

## STRUCTURE AND RELIEF OF ALBANIA

*Prof. Dr. Ali Selçuk BİRİCİK*

### **Abstract**

*ALBANIA, is a European country situated in the Balkan Peninsula. The west side is bordered with the southeastern costs of Adriatic Sea . Albania has borders with MONTENEGRO in the North KOSOVO and SYRBIA in the northeast, MACEDONIA in the east , GREECE in the south - southeast.*

*Area 28. 742 km<sup>2</sup> , .*

*Capital city is T I R A N.*

*Shkodra ( Shkoder ), Durres , Albania ( Durres ), Elbasan, Korca ( Korce ), Vlora ( Vlore ), Gjirokastra (Gjirokaster), are the major cities.*

*The population is 3,194,972 according to 2010 census results, respectively. The rate of Albanian population is 95 . 3 % , 2, 5 % gypsies, 1,8 is Greek, 0.14 is Macedonian and Kosovo people.*

*Albania is a mountainous country. The mountains are included in the Alpine Orogeny System. Albanian Alps mountain ranges in the North , east , south - known as the Dinaric Alps. These different orographic and tectonic nomenclature extensions on developments in different directions.*

*The main factor in determining the structure and relief of Albania on the basis of the Alpine Orogeny, and epyrogenyc Movements related to that. The presence of Plato and lowlands is related to them.*

*The presence of high mountains ( the Shar Mountains, 2764 m, etc. ), by the rivers around here has deep breach. Aspects of the main stretch of rivers, but some exceptional cases, the south-east, north-west is true. This stretch, depending on the systems developed in the fold is not a coincidence.*

*The country from east to west elevation is gradually lowered, Adriatic Sea coast is the transition towards the plains. Land in the country about 1 / 3 ' , which corresponds to the formation and development of the plains, and even the whole structure and relief of the country's present-day tectonic, isostatic and eustatic controls on movements.*

*The details of the issue is given in the main text relatively.*



General Physical Map of Albania

## Structure of Albania

Their structure is dominated by the Alpine structure.

Land formations and lithological units in the structure of the and belong to the Mesozoic and Cenozoic. Pre - Mesozoic ( *Paleozoic* ) land is not common. Though very limited, they are exposed at the eastern parts of the country.

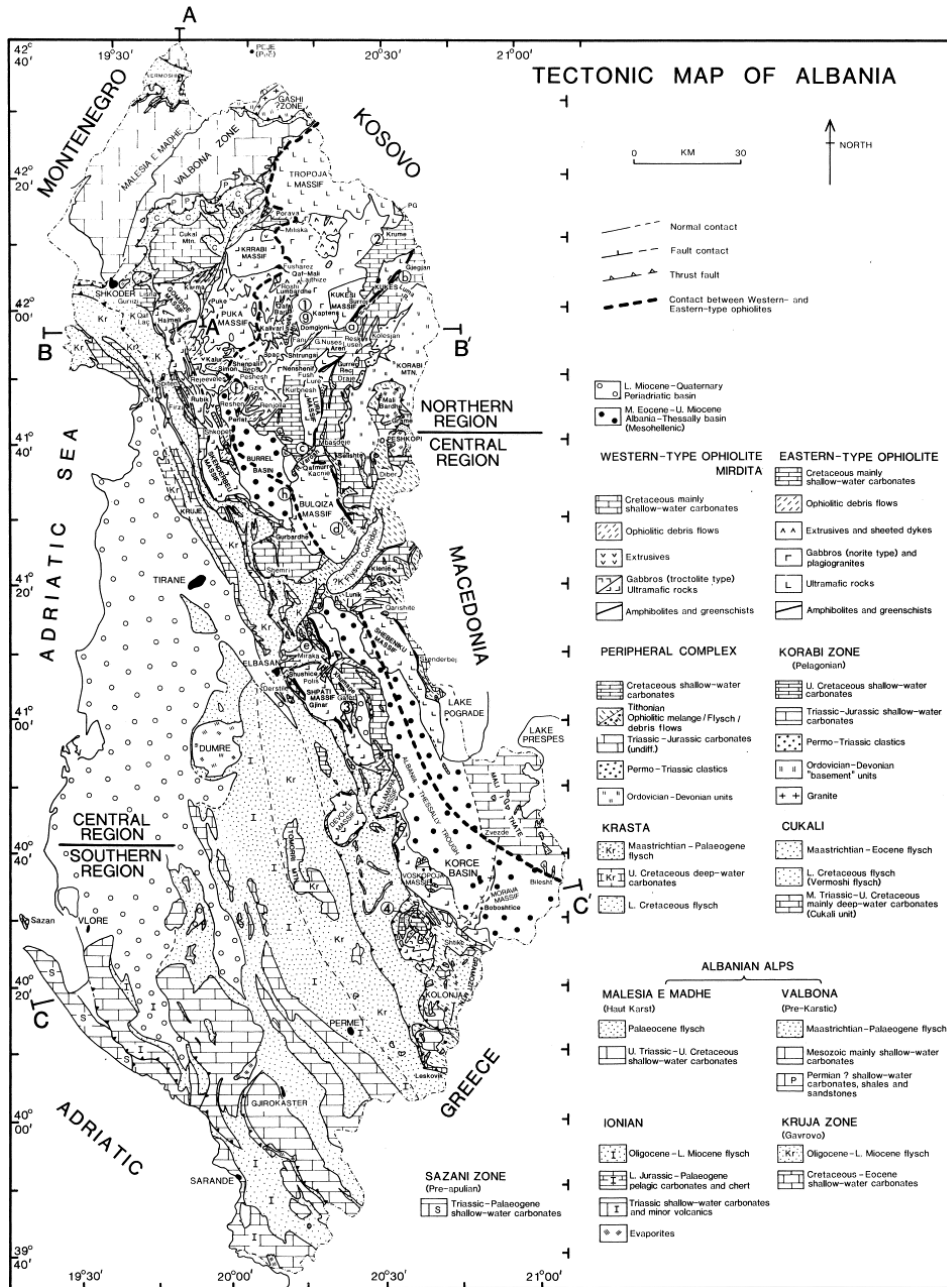
On the other hand the Triassic, Jurassic, and Cretaceous formations in the country, representing more than space on the grounds. SW between Albania, these formations are also seen in the east, along the border with Macedonia SE - NW show stretch line. This state of tectonic events related to the course. Thus, the thrust and the fault lines is lying in a linear SE - NW direction.

Mesozoic land in Albania and in a way which fossilized Paleogene and Neogene formations in the form of blankets over them discordantly.

Paleogene and Neogene sediments and volcanites in various areas of Albania's Adriatic Sea, as well as the North - east section of Lake Ohrid - Lake Shkodra şariyajlı evident between the line to the southwest, according to the structures of the Tertiary Basin remained settled in the bottom. Here, limnic and fluvial sediments of Paleogene and Neogene marine sediments encountered with. These formations constitute 2 / 3 part of the Albanian land.

Alluvial formations specific to Kuaterner, are along the wide river coastal bases behind the Adriatic Sea coastline in Albania.

In addition, the northern shores of Lake Shkoder and SE coastal areas in the back there is relatively widespread alluvial stores.



General Geology and Tectonic Map of Albania



Tectonic Map of Albania

In detail in the description of the issues related to structure the Albanian land are also available. These, there is enough data and field observations outlined below for yet been mentioned.

Various Paleozoic formations of the oldest in Albania consists of the main land. These Ordovician - Devonien'e specific metamorphic lithological units.

On the other hand Permien'in deposited in a shallow marine environment of carbonate rocks (limestone, marble, ..), schist and sandstone aflörmalarına encountered. In addition, chlorite schists and amphibolites are also available.

Paleozoic rocks in which they understood the depth of magma origin of granite, plagiogranite and gabbros in Albania lithological units of land is located between the old foundation.

Permian sandstones and conglomerates, is Trias'a transition. These are the Permo - Triassic of creating and Triassic clastic rocks of the 'state of the basal conglomerate.

Triassic in the Triassic - Jurassic 'and the Triassic - Paleogene in carbonate rocks deposited in a shallow marine environment, the owner of an important place in the territory of Albania. Likewise, the Jurassic - Paleogene pelagic ( *open sea environment* ) is composed of carbonate rocks and cherts.

Although not yet distinguish relatively large time interval ( *Triassic - Cretaceous* ) located in one of the shallow and deep-sea sediments from place to place ( *especially carbonated lithological units* ) that the formation has been found.

On the other hand, was formed during the Late Cretaceous marine facies carbonate formations. They are distinguished as Shallow and Deep Sea Facies.

Albania is an important point in taking care of the grounds, in the eastern part of Albania from the S SE N, NE, or the right place in the shrinking and expanding aflörmanlaryla ophiolite formations are striking.

These are probably towards the end of the Cretaceous ophiolitic relates to the rise of a magma. This case goes back to a clear upward along the route described above. This is from the axis of the ridge line between the **Western Type Ophiolites** 'ler W, E sundakiler **Ophiolites in the Eastern Type** 's classified under the name.

Ophiolitic units :           - Ultramafic - ultrabasic rocks,

- Discharge from the ophiolitic units,

- Ophiolitic mélange, ..

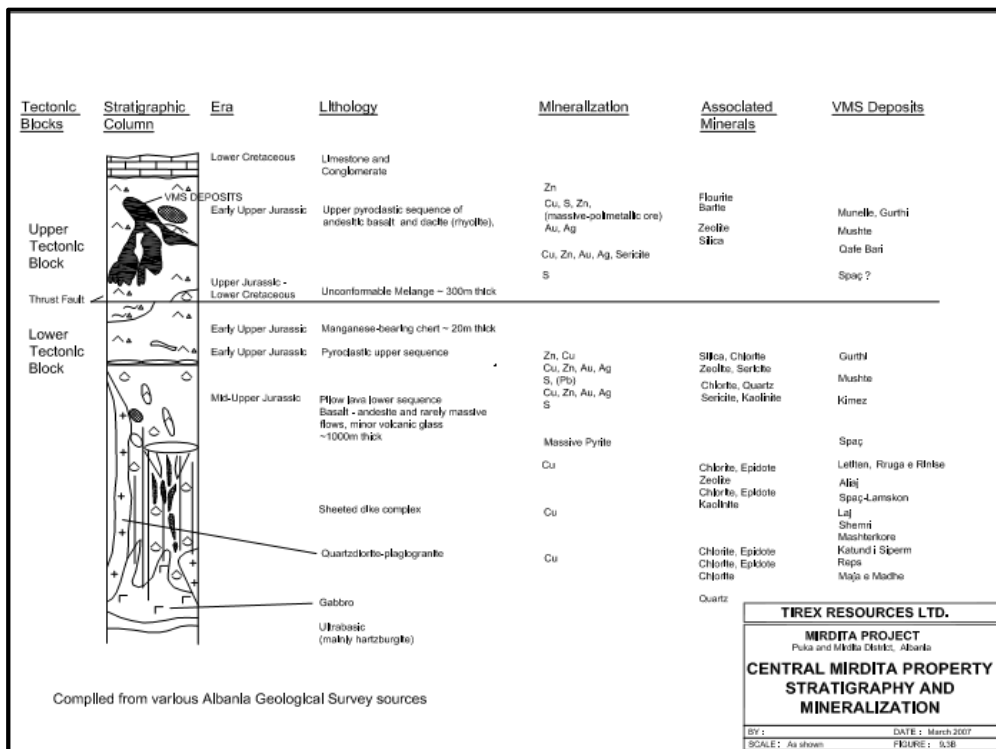
named in the form of a state of ultrabasic massif. Chrome around here, especially in various ores have been formed.

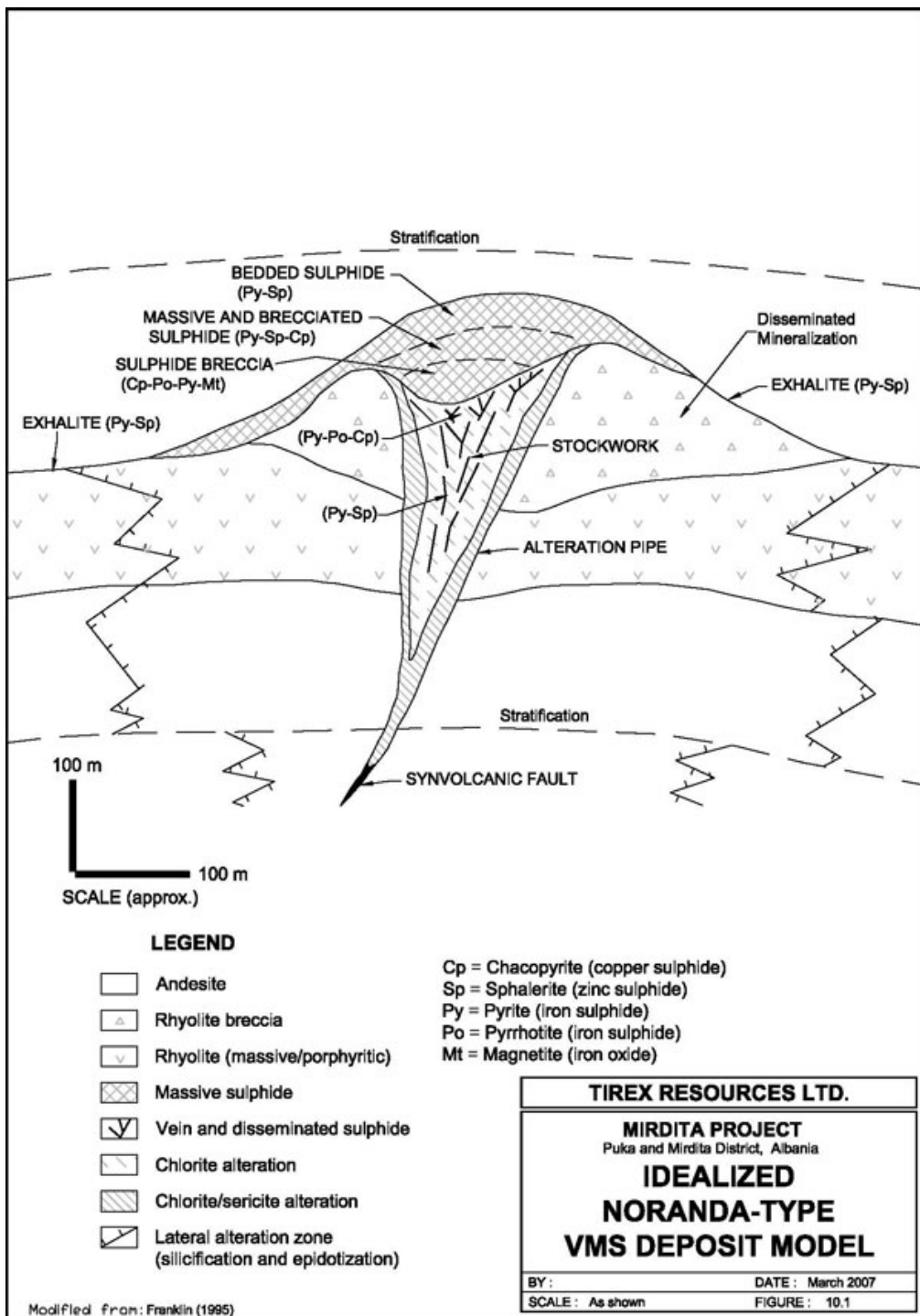
Mentioned in ultrabasic massif ;



- Tropoja , - Kuks , - Lura , - Bulqiza , - Shebeniku , - Pogradeci , - Krabi - Gomsique , - Skenderbe , - Kutermani , - Shapati , - Guri Zi , - Vallamara , - Devolli , - Voskopoja , - Morova and Vithkuqi . . . . known by the name.

Albania land ultrabasic massif and surrounding formations by a private entity in connection with the operation of mining research and Mirdita Zone Project under the name of Mirdita relatively examined in detail.







Mirdita of ore deposits Chromium, Copper, Pyrite, Gold, Silver, Zinc, Lead, Sulphur are available. Ores mentioned in the Jurassic - Cretaceous grounds formed understood. However, data regarding the two separate stratigraphic enclosed shown in cross - section.

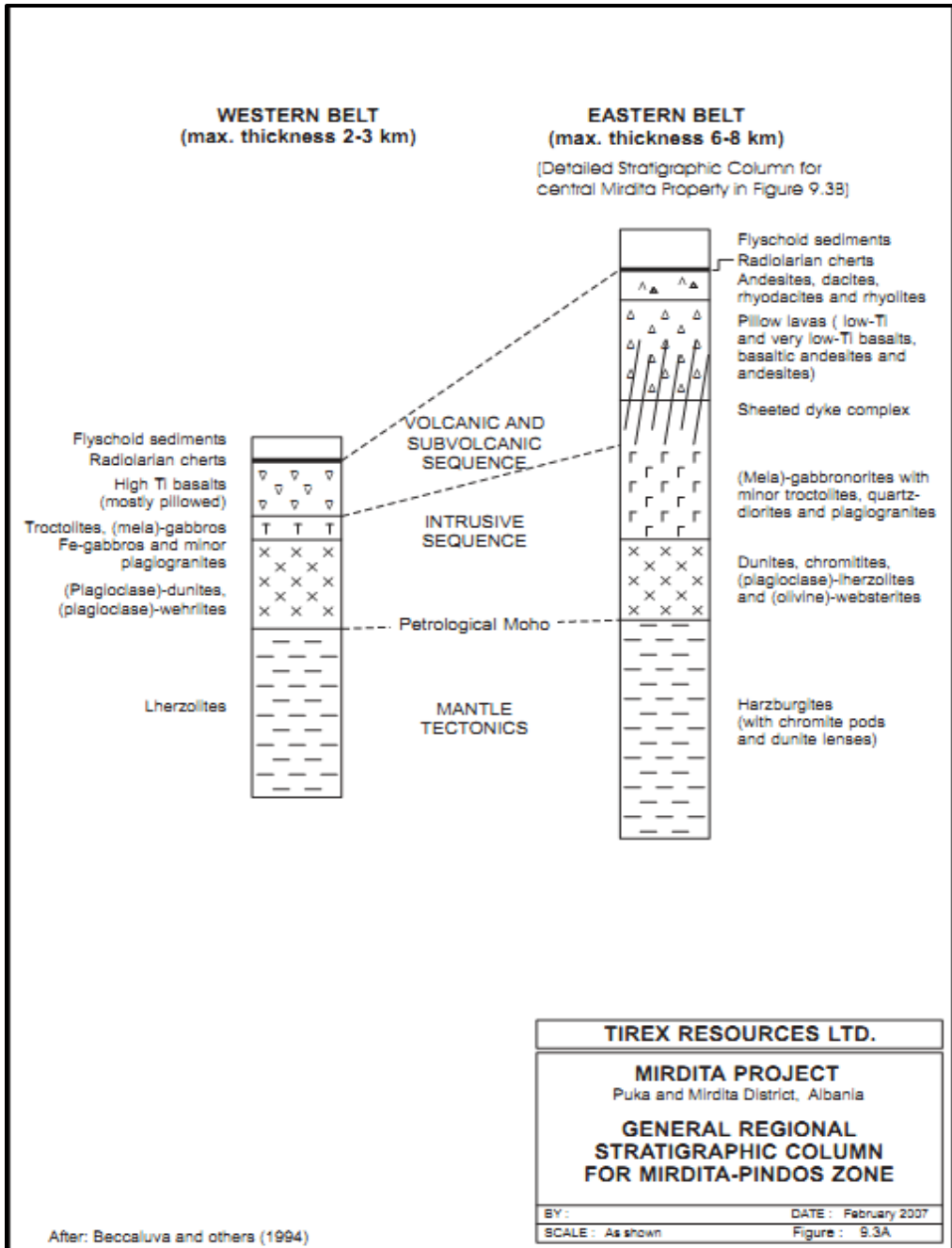
Albania, as well as nickel and coal reserves of oil and natural gas reserves in the mevcûddur well.

Outside the territory of Albania ultrabasic massifs fasiyesi'nin flysch is understood that the relatively large footprint. Netekim the lower Cretaceous, Maestrichtian, Paleocene, Eocene, Oligocene, and Miosen'de fliş'ler was formed between lithological units where the owner of a separate and important.

On the other hand, in a narrow outcropping Oligocene - Miocene evaporid'leri is also important.

Miocene - Quaternary volcanic rocks which is the product of volcanic activity have occurred in Albania, where structural importance of a separate owner.

Outcrops lithological units described above is that somewhere in the land of Albania and the Albanian General Jeoleji their distribution area and Tectonic Map, shown dismissed.



## Relief of Albania

When the general analysis of Albanian relief, three main geographical units can be mentioned. With these conventional classification; 1 - Mountains, 2 - plateaus, 3 - Plains are distinguished.

Each of these are examined separately by the geomorphological characteristics, formation and develop internal and external Dynamic Dynamic amylin appears to be effective Âmilleri'nin. In this context, the Alpine Orogeny - Tectonics and epyrogenyc style of young tectonic movements that followed it say that they are effective Thus, Alpine-type folds and thrusts within the framework of orographic systems formed by Albania, as well as the basic elements of relief, again, the presence of tectonic depressions subsequent formation of depressions, volcanic activity and volcanic elements of relief. . . are remarkable forms.

In addition, the climatic conditions and sea - level oscillations and a rich variety of relief to be made. The presence of high mountains ( *Alps of Albania* ) on the one hand the formation of glacial and periglacial relief as provided in the formation of a very deep canyon vâdlerin and possibly some other reliefi entered.

Although this subject is very extensive, we introduced the following statements have been condensed in the name of some of the main topics.

Albania, the Adriatic Sea coast towards the east, faced with a number of levels of elevation. On the other hand, and interglasyal glacial period in the Mediterranean ( *hence the Adriatic Sea at* ) relief formation occurring in the coastal effects of changes in level occur in every way.

These features are put forward in Albania, in terms of the effects of altitude levels is striking relief.

## Effects of Altitude Levels in Albania Relief

Albanian land, gaining altitude when you go to the east from the Adriatic Sea coast. Constitute the lowest place in the plains of the coastline along the coast of the country.

The above-mentioned fields surrounding the plain plateaus, heights 250 to 500 m between the floating state of the flats.

However, the country's north, east and south showed significant increases towards the ridge, deeply carved river beds is located in the high mountains. Instead of passing through these places in the form of meandering rivers impacted by sticking by deep and narrow straits times, but they brought in some quarters kaptüre decrease in the slope where the material is quite thick alluvial deposits is dominated by turn helped the formation of the plains.



General Physical Map of Albania

Thus, we can say that, even though some exceptions Albanian land east - west direction dissymmetric offers a profile. That is to say, in high mountainous areas,

the eastern, western lowland transition courses, with a sharp slope is disappointment. This is an average elevation of 2000 m, with the level of al - Qaeda in the mountains of 2000 m difference in level means. This is a relatively short distance from the floor, which, however, such as al - Qaeda a significant elevation of 2000 m difference in level between the erosional activity that might have been plucked from the coarse material and suggests that square. However, they are brought to the seaside was reduced waves back and forth movements.

On the other hand need to be involved in the following point. Referred to a large extent fluvial plains material of marine origin, but also sâhibtir characters. Thus, the alluvial plains of the materials that make up flüvio - appear to be of marine origin.

### **Mountains of Albania**

Albania in the Alpine orogenic system to the mountains, which are included in the two main groups are examined separately.

One of these areas in the north of the country is known by the name of the North Albanian Alps. Their general extension of the SW - NE 'stop. The peak heights of the mountains along the border with Montenegro and Kosovo, which is over 2500 m These include Maja e Radohimes ( 2568 m ), Jezerce ( 2694 m ), Grykat e Hapeta ( 2625 m ) and Dijeravica ( 2656 m ) peaks is located. These regions is dominated by glacial and periglacial relief places.

Albania's second main group is known by the name of the Dinaric Alps mountains. They can be divided into two according to aspects of the stretch.

#### **SE - NW extension of the Mountains with**

- \* Vlore ( *Cike* ) Mountains ( 2045 m )
- \* Tartar ( *influenza* ) 1946 m - Quendervice ( *Maja e Kendervices* ) 2121 m - Gjerde ( 1883 m ) - Delvine Mountains,
- \* Nemerçke ( *Maja e Papingut* ) 2485 m, Trebeshina - Mallakaster Mountains,
- \* Kolonje ( *Gramos* ) 2523 m - Tomorr ( *CuKa Partizan - 2416 m -* ) Mountains
- \* Vithkuq - Ostrovice ( 2346 m ) mountains,
- \* Valamar ( 2373 m ) - Elbasan Mountains,
- \* Tirana - Dajit ( 1828 - 1612 m ) mountains,
- \* Financial i That ( *west of Lake Prespa* ) 2287 m - Shebenik ( 2253 m ) Bulqize - Deje ( 2246 m ) - Lure ( 2119 m - 2121 m ) mountains.

\* Shar Mountains, mainly divides into two branches. SE-NW extension of a branch of them. On this line orographic Deshat (Velivar) 2375 m, 2764 m and Gjallice Korab ( 2,486 m ) are the peaks.

### **With SW - NE Extension of the Mountains**

Another part of the Shar Mountains, outside the borders of Albania, Macedonia - Kosovo is in part (Titov Vrv 2747 m - Koritnik 2394 m) and the SW - NE show stretch line.

### **Rivers of Albania**

To Albania, surface water, and groundwater is a country rich. Major rivers that drain the Adriatic Sea surface waters are drained. They are known by different names and Montenegro to the South from the border.

#### **Drin River**

Akarsudur outlet of Lake Ohrid. From Kosovo White Drin River, Drin River, the main channel to the connected. Akışlıdır the beginning but from south to north. NW or Drin, which flows near Kukes, this time to SW Fierze settlement proceeded towards the place where the waters of the Adriatic Sea, is released.

As the size of basin of the River Drin in Albania ranks first in length and nutrition. Dams on rivers, which handles a large number of various maksatlarla are made.

#### **Mat River**

The NE and SW HIGH starting locations in the upper mountainous areas of Albania dates back to the summits. One of the three major tributaries ( *Urake* ) NE or the other ( *Lusen* ) E or a one ( *Matte main mecrainin up segments* ) SE extends y. Ulez near the junction of the two secondary arm proceeded towards the Adriatic Sea from the E'dan W or water discharges.

#### **İshem River (Ishmi)**

Mountains north of Tirana, the descending branches (Tirana, Rinas and Zeze teas) and the waters of the Adriatic Sea coast of the northern peninsula grew Rodoni has been released.

#### **Erzen River**

Turn to the northwest through the south of Tirana and is the owner of a role can not be underestimated in the formation of a unity deltanı is connected to the Sea.

### **Darci Stream**

A relatively small river. It roughly flows from E to W.

### **Shkumbin River**

Elbasan starting points in the upper river in the northern mountains extending from the field, from where Cerrik from the W or moving toward a settlement and Seman has undertaken an important role in the formation of mixed delta.

### **Seman River**

Is another of the major rivers of Albania. Ballsh, Ossum and Devall is one of the important tributaries of river Seman teas. The high mountainous areas of these peaks up and run towards SW mediums, from the NW to SE, parallel to each other the right way akışlıdırlar. However, the medium you are connected to the main part of the plain from the SW or NE (Devall and Ossum) or directed towards, and finally NW north of Fier and empties the waters of Adriatic Sea. Seman River brought their own materials played an important role in the formation of a delta known by the name.

### **Vjose River**

Vjose starting points in the upper river extends to the territory of Albania SE neighbor, Greece.

Albania is one of a fairly large rivers. Branches (*Shushice, Drino, Zagorise, Vjose and Lengarice tea*), including the SE, and the Adriatic Sea, the waters flowing from the NW or empties it into the right.

As mentioned above, partly Vjose River Delta in the formation of the Seman river with Shkumbin and Seman has been effective.

### **Bune Creek**

A river in northern Albania from Shkodra Lake stop. Flows from north to south.

### **Kales River**

South of Albania, from north to south and empties it into the right course and lagoon waters Xarrë.





## **Drin River**

### **Lakes in the Relief of Albania**

Lakes have different and important place in the relief of Albania. Lake depressions of the lake, morphometric characteristics of the formation and development of underwater detection means known relief. The depressions filled with water is called lakes. Thus, lakes, has a different significance in terms of hydrographic respect, too,.

For this reason, while we mention lakes in Albanian Relief, will focus on how the lake depressions formed. Likewise, we will give some explanations about the lake waters as well.

In general, land of Albania 's structure and origin of lakes in Albania as of relief as a whole, if I notice :

- Tectonic activity,
- Volcanic activity,
- Karstification,
- Glaciation
- Coastal delta formation, and also

Albania's *Dalmatian coast - type* karstification sea level rise and the effect of falling ( *karsto-marinal effect* ) were formed dependingly.

Albania's eastern boundary is located between Macedonia and Greece, Ohrid ( *Ohn'd* ) Lake and Lake Prespa lakes of tectonic origin

### **Lake Ohrid**

Albania 's east-central part, with the eastern half of the lake in the north of the border with Macedonia Macedonia, Albania's land belongs to the western and southern parts.

Ohrid Lake, an oxbow lake of tectonic origin. Lake Trough, a **Graben** developed between Struga-Korce Tectonic Depression property's northern section.

N NW - S SE line north towards the south of Korce in Struga 90 km long, 15 km wide depression also two ( 2 ) parts formed. Someone in the north of Lake Ohrid giving rise to depressions where the other one in the south basin of Korce made on the agricultural activity.

The Depression's divided in two, the course is related to tectonic movements epirogenic style. Ohrid Lake Podgorie located 12 km south of the land rose in epirogenic, as a result, the depression of Lake Ohrid' s collapse deepened emerges.

Basin on the other hand blindly 'according to the characteristics of the surface topography and surface waters of Lake Ohrid from the independent drainage system Maliq-moglice in a deep valley between the crossing was opened and a relatively broad-based Seman River of the Devall creek channel for up to Seman River to the Adriatic Sea, and finally what will be discharged.

Korce basin floor and the height difference between the depression of Lake Ohrid Lake Ohrid Basin waters suggest the possibility underground connection. Ohrid Lake, trending north-south along the western coast has a significant fault orthogonality. Off the west coast of the lake at its deepest point. Here, the maximum depth up to 300 m is approaching.

The lake offers a profile dissymmetric east-west direction. Indeed, as mentioned above, partly steep eastern coast of the western coast of the horizontal.

Ohrid Lake on the north shore of the waters from eating more than one place depending on conditions ( location of the regülatör ) gideğeni ( Karadirin Creek ) Barjı Globaçisa via a tunnel through the opening between Debre Dam) Drin River to the Sea, and finally Driya 'is discharged is.

Dam from Lake Ohrid Globaçisa Karadirin brook at the beginning and the output was controlled by two separate regulators. This relates to increases in falling water level of Lake Ohrid.

Area of 358 km<sup>2</sup> and 693 m high above sea level in Lake Ohrid, a fresh water lake. The average volume of 55.4 km<sup>3</sup> of water species. The lake is rich in flora and fauna in particular. There are about 200 endemic species living in the lake environment. These include the Ohrid Lake Ohrid trout striking how specific ones.

On the other hand, 15 km ESE of Lake Ohrid under the influence of water regime linked to groundwater of Prespa Lake and is 150 m higher than this lake .

Because of the unique natural features of Ohrid Lake, it has been taken to the World Cultural Heritage list in 1979 by UNESCO in order to be protected.

### **Lake Prespa**

Lake Ohrid, Prespa Lake, 15 km ESE of the 'sundae. Border with Albania, Macedonia and Greece, but at 3 separate the country's savings.

One of the big Prespa Lake Prespa Lake in the north, and the other just south of the Prespa Lake, a small lake known by the name consists of two separate. In fact, the *Small Prespa Lake*, a narrow strait and the *Great Prespa Lake* is connected to what.

Prespa Lake 'nude W is perpendicular to the coast than in the E coast. Summit elevation 2287 m of W coast of the lake behind the finds and the Mali That is called the orographic effect of the extension.

Prespa Lake is a lake in the tectonic origin. 843 m high above sea level is the level of the lake. Area 273 km<sup>2</sup>, maximum depth of 54 m.

In the S SE of Great Prespa Lake called Golem Grad Grad and goods have two separate name. Small Prespa Lake is a small island known as the Agios Achiblius.

*Great Prespa Lake*, giving rise to the northwestern coastal mountain range behind the mountains to the north, called Mani That extension. Thus, the Ohrid Lake Prespa Lake nude from the mountain range that separates the Ohrid and Prespa *Horst* separating his depression than anything else is not. Although there is this distinction, as the tectonic and topographic Prespa Lake from the underground karstic Lake Ohrid means' I suggest that a water flow.

It just NW shore of Lake Prespa W 'a right of Ohrid Lake' nude near the coast where E is a historic settlement with the former seen a tremendous amount of water

outlets throughout topography Aziznaun Village locality where the Remaking sources corroborates this opinion.

### **Shkodra Lake ( Lake Shokoder )**

It is one of the Albania 's three ( 3 ) big lakes.

The Lake, Albania 's NNW and is located between the border of Montenegro, Montenegro, and thus a part of the lake ' s, as a part of Albania are under - saving.

The lake in NW - SE direction is relatively high mountain ranges of southern coast is surrounded by ship.

In fact, the lake 's shore of the north and east of the lower mountain ranges in the presence of ships are noteworthy. In this state of Lake Shkoder Basin, NW - SE direction corresponds to an enhanced tectonic depression.

Most important factor in the formation and development of the lake cupping north-eastern shore of the lake behind the NW - SE direction, extending the tectonic line. This tectonic line ( *fault line* ), about 8 km north-east of the city of Shkodra determined to be a part of the territory of Albania, in a part of the territory of Montenegro is 75 km long. Eroded plateaus corresponding to the aforementioned low plains to the lake in front of the perpendicularity of the fault begins.

Moraca and Cijevna streams emptying their water from N and NE into the lake carried large amounts of material, so that led to the formation of a large delta in the north of the lake.

Shkodra Lake, giving rise to explain the formation and development phases outlined as follows ;

- Northwest - southeast axis formation of folded mountain ranges,
- The faulting and folding systems-faulted anticlinal and synclinal formation so that they,
- The formation of depressions in the form of - Syncline and their different fault systems ( *diagonally and vertical faults, dip-slip faults ...* ), becoming clear
- Finally, the aforesaid main body of the body tectonic Lake Shkodër found as a result of events.

In addition ;

- Karstification played an important role in the formation of the lake - shore.

- One other factor, which has a very large nutritional Drin River basin of South - eastern shore of the lake now yığması brought enormous amount of material formed by alluvial sediments.

Drin River has not yet mentioned the Great Wall before creating the Adriatic Sea's waters of Lake Shkodra now giving rise to become a bay of tectonic origin, but was occupied primary depression. Sea level during violet **Base Shkodra Cupping** was then occupied the waters of the lake.

Featuring a pedestal level of the Sea which occurs at the level of grinding and material handling activities lowering **Drin River** alluvial material is accelerated and thus block the size has reached the front of the old bay.

The main body of the lake's formation, although in the first degree of tectonic events have affected the lake 'in making today's fame Drin River' has assumed a major role in the wall, cove formed.

Lake, near the Adriatic Sea, from time to time to be associated with the bygone, though occasionally it can be concluded disconnected. The relief at the depth of the lake and the area of the lake waters influence the physical, chemical and the biological properties.

As it stands, the lake level is situated six ( 6 ) has m higher than the sea level. The area of the lake varies between 370 - 530 km<sup>2</sup>.

Of all the maximal depth of the lake ( 44 ) m. Lake depression characteristic within this state is of **Crypto**

## **Depression**

### **Albania's Adriatic Seaside And Nearby Lakes**

Albania's Adriatic Sea coastline and is located near the lakes is a privilege.

The formation of lakes and coastal development in the back of a large extent by a rise in sea level falling in Albania 's highest mountain east of the Adriatic Sea of action' brought by the rivers draining the waters of what materials have been effective.

The formation of Delta, Delta Lakes lagoonal character in this regard are matters to be dealt with. These formations along the coast of Adriatic Sea, Albania 's right to examine from north to south, starting at the same time the formation and development of coastal relief will provide some information about.

## **The Formation and Evolution of Albania Coastal Relief**

To reveal the stages of formation and development of the coastal Relief with all details means putting forward the development of the relief of Albania.

### **Formations And Their Tectonic Features That Make Up The Territory Of Albania**

Essential relief such relief as they are effective in Albania on site destruction and new elements of the shape of a part in the formation of relief Adriatic Sea ( *Mediterranean entirely* ) level oscillations that occur during the Quaternary ( *lower and that increases ranged between  $\pm 200 m$*  ) fluvial relief, coastal evolution has been extremely effective in relief.

Albania Alpine Type Relief ( *thrusted* ) is dominated by a monoclinical structure with the general framework, and thus parallel to each other in every way to draw attention to rivers, streams, continues to subsekan valley floors.

These rivers ( *Drin, Mat, Ishmi, Erzen, Shkumbin, Seman, Vjosa streams* ) as reflected in the plain beyond the places disappointment slope corresponds to the former coastline. In this context, the coastline plains, fluvial sediments and the Adriatic Sea, the shallow sections of marinal Fusūs found as a result of filling.

***Albania's Adriatic Sea coast to the east coast line towards the old boundary line separating the Plato and dead cliffs above the plain concluded that overlap.*** Here, the presence of marine coastal terraces, as well as veranda steps that have become apparent reveals the importance of the issue.

All of them certainly done on-site field observations to gather more information. Thus, changes in the level occurring in the Mediterranean coastal Quaternary fluvial relief and will be laid down in detail the effects of relief.

### **Albania Deltas and Delta Lakes**

High mountainous areas of Albania into the peaks of the starting places in the upper flow from the lush, abundant rivers flow, on the other hand to the floor while maintaining the one hand, the activities of erosional materials for themselves, cut off from the base level ( *the final level of al-Qaeda* ), the event carries the Adriatic Sea and the Sea 'Deltas have been formed over time by filling in the shallow places.



As known important elements of Delta coastal relief. Delta needs to be addressed on its own relief.

The north of Albania ( *Shkodra Lake South* ), South ( *the part which is up to the border with Greece* ) in the correct part of the coast, with some exceptions a typical Dalmatian Coast Relief 'I can say that what the owner. The above-mentioned elements of the current state of the shape with some exceptions, the coastal deltas close to the part, older than alluvium Aid structural characteristics ***Type Dalmatian Coast 's*** indicate the presence

We figure in the formation of deltas, which are similar to each other and mentioned about some of the features we will only briefly. In this context shall be on the delta lagoon lakes are also included..



### **Delta Drin**

Several dams have been built on the Drin River, Deep Throat decrease in the slope of the valley after the near Shkodra, which today is a plain view, however, the recent geological Mazin ( *Quaternary* ) Deniz'inin Adriatic shallow pile of material brought by the environment, for the time was the formation of the delta.

In addition, the Drin River Delta 's in the formation of Lake Shkodra to the waters of the rivers that discharge Cijevne Moraca and yet without formation of Lake Shkodra and brought before the waters of the River Drin, such as the ingredients, and even the media have carried with it the shallow Adriatic Sea.

The old coast line, the western part of Vau i Dejes Dam was going through. Today, however, these regions close to the western limit of the alluvial materials by filling Montenegro also made to account for the enormous agricultural activities on the delta was formed. There are a few very shallow lagoon on the Delta store. Today, the seam directly connected to the sea is a Luners Lake Lagoon.

### **Mat Delta**

Albania's largest delta.

Matt has a role in the first degree in the formation of the delta of the river. River, a tributary of the River Drin and Mat from north to south of the main mecrainin Ishmi River, which drains water from the effects of Tirana has been Plain Basin.

On the delta of the River meanders movements today by Matt formed his own Adriatic Sea waters has been released.

Mat Delta, located Ishmi stream discharged by the Sea of Shengjin ( *south - north direction* ) 27 km long in an east - west direction and 15 km wide.

On the basis of a large number of delta marsh Away ( Gjole, Negles, Laçit, Trenshit, Burdutojes bogs ) are available. In addition, the Adriatic Sea coast beach areas ( one of the Mat River in the north and the other south of the ) two separate (and Stom Stako Loshit Ishull i ) There is a lagoon lake.

Delta Plain in the south of Tirana ends opened and marshes.

### **Delta Erzen**

Erzen played an important role in the formation of Delta River. In addition, the formation and development of the smaller streams have been effective in the Erzen Delta. Delta has created a bulge towards the sea.

Delta swamps are seen on the floor in some places. Lagoonal lakes is also relatively small boyutludurlar mevcûd. These are the north and south of the river Erzen. Coincides with the northern parts of the settlement of a few others in Durres.

### **Seman Delta**

Albania's largest delta, Delta Seman. Delta, north - south direction length of 70 km, the widest part of the E - W direction 45 km.

Seman Delta, Albania, three ( 3 ) major river in the Shkumbin, Seman, and Vjosa Irmakları'nın is a result of the joint effects. Thus, Delta Seman, mixed, or characteristic of a delta complex.

In fact, Shkumbin, Seman, and they are considered separately each of the specific Vjose the delta streams mentioned. However, they are united with each other ( *to cover both alluvial deposits formed by combining cones, etc.* ) could be called due to their mixed Deltas Deltas or fan.

Administration in the name of Delta Seman, Seman river between the other two rivers, or due to the fact that in the middle.

From the end of the plateau is quite low on the delta between Elbasan'in SW Adatepe'ler, swamps, lakes, fields, and has a lagoon.

There are two large lagoon lake Seman Fan Delta. The first one and the one Karavastas north of Lake Lagoon, and the other Vlose River Lagoon south of Vlore Nartes lake in the northwest of settlement. Seddeleme the waters of this lake and canals, was brought under control.

Separately from other Vlores dark lagoon lake deltas located south of the Seman.



### **Seman Delatasi ve Karavastas Lagün Gölü**

#### **Albania's High Mountainous Areas**

##### **Part of the Summit Lakes**

Albania's land about 2 / 3 percent is high mountainous areas and plateaus. These mountains, the Alpine orogenic system is included.

North Albanian Alps mountains in the north of the country, east - southeast of areas known as the Dinaric Alps.

Including the North Albanian Alps and the mountain ranges, as well as strings Dinaric Alps and the mountain peak elevations of 2000 m, including the above 2800 m in some places to the approaching.

These geological formations in which the structure of mountains, elevation values, examination requirements, as well as the recent geological past and present-day

climatic conditions, glasyasyon, karstifikasyon gives important clues about the formation of high-mountainous lakes, soccer fields.

However, mining and troughs created by human intervention in the lakes may occur for other reasons known.

No doubt we have enough detail to obtain baseline data and field observations are not found. Have shortcomings. We hope to resolve them in time. Maybe I could have made this region has detailed studies. We shortcomings data base in the light of our experience and knowledge gained over the years, though many would like to make statements will be incorrect.

### **Glacial Lakes Peak Regions of the Alps in Northern Albania**

These were examined in two separate section.

a) Maja Ismet ( *Tuesday Bruca* ) mountain ( 2558 m ) 's and Montenegro ( *Montenegro* ) facing north towards the border areas of peak glacial and periglacial relief ( circus, ... ) can be seen in some aspects. Mountain, near the border with Montenegro, a cirque lake where you can Jezerces believe that the Lake. Likewise;

b) In northern Albania, Kosovo border Gijeravica / Deravica Mountain ( 2656 m ) peak Doberdol parts of the lakes ( *as the case of a couple* ) and Sulbices lakes ( *more than four times the number of* ) in the lakes of glacial origin are included. Without a doubt, relief of the Alps alone in Northern Albania circus / cirque lakes, but a variety of glacial and periglacial relief.

### **Glacial and Periglacial Relief the Shar Mountains**

Shar Mountains, Albania - Macedonia - Kosovo border represents a significant relief. My opinion, it would stop, glacial and periglacial relief sections of the Shar Mountains, the summit is developed. Prizren (Kosovo) to the right parts of the southwest slopes of the mountain peak nive - karstic relief constitutes a dominant çukurluklarının seen.

It is clear that in some parts of sections of the summit of the mountain lakes of the circus! However, all of them can express done on-site land surveys and will return to light.III - In the mountains, Dinaric Alpine system

### **Lakes at the Peak of the Dinar Alpine Mountain System**

a) Maja e Kunora e Lures Mountain ( 2256 - 2121 m ) lakes

Southwest of the summit of the mountain in question coincided with the mountains of Shar kesinimde north - south direction, a linear array of them on the line in case the fact that there are seven different lakes, or suggest the presence of a fault or dolinlerin per layer.

b) The Lakes In The South Of Maja E Kunora Lure

Mount Elevation values of the peak areas of the lakes names given below 2101 m. Named here, seven (7) There is a separate lake. These include;

-Dhive, - Kolo Madhit, - Shlahurges, - Bataces, - Kasrus, - Balgiat, - Matt lakes are included.

Lakes clustered character of the summit is a dome, and perhaps there evidence that the cone of the volcano. From the slopes of the peak of the dome or cone of the volcano mentioned in a radial drainage is dominant.

c) Maja e .... the further south, it is an independent, which is a Bulgize Mountain ( 1871 m ) peak part; - Skenderit, - Dunav, - Berahe,-Sopolit,-sopose are referred to as lakes.

The slopes of the Bulgize mountain walks towards the summit is dominated by a radial drainage.

d) Shebenikut Mountain (2253) coincided with Albania, the east and north-west of Lake Ohrid part of the summit; -Sheberiku, - Rajca are known as karst lakes.

e) The lakes called Madh and Lukoves Lakes in the west of Ohrid lake

f) The peak of Mount Valamar sections (2375 - 2241 m) in;- Valamares, - Lente,-Belash, - Luedhed e Selces are known as lakes.

Parts of the slopes and skirt walks towards the summit of the Mountain-mentioned radial drainage is dominant.

**The Ancient Off - shore i slands**

**The Island in the Southeast of Shkodra Lake**

Drin River, Adriatic Sea, is flat, which is the primary mouth at the altitude 205 m from Dam Island is located in the southeastern part of Shkodër in a residential area.

Drin River, which is today referred to an Island Hill property passes south of the island. Previously, it appears that the North shore of the correct flow through the Shkodra Lake. Perhaps showing the flow from both sides of the former island.

### **The Islands, At 20 Km South of Shkodra Residential Area**

Northwest - southeast direction, in the form of an ellipse, the form of ridges, hills Kuesta Relief characteristic of the island.

The summit elevation is 545 m, 387 m to the southeast gradually losing altitude, ... Maja e Zeze (seam Kakarriqit) Ada Hill and further north parallel to the peak heights of the 383 m, 316 m, 375 m, Ada Hill, which is located in Fush'e Barbuilushit is. These two long flat base of the islands is a cross-Sübsekant Depression to today vorret with financial Collage is Shkreli lakes and bogs. No şubhesiz they are in all remaining pockets of Adriatic Sea.

### **Kodra e Shkallese Gardhe Island in the northwest of Tirana**

The summit elevation 297 m, this island is in an extension of the right Rodoni Peninsula, east and southeast.

Rodoni Peninsula (174 m) in the northern and southern shores of the falezlidir. Likewise, the extension of such a low plateau to the southeast peninsula and character. At the same time this is an erosional surface of the leveled with an average altitude of 200 m. The plateau east - Northeast cliff overlooking the coast and the dead faulted state. Represents the oldest cliffs off the west coast was also destroyed.

Koder Plateau west to the east of the delta plain, a plain tectonic origin (Tirana Valley) is located. Albania's capital Tirana is located in the southeastern end of that plain at the foot.

Southeast - Northwest trending Tirana Subsequent Depression plain corresponds to a faulted. Plain at the foot extension to the northeast, Rodoni Matt from Misaligned peninsula is connected to Delta Plain.

### **Island in the northwest of Durres city**

The summit elevation 186 m, this island (goods, Durresit) 's west coast rocky and faulted. Erzen east of the Delta swamp is connected to a field.

### **The Island at 20 Km South Of Durres City**

Vacated portion of the north of the mouth of the river waters of the Sea of Shkumbin Adri SE-NW extension, there is an island in the ancient Near altitude of 250 m. Today, this is known as Lagji peninsula.

## **Elbasan Islands**

Elbasan'in southwest of one of the important cities of Albania, close to the Adriatic Sea, where a Adatepe today, but a thing of the past close to the island of geological apart in a north - south direction are flat ridges. Elevations between 250 -300 m, this Adatepelerin (Divjake and other islands south of it) is limited circles alluvial formations are in the plains. Thus, the appearance of these hills with almost plain floor.

## **The Islands in the South of Fier Allocation Unit**

They are an island to the north and south of the river Vjosa. Likewise, these islands mevcuddur smaller islands. North - south direction behind these manmade islands, a Adatepe coastal state today. Does not exceed the maximum elevation of 300 m.

On the other hand Vjosa River north towards the southeast of the island of Fier different sizes, three (3) There are separate island. With no doubt, they also state in its present form as an Island Hill.

## **Bibliography**

SELÇUK BİRİCİK, A. – 2011 : Vardar Basin. International Balcan Annual Conference. Macedonia – Skopje. IBAC 2011 May 9 -13, Proceeding Book. Macedonia.

ANONYMOUS: Chrome in Albania. 64 sayfa tutarında özel rapor.

TREX RESOURCES LTD. 2007: Mirdita Project, Puca a Mirdita District, Abania.

- Geology of Albania,

- General Regional Stratigraphic Columu. For Mirdita – Pindos Zon,

- Idealized Noranda – Type VMS Deposit Model,

- Centrale Mirdita Property Stratigraphy and Minerlization.

[www.wikipedia.org/](http://www.wikipedia.org/) Lake Skader, - Lake Ohrid, Lake Prespa

[www.shkodra.gov.al/hkoder](http://www.shkodra.gov.al/hkoder)

## **Maps**

Physiography map of Albania

<http://upload.wikimedia.org/wikipedia/commons/1/1c/Albania, Map of Albania.>

Surficiae geology of Europe (scale: 1 / 7.100.000).



Wetlands of Albania (scale: 1 / 350.000), Ecat – Tiran.

Albania Map. (Scale : 350.000)

Tectonic Map of Albania.

Topography Map of Albania with Contour Lines