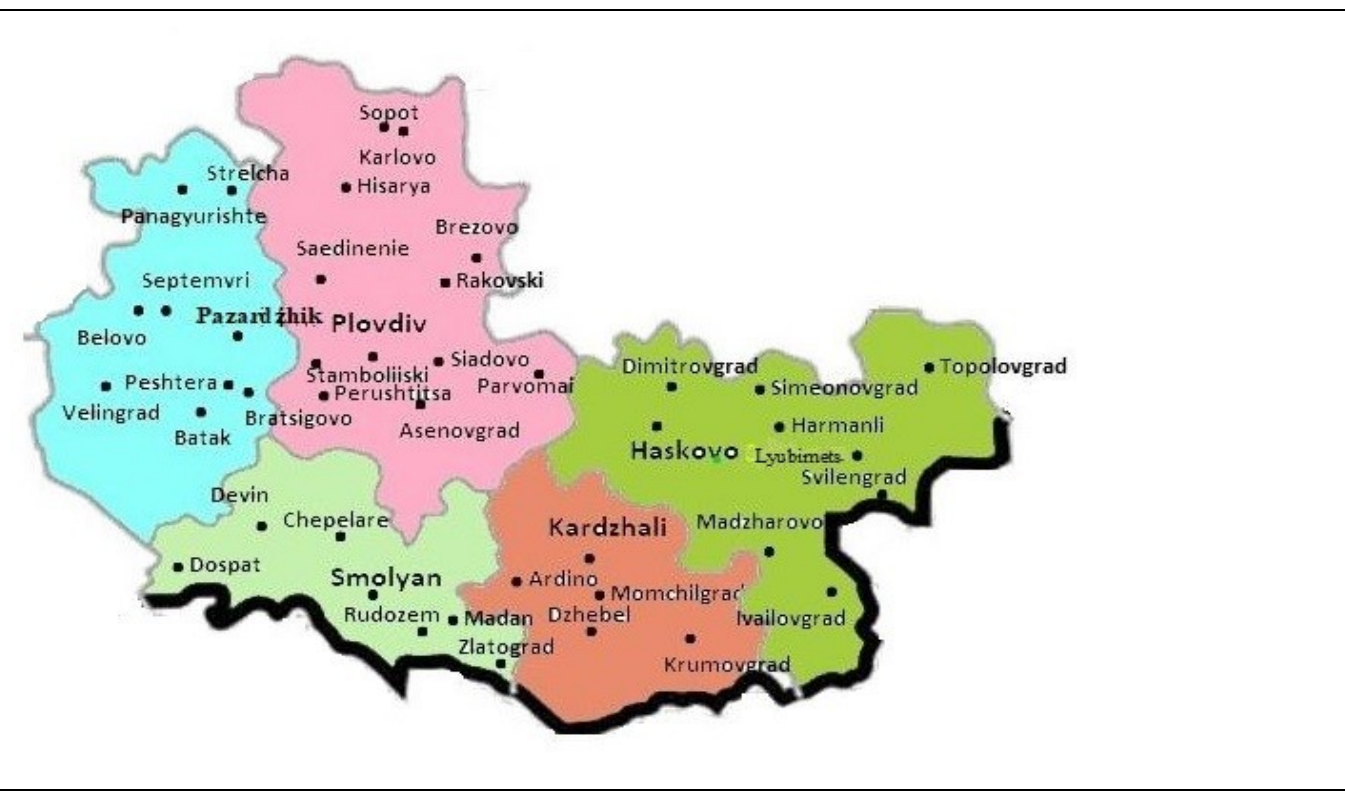
66. The South Central Region secondary sector



67. The South Central Region primary sector



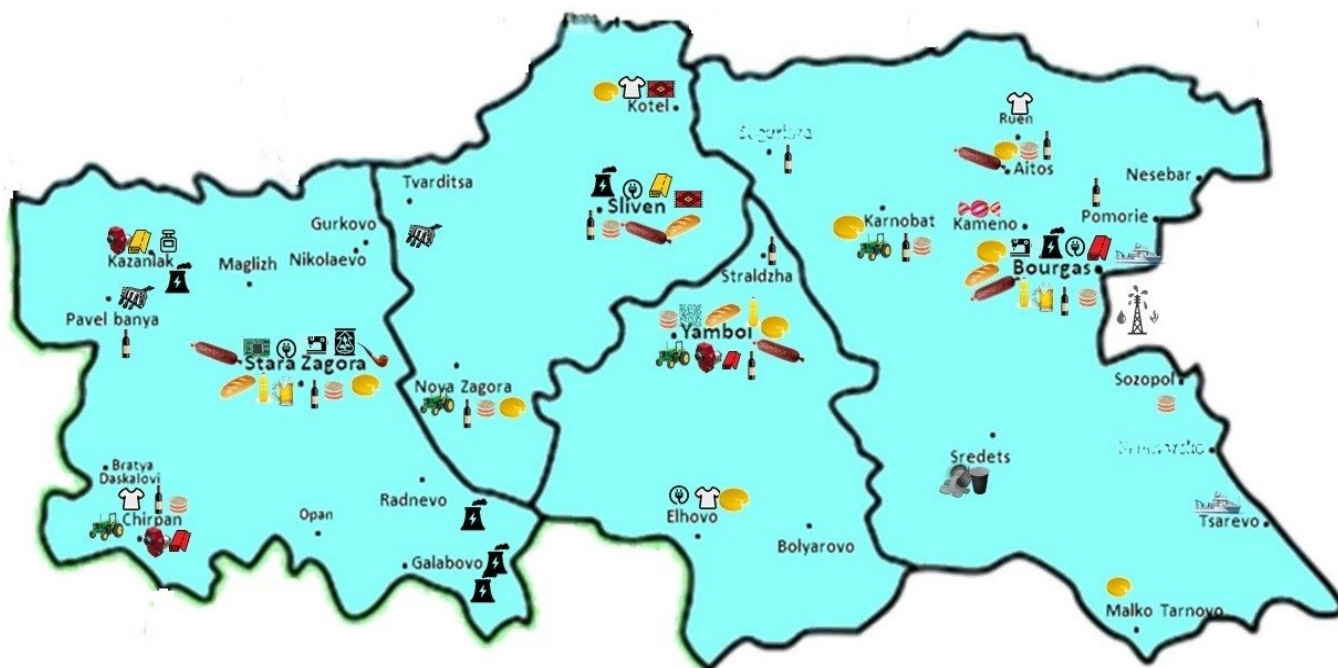
68. The South Central districts



69. The South-East Region primary sector



70. The South-East Region secondary sector



71. The South-East Region districts



72. The North-East region primary sector



73. The North-East region secondary sector



74. The North-East region districts

Districts of North-east region



75. The North Central Region primary sector



76. The North Central Region secondary sector



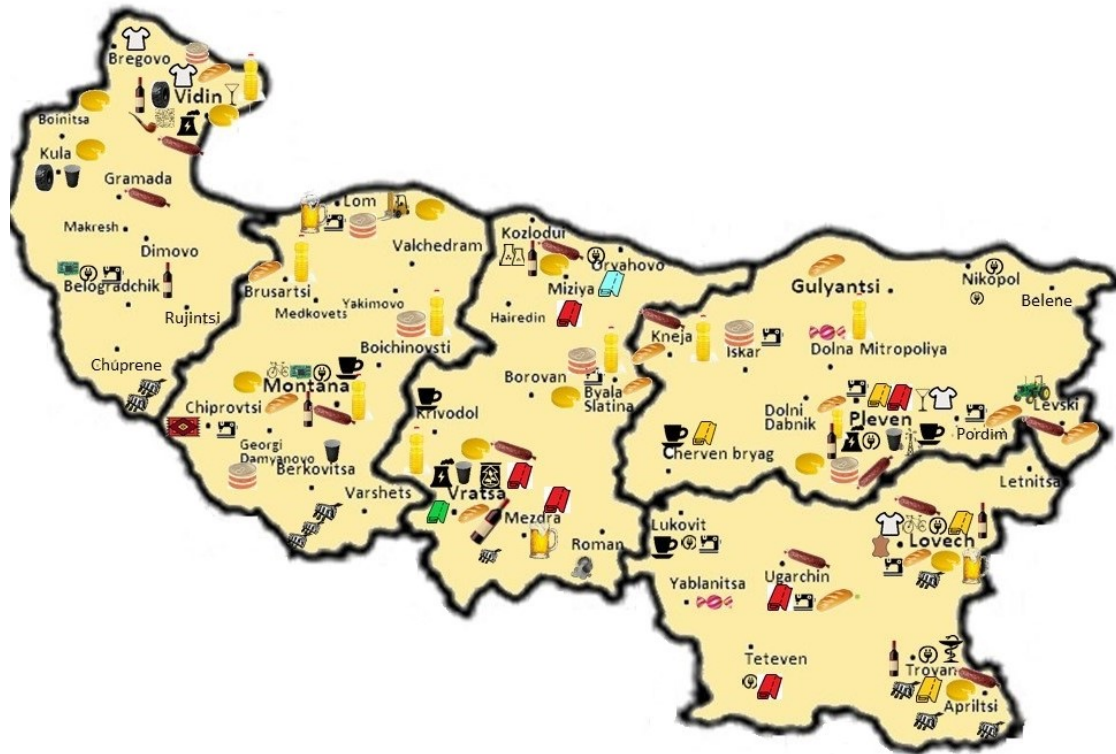
77. The North Central Region districts



78. North-West Region primary sector



79. North-West Region secondary sector



80. North-West Region districts



Glossary

aspen – трепетлика

badger – язовец

broad bean – бакла

canola – рапица

capercailzie – глухар

chestnut – кестен

chickpeas – нахут

cinnamon soils – канелени почви

clematis – повет

disparity – несъответствие

haberdashery – галантерия

hedgehog – таралеж

heron – чапла

hornbeam – габър

insurmountable – непреодолим

intangible – нематериален

intermittent – прекъсващ, пулсиращ

inundate – наводнявам

itinerary – маршрут

jackal – чакал

knitting – плетиво, плетене

lagging – изоставащ

livelihood – прехрана

masl – метри надморска височина

mallard – зеленоглава патица

negligible – незначителен

outermost point – крайна точка

pheasant – фазан

perennial – многогодишен

perishable – преходен, тленен

poach – браконьерствам

polish elm – полски бряст

pollinate – опрашвам

royal jelly – пчелно млечице

silk cocoon – копринен пашкул

smolnitsi soils – смолници

soybean – соя

swamp forest – лонгозна гора

sycamore – ясен, чинар

thermophilic – топлолюбив

varnish – лак

vertebrate – гръбначно животно

white head vulture – белоглав лешояд

wood-grouse – див петел

woodpecker – кълвач

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