

## SOME SPATIAL DATE REFER TO ALBANIAN MOUNTIAN ZONES REGARDING ON HUMAN HEALTH

**Bilal DRAÇI<sup>1</sup> and Pal NIKOLLI<sup>2</sup>, Albania**

**Key words:** mountain areas; mountain climate; medical geography; human health; natural resourses; tourism

### SUMMARY

In this paper we will be given some assessment about potential of mountain areas to the Human Health, refer to date of international literatures and some cases from Albania as well, mountain areas like: Qaf-Shtama; Thethi; Voskopoja, Dardha and so on.. about this topic

Even though difficulties of statistical dates in this new field, we can give some considerations and drawing up some conclusions and recomandations as well for Albania

As we know more than 28% of albanian territory belongs to the highlands. So, this is a huge natural resourses, but refer to the Human Health is still less known and profitable.

In general up to now, this topic is involved and practisise in the mountain tourism framework. But just in the few cases this topic is more in special areas than practic, like mountain “*sanatoriume*” in some places, very huge profitable.

In this paper will be given through the diagrams and some comparative cases, potentials and possibilities for the further development in some places in Albania.

### SINTESI

In questo articolo ci verrà qualche valutazione sul potenzialita delle zone montane per la salute umana, che si riferiscono alla data di letteratura internazionali e alcuni casi d’ Albania, si come le zone montane: Qaf-Shtama; Thethi; Voskopoja, Dardha e così via. su questo argomento

---

<sup>1</sup> **Dr. Bilal DRAÇI**, bilal\_draci@yahoo.it

Universiteti i Tiranës, Departamenti i Gjeografisë, [www.fhf.edu.al](http://www.fhf.edu.al)

Tel. +42371488 GSM: 0682279449

Address: RR. Mihal Grameno, Pall 7/1. Njësia Bashkiake nr.2. Tirana

<sup>2</sup> **Dr. Pal NIKOLLI**, palnikolli@yahoo.com

Universiteti i Tiranës, Departamenti i Gjeografisë, [www.fhf.edu.al](http://www.fhf.edu.al)

Anche se le difficoltà di date di statistiche in questo nuovo settore, siamo in grado di fornire alcune considerazioni ed elaborare alcune conclusioni e raccomandazioni pure per l'Albania

Come sappiamo oltre di 28% del territorio albanese, appartiene agli terreni montuosi. Quindi, questo è un enorme risorse naturali, ma se si riferiscono alla salute umana è ancora meno noto e redditizio.

In generale, fino ad ora, questo argomento è coinvolto e applicato nel quadro del turismo di montagna. Ma solo in pochi casi, questo argomento è più applicato nelle zone speciali, come la montagna, conosciuto come "sanatorium" in alcuni luoghi, molto grande redditizio. In questo documento verrà dato attraverso gli schemi e alcuni casi comparativi, potenzialità e le possibilità di ulteriore sviluppo in alcuni luoghi in Albania.

**Key words:** mountain areas; mountain climate; medical geography; human health; natural resources; tourism

## 1. INTRODUCTION

Among the range issues addressed in June 1992, the United Nations Conference on Environment and Development (Rio de Janeiro) pertaining to sustainable development in a document referred to as Agenda 21, is exclusively devoted to mountain regions. For the first time, an official and explicit recognition is known that mountains and uplands are a major component of the global environment has emerged. A summarized version of Agenda reads: Mountains are important sources of water, energy, minerals, forest and agricultural products and **areas of recreation**. They are storehouses of biological diversity, home to endangered species and an essential part of the global ecosystem. Most mountain areas are experiencing environmental degradation. Mountains also represent unique areas for the detection of climatic change and the assessment of climate-related impacts. <http://www.who.int/globalchange/climate/en/ccSCREEN.pdf> -

As a consequence, mountains exhibit high biodiversity, often with sharp transitions in vegetation sequences, and equally rapid changes from vegetation and soil to snow and ice. In addition, mountains ecosystems are often endemic, because many species remain isolated at high elevations compared to lowland vegetation communities that can occupy climatic niches spread over wider latitudinal belts.

In socio-economic terms, mountain landscapes attract large numbers of people in search of opportunities for recreation and tourism. However, the environmental stress imposed by growing numbers of tourists is placing an increasingly heavy burden on mountain resources and, in many parts of the developing world in particular, on local communities. With the rapid

industrialization and population growth has witnessed worldwide, the natural environment has undergone unprecedented changes. While the causal mechanisms of environmental and climatic change are numerous and complex, two factors can be highlighted to explain the increasing stress imposed by human interference on the natural environment: economic growth and population growth.

**Health:** changing climates may lead to new distributions of vector-borne disease for some region specially in the tropic and equatorial zones. A particularly interesting example in the context of mountains may be the positive potential refer to Human Health, regions that are today favorable for the development to this direction.

**Tourism:** over the last 25 years, tourism and recreation has been one of the fastest growing industries worldwide. Tourism has both economic benefits for, and potential adverse effects on, mountain environments and local mountain communities. Changing climates may alter the seasonal patterns of tourism (for example, skiing in winter), and thus the environmental pressures associated with different forms of tourism.

About 26% of the world's population resides within mountains or in the foothills of the mountains (Meybeck , 2001), mountain-based resources indirectly provide sustenance for over half. Moreover, 40% of global population lives in the watersheds of rivers originating in the planet's different mountain ranges.

About 28,1% of Albania territory is considered as mountain areas in which is living not more than 5% of it's population. Some characteristics of mountain climate and mountain areas in general may summarize as below: extremes are the norm; great environmental contrasts in short distances; large variations in short time; high complexity; effects on climates of adjacent regions; make their own weather, influencing on human health.

## 2. METHODS AND DATE BASE

Geographicly, about this topic, we are focusing on four Major Climatic Controls: altitude; latitude; topography; continentality. Even though the complexcity of relations among natural elements and human health, there are some studies particulary for the urban and maritim climate and human health. But almost rarely we can find out studies and publicities about this topic. Some of them needs to be deeply and on other hand some date comes from laboratory date or from expert and training persons like sportsman, alpinists etc, so not from real life.

There are solar radiation, air pressure, density, and oxygen; temperatures, humidity, windy date etc, that influence directly our human halth. But above date doesn't collect and elaborate refer to human health.

That's way, collecting and assessment of these date in our country particularity remain a big problem for studies in the future.

First of all we refered to international literatures and some concret case of neighbourhood mountain areas in order to compare with albanian mountain areas. Meanwhile in Albania there are some date (solar radiation, temperatures, humidity, windy and rare studies focused on this topic. Also lacking of specific date and scientific studies about this topic, we refered to these date some scientific institutions specially to Institut of Geoscientist, Energy, Water and Environment, INSAT and Health Ministry and etc. Consulting with some field specialist particularity with phisician have been helped for some precise and approach contexstualy. Some other date more scientific comes from proceedings, mostly foreigners.

### 3. RESULTS

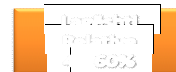
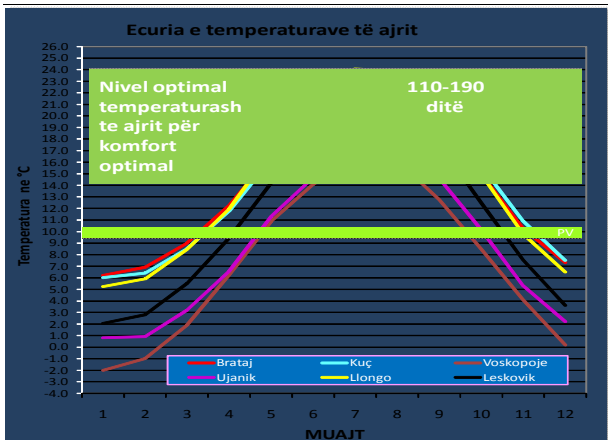
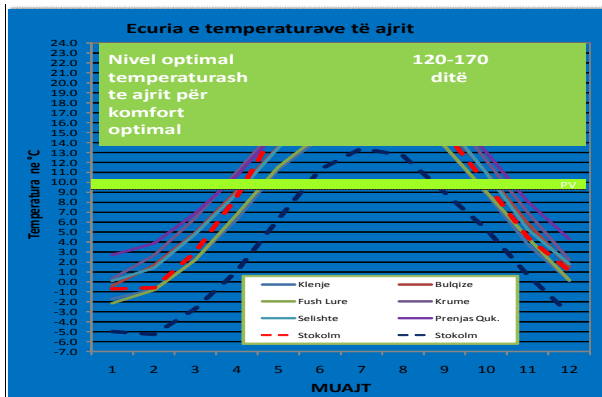
Some main results drawn, based on our researche and refer to international geomedical literatures are below:

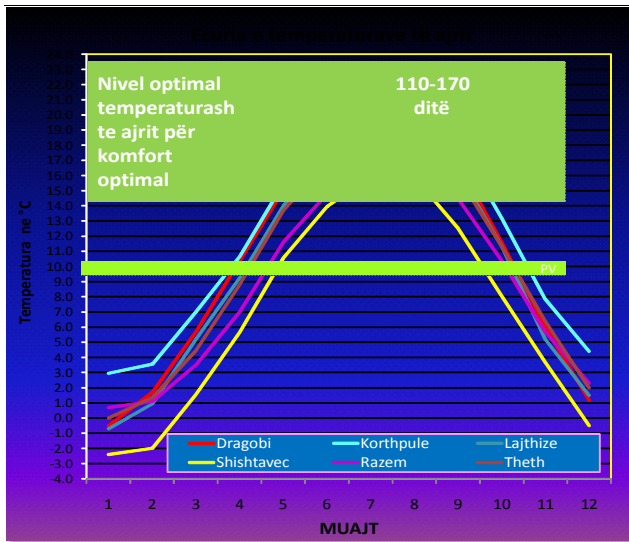
- Mountain climate often is considered as “red globules of blood” climate
- Mountain climate has profound healer effects for human health and it's more profitable than maritime climate.
- Mountain climate effect on endocrine glands
- Physical activity in the mountain climate reduce cardiovascular diseases
- Almost fully scarcity of microorganisms, bacteriums, virus etc, makes these areas without needs for antiviral medicine, so with the minimum or less risk since absent of infection diseases.
- Healthy effects of “mountain solar baths” and other microclimatic elements extend and increase immunitary sistem activity and protectiv mechanism of human organism. Staying in the mountain zones, far from urban pollution has pozitiv effects in immunitary actions.
- Children visiting often heights increase their capacity of mental and phisic rezistence.
- It's well known that the sportsman increase their results where this climate is part of their training for the best results. ( For example, Vllaznia team, for years was training in the Razma and Flamurtari team in the Llogara, both mountain areas..). Also inhabitant dweller of Kaukaz, Andeve, etc, mountain areas has had the longer longevity over 100 years without any specific human disturb.



### 3.1. “Physiological Comfort”

This term using in Medical Geography show a normal and positive situation of human health. It's contain a sinteze of temperatures: normal from 14 to 24 ° C, and very well from 19 - 22 ° C; humidity (40-60 % relative humidity) and windy effect (< 0.5 m/sec.) value. Below in the diagram (tab. 1) is given capacity of some mountain zones in Albania in term of “Physiological Comfort” . (Draçi B; Kraja Dh., Medical and Health Geography. Tiranë 2010)





100-140  
100-140  
100-140

Tab. 1. Diagrama and graphics of some Albanian mountain places refer to “physiological comfort”.

Zorba P., “Klima – pasuri kombëtare, monitorimi, vlerësimi dhe shfrytëzimi i saj për ekonominë e vendit” - International Conference UPT-Tirana, 16.06.2011.

Uncomfortable period mostly is in the winter season, when should have a special attention. Staying in the mountain is recommended to the smoking and lungy disease persons. The “sanatorium” is known earlier for the healer of these disease.

- Increasing the altitude decrease the air pressure, density, and oxygen (O<sub>2</sub>). That’s cause some disturb even the disease. The most well known is the “mountain disease” etc.,

### 3.2. The “mountain disease”

It is known early from the alpinists, but studied later (XVIII century). In general problems start from 1500m altitude and the big disturb start over the 2000m., but depend on the persons. There are in Albania these problematic altitudes. The consequences are shown with organic disturb; physic disturb; and intellectual depression.

### 3.3. Disturb of atmospheric pressure (decreasing of the air pressure, density, and oxygen)

There are not the same, because these can be shown on the lower altitude and often from the baric centers in every places apart from altitude. But for the mountain altitude they are part of each other. Every change of atmospheric pressure caused change in the body volume; liquid level; and electrolytic balance. The consequences are shown in the increasing of blood pressure; general irritation; eyes; in the zones of collection of body water; and channels of areas exchange like; ears etc.,

Also high percentage of humidity in these areas increase the prevalence of chronic bronchitis. (when more frequent are in the North Europe places, but in the mountain areas as well).

A more complex form for the health human is the mountain tourism. There are some receptions and different attractive forms for this reason everywhere in Albania. More frequented are the mountain areas in Korca regions, (Dardha, Voskopoja, etc.); the north Albania (Thethi, Boga, Razma, Kelmendi, Valbona valley, etc.); Dajti mountain; Qaf-Shtama; Llogara in Vlora etc. (see below),



Map1. Albania. Some mountain areas of receptions and different attractive forms for mountain tourism.

But needs more studies for this huge potential in the human health in Albania. We are in the initial studies.

#### 4. SOME CONCLUSIONS

Mountain areas as a huge human and development wealthy can and should apply also to the improving of human health in general and in the treatment of special disease:

- Empirical experience comes since the earlier time but the scientific treatment comes later refer to the case, since XII. Century and so on..
- Today the climate and the mountain ecosystems there are prevention and therapy more recommended for the healthy and some kind of disease.
- Mountain climate for the human health has profound healer effects more than maritime climate.
- Besides the international literatures, the best experience in these aspects comes from some surroundings countries as Macedonia, Montenegro, Serbia, Croatia, Kosovo etc...
- Albania has big potential of mountain areas (more than 1/3 of territory) using not only for the economic development but for the human health as well, at least for 150-160 days/year, refer to “physiological comfort” and maximum 190 days/year.
- Even though the absence of the statistic date, until the '90 years, in some cases, mountain areas in Albania were using not only for the mountain tourism, but directly for the health and disease, like Qaf-Shtama hospital in Kruja district (hospitalized about 200 persons for the seasons), Dardha, Voskopoja etc.... (*INSTAT – Albania*)
- These human-health functions of mountain areas often are part or “asset”, added value of protective zone or parquet with different status
- Possibilities for mountain tourism are well known in Albania, in some places and based on these possibilities we can establish resorts with primary health functions or touristic complex for the different reasons
- Mountain area in Albania offer possibilities for renewable solar, windy and water energy using, full possibilities for bio agriculture product as well
- Implementation of development policy in adaption with environmental principle would be a very important element in better mountain territory valuation and arrangement

## REFERENCES

1. Albanian Science Academi. Albanian Climate. Hidrometereological Institut. Tiranë, 1975.
2. Draçi B; Kraja Dh., Medical and Health Geography. Tiranë 2010
3. Jaho S.& Co., Klimatologjia. Tiranë, 1988.
4. INSTAT - Albania
5. Kalkstein L.S. & Valimont K.M. (1987). Climate effects on human health. Washington D.C. Environmental Protection Agency.
6. Nikolli P. “Sistemet e Informimit Gjeografik”. SHBLU. Tiranë 2011.
7. Tištea D. ect, (1972), Bukuresht. Considerati privind factorii metereologici ai climatoterapieii și calculul frecvenței lor prin procedee mecanizate. Institutul de Meteorologie si Hidrologie.
8. Trebbi Rizzardo, “Teoria del Volo” – Conforme a JAR- FCL, Edizioni AVIABOOKS, 2005, Torino, Italy.
9. Zorba P., ”Klimatologjia” – 2009 © “AlbPAPER”; Tiranë.
10. Zorba P., “Klima – pasuri kombëtare, monitorimi, vlerësimi dhe shfrytëzimi i saj për ekonominë e vendit” - International Conference UPT-Tirana, 16.06.2011.
11. “Glossary of Meteorology” – American Meteorological Society, Second Edition © 2000, USA.
  - <http://www.who.int/globalchange/climate/en/ccSCREEN.pdf> -
  - [www.who.int](http://www.who.int).