



**Τμήμα Μηχανικών Χωροταξίας Πολεοδομίας και Περιφερειακής Ανάπτυξης**

**Diploma Thesis**

**<<Development Potentials of a semi-mountainous**

**Region.**

**The case of Elassona>>**



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## **Preface**

This paper has been carried out in the frames of my academic service and constitutes the beginning of my pastime in a writing level. Spark for the choice of this subject was the economic, social, cultural and environmental investigation of the reality of the semi mountainous region of the province of Elassona. The aim of this paper is to present the aspects of the mountainous and semi mountainous regions, to present the problems that they face and their possibilities and develop policies for their local development.

In this point I owe to thank my family and friends who helped me with the collection of the material, the vital advices and their support and also my professor mister Serafim Polyzo for his important advices for my paper and his unconditional support and understanding.

## Preface

### **Summary**

This paper is separated in two big units (the theory and the data analysis), and has as a main objective to present the problems that the mountainous and semi mountainous regions face and also to examine which are the possibilities of development and how they can be applied.

In the first part of this paper (1st chapter), an effort is being made for a short analysis of the significance of development and of the theoretical approaches in the modern world, focusing more on local development, which is considered to be more efficient for the particular region of study.

In the second chapter, there is a report about the mountainous regions and a more concrete determination of those regions and their particular characteristics, their main problems, as well as the prospects of their further growth, while an important point of this report is also the short presentation of the policy of the European Union and Greece, presenting at the same time important initiatives for the mountainous and semi mountainous regions (LEADER, LEADER +).

In the second part of the paper (3rd chapter), we have the analysis of the wider region of Ellassona, examining its geographic, demographic, financial, social, urban and cultural characteristics, as it constitutes a characteristic example of a semi mountainous region, and finally we have the presentation of the region's possibilities and prospects to develop economically, socially and culturally and the way all these can be accomplished (5th and 6th chapter).

### **Introductory remarks**

The mountainous and semi mountainous regions, constitute an area with multiple operations. Although they are characterized by their productive activities, which are mainly related to agriculture and livestock-farming, their unique natural and cultural elements, present developmental problems that place those regions in the center of interest.

Mountainous and semi mountainous regions are called those regions that their territorial surface is inclined and bumpy, they are separated from ravines or are

covered by abrupt mountainous volumes that create ground creases, are deep and multiple. They also have altitude differences higher than 400 meters and also the region's surface or at least its bigger part is found in an altitude above 800 meters from the sea surface (National Statistic Service of Greece ).

Moreover, they are characterized by unfavorable climatic conditions and by limited possibilities of exploitation of ground and further productive activities, something that causes decreased employment opportunities, decreased incomes, reduction of economically active population and low demographic density. That is to say, we are dealing with rural regions that have their own social and economic identity.

Besides, opposite to any bounds and restrictions that are imposed by the geographic conditions (altitude, climate, ground), the residents of the mountainous and semi mountainous regions shaped in the past "their own ways of life", adapting their farming and veterinary techniques and practices and in general their social and economic organization so that it allows the best possible exploitation of the natural resources.

The Greek country side, part of which constitutes the mountainous and semi mountainous regions, forms an important and active piece of the Greek territory. It presents economic, social, cultural and environmental particularities and difficulties, which should be evaluated and included in the planning of the development programs, so that it can cope with the various challenges of our times.

The significance of the term development along with the most specialized and essential terms, such as endogenous, integrated development and local development, having escaped from the narrow and limited bounds of economic achievements, includes henceforth values social, cultural and environmental, and aims to the integrated approach of the countryside and to the maintenance and promotion of the local economies and societies.

In our days, with the redefinition of the significances of development and the use of programs and policies of integrated local development in Greece and in the European Union, the opportunity is given to the mountainous and semi mountainous regions to improve their economic and social current situation and to apply programs that would promote their growth.

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## CHAPTER 1

### **Meaning and definition of development**

The views that have been formulated regarding development and geographical distribution in a worldwide scale have been thoroughly analyzed and studied. The most commonly accepted view in the modern world regarding to what is development is the following: Increase of prosperity in a society. As a mean to measure that increase, people use the GDP's growth. In other words, the increase of the value of the production level of goods and services. The only thing that is required, is to achieve a per capita income growth, so we can be certain that we improve the prosperity of the society (Sartzsetakis 2002).

The term development is referring to the necessary socioeconomic transformations which lead to the desired state. Therefore, the definition of growth includes not only the goals but also the means by which these goals will be achieved.

The term development includes goals such as equality and also includes qualitative and quantitative features. That is why development cannot be measured only as a monetary value. Therefore, the term development has a broader meaning than economic enlargement, because apart from the economic, social and cultural enlargement it also includes the natural environment.(Markadya and Bardier 1981)

In our days the term growth tends to be misunderstood, given that it is connected to the infrastructure works that are being done in a region. These however, are simply the means for the achievement of the objective of growth and no main goal. It is mainly a multidimensional social process, that involves structural changes in a social shaping. These structural changes can have economic, social, geographic or cultural character. After the war the term development was identified with the terms enlargement and industrialization, while the more suitable indicator for its measurement was chosen to be the GNP (Reppas, 1991). Changes however in the needs and problems that began to appear in already "developed" regions differentiated the developmental models, focusing on the completed integrated development, where qualitative indicators are equally used with quantitative in order to "measure" the development.

Given the definition of development we can result that its measurement should include a large number of indicators. In the 1960's a new type of indicators were developed called social indicators and later on, environmental indicators appeared. The last decades an effort is being made in order to develop a new type called <<sustainable growth>> indicators. An analysis of the way with which a promotional enterprise can cause development in a region began in the 70's, in other words the growth of one region can also cause growth in other regions. This theory was called polar development and directed a big part of the policies of the regional development. The development of a region is believed that could bring more and propagating results in the areas that it influences. (Gore C. 1985). While with the accumulative causality, an accidental change can lead to the flow of makes that will influence the wider space of change. (Myrdal 1957)

The diffusion of development is achieved when the increase of the labor cost, or of the other production factors changes the structure of the costs that the enterprises have. The enterprises import new technologies and seek new regions where the production factors prices are lower and where there are territorial advantages which will allow them to keep on being competitive in the markets and so to be able to sustain their profits.

In that way, the production is differentiated and the installations are multiplied, while it is the form "one product – one factory" that is abandoned. Networks of affiliated enterprises are created that can use cheaper work in the regional districts, to avoid the negative urbanization economies, and finally to profits from the cost differences that exist among the regions (Barquero A. 1992). From all the above, it becomes obvious that the capital is sited where it maximizes its profits, while the work is moved in regions where it maximizes its earnings (Kourliouros H).

The government has the main responsibility for the completion of the development goals and it also has the responsibility for the financial and institutional means that will be used in order to achieve that goal. The government contributes to the creation of large units and infrastructures in financially underdeveloped regions in order to create a stable and permanent employment and also to allow the modernization of the traditional social structures of the rural areas. In order to achieve that goal, the government must change the lifestyle and the social behavior that people in rural

areas have. In addition, the modernization will in the long term result in the increase of the local innovation via investments, increase of income which will also conclude in an increase of product consumption and in an enhancement of living standards. It will also conclude to the increase of the financial resources which will allow the region to develop major development projects regarding equipment and infrastructures. This will lead to the creation of new poles of attraction pulling new production units and entrepreneurial activities in the regions. In order to succeed such an effort there must be a welfare state which will finance and supports such projects and assist the establishment of those projects in the mountainous and hilly areas.

From all the above, we can conclude that the growth is a rather difficult and complex procedure and the use of only quantitative indicators could lead to wrong assumptions and to the misrepresentation of the reality that exists in the semi mountainous regions. For that reason, it is imperative that we should use a combination of different criteria in order to have an overall perception of what economic growth is.

### **Local development**

The term local development isn't just referring to the development of the production factors. It is the improvement of the operating conditions and the quality of life of the local community. It is also the strengthening of the territorial and social sustainability. The term development refers to a procedure of economic growth that is accompanied with long term structural changes.

The term local development should not be compared with the development of a specific special unit, but with the development that relies on local production factors. It is a form of regional development in which local communities, local companies and local organizations are the key levers of the production process. Local factors are not only the geographical and physical characteristics of a region but also the sociocultural characteristics of local production that involves in the development procedure. That is why regions with disadvantages are possible to grow, with the aid of the know-how and the entrepreneurial activity that local factors establish.

Local development can be considered a process of economic growth and structural changes that leads to the improvement of the level of life of local population and to

which they can be distinguished to the following dimensions (Goffey and Polese 1985):

- ✓ the economic dimension, where the local businessmen use their faculty in order to organize the local productive factors in satisfactory levels of productivity, so that they are competitive in the markets,
- ✓ the social-cultural dimension, where the values and the local institutions constitute the base of the developmental process, and
- ✓ the political-administrative dimension, where the territorial policies allow the creation of a local favorable economic frame protecting it from the exterior effects and promoting the growth of local dynamics (Barquero A. 1987).

However the approaches that exist for the local development are two: a) the sectoral approach of the problems of space and their confrontation and b) the integrated development that takes into consideration the space dynamic, with acted recipient the people and final objective the local prosperity and the improvement of their level of existence.

Regarding the first approach, a concrete sector or certain sectors of local economy become recipients of interventions and constituting motive force so that they give impulse to the growth of other sectors of economic local action too. Regarding the second approach, it aims to the integrated development and it targets all the sectors of the local economy which shows dynamic development prospects.

The most modern scientific approaches concur to the fact that the economic development of a region is a key factor for the region's attractiveness and competitiveness (Chershire and Gordon 1998). Local development regards a large number of factors which support and strengthen the local economies. According to the World Bank (2001) local development is an effort made by people in order to achieve economic growth which will result to both economic benefits and better living standards for the society's members. Furthermore, local development helps local government, local private sector and local nonprofit organizations and gives them the chance to cooperate in order to achieve an overall development which will make the

region more competitive. In an international level, there are many actions that the regions can take in order to improve their local economic growth.

These actions can be securing a good entrepreneurial environment, supporting the small and medium businesses, encouraging the development of new entrepreneurial ventures, attracting foreign investments based on the characteristics of the region, investing to the improvement of the human resources or finally trying to create clusters of specific productive activities (Metaxas 2008). Each one of these actions described above focuses on specific areas of growth in order to evaluate the region's advantages and disadvantages so as to create the appropriate development plan which will fit to the region's needs. Local development can be seen as a process of economic growth and structural changes which will eventually lead to the improvement of the living standards of the local population. Local development has many aspects. There is the economic aspect where local businessmen try to use their skills in order to organize the local production factors so as to become competitive to the markets.

Apart from the economic aspect there is also the sociocultural in which the values and the local institutions are the key foundations of the development procedure. Finally, there is also the political and administrating aspect in which the region's politics create an economic context protecting the region from foreign effects but also promoting the development of local possibilities (Barguero A. 1992).

## CHAPTER 2

### 2.1. Semi-mountainous areas in Greece

Semi-mountainous, as well as mountainous areas in Greece, constituted and still constitute a neglected part of activities. The National Statistic Service of Greece defines as semi mountainous the regions of which the territory locates on the foothills of mountains, or their area is divided in plains and the mountains with an altitude of approximately 800 meters above the sea level. Mountainous, are the regions with an altitude above 800 meters or their terrestrial area is inclined and rocky (Greek Statistic Service).

They consist of gorges or mountain masses which create altitude differences over 400 meters high. The low mountain of an area meaning the accessibility of an area depends not only on the altitude but also on other natural characteristics such as the climate conditions, the survey and the morphology of the area. Those characteristics define the level of accessibility of an area. Therefore, the level of accessibility of an area implies the social, financial, political and the cultural isolation of the area. It is a fact that rural areas survive with the aid of foreign compensations that are given to them according to the European politic, in order to continue the production of their goods.

The European Union established the term disadvantageous or flawed areas and provides those areas with funds trying to even the differences between those regions and the regions that are more benefited. Nowadays, agricultural policy has changed, promoting the differentiation of the rural economies, in order to deter them from depending on the rural incomes. There are special national and European funds which are used as a mean of development for those areas. The most important asset that those regions have is their “natural” beauty. That beauty can be exploited, with the use of the development policy, by the tourist businesses.

However, the consumer society that social media promote as the only lifestyle that leads to prosperity has led to the depopulation of the mountainous and semi mountainous areas in Greece, causing the abandonment of the farmlands, the erosion of the land, the accumulation of unemployment in the urban centers, the ageing of the rural population and other negative effects. On the other hand, regions that attract

tourist investments have different fate. An example of tourist investment that is widespread in Europe is ski tourism that attracts foreign people to the region and aims to the growth of the local income. In addition to the most European mountainous and semi mountainous regions, those in Greece have an additional advantage. They have an abundance of natural wealth meaning the great number of wild plants and animals that exist. In Greece, semi mountainous areas were abandoned during the mass immigration period not only abroad but also from villages and small towns to city centers. That period lasted three decades, from 1950 to 1970. As a consequence, urban population grew and rural population declined from 1970 and forth. That is the reason why the farming sector in the mountainous and semi mountainous areas is declining over the last 15 to 20 years (Karanikolas, Martinos 1999). Young people are forced to leave their villages or small towns, since they don't have the same opportunities that young people have in the big cities (opportunities considering work, education, art, entertainment, sociability). This situation is amplified through the social media which highlight the urban lifestyle of mass consumption as an ideal lifestyle. For that reason, the only people that are left in rural areas are mainly older people over 65 years old (Ministry of Environment and Public Works 2000).

## **2.2. EU growth strategies for semi mountainous regions**

The importance of local development has been acknowledged from the European Union and its state members. After the structural changes in the early 80's, European Union and its financial institutions focused in local development. Special programs have been created for the enlargement of local markets and also for the promotion of innovation. The main goal for such financial programs for the development of semi mountainous areas, must be the establishment of effective measures that will support and improve the agriculture and farming, deterring at the same time the population and especially the young people from moving to cities by creating motivations for them and also increasing the entrepreneurship and the environmental protection. With the help of the financial institutions and other researches, the European Union managed to create efficient tools for the diffusion of know-how, providing financial and technical help, organizing networks for the diffusion of innovation and also for the education and training of the human resources. Those tools have been a mean for supporting the local development, especially in mountainous and semi mountainous areas that have greater need to exploit the EU financial resources.

The EU policy for local development primarily starts by focusing to small and medium enterprises (SMEs) from 1971 with a study of the Economic and Social Committee (ECOSOC) for the role of the SMEs in the European Union. The SMEs is considered to be means of innovation, better equipped and able to manage economic difficulties. Through that policy SMEs increased their presence in the international markets and were able to export their local products. The local enterprises associate with the international markets not according to the developing level of the region that they located but according to the quality of the products that produce.

The European Social Fund finances the training of young, unemployed and women that wish to enter the labor market, the recruitment of young people under the age of 25 or people that have been unemployed for a long time, to new jobs. Those measures are carried out in local level trying to mobilize the local workforce. The European Regional Development Fund that sponsors via the government financial funds focuses on the exploitation of the local workforce. Also, the European Agricultural Guidance and Guarantee fund strengthens actions considering the agricultural sector and specifically the local development in rural areas. The EU focuses the attention to the areas facing the biggest problems in order to locate the factors that are determinants for the improvement of local development. That policy includes integrated development programs, mobilization of local authorities, the promotion of innovation and the use of venture capitals. The basic measures that are being applied in the semi mountainous regions are based mainly to the increase of the motivation for investments through socio structural changes and through integrated programs (INTERREG). Some of those programs are the Integrated Mediterranean Programs which target to the development, the support of employment and of incomes of the southern regions of Europe and especially Greece and were completed in 1990. The National Development Laws which provide motivation for investments in agriculture, stock farming and fishery and also the Community Support Frameworks and the Regional Operational Programs which also support and help the development of the agricultural sector. Another European program that concerned the cultural development was LEADER (Liaisons Entre Actions de Developement de l' Economie Rurale) and focused on actions for the development of rural economy. Especially for Greece that was a program that fitted the rural regions because of their rich heritage considering that those regions have strong tradition, history and cultural identity.



Local culture can be a major advantage for growth and the cultural development driving force of the social development of a region. Rural areas can develop financial activities which create new work opportunities based on the wealth of the region's identity and its cultural heritage. The actions of that program have 4 key objectives. The promotion of the local identity of the region, the exploitation of the local cultural heritage, the creation of cultural infrastructure (cultural museums, cultural centers) and finally the promotion of cultural activities (events or festivals). Those objectives will lead to the improvement of lifestyle, the activation of the local initiatives and the increase of the attractiveness of the mountainous and semi mountainous regions.

### **2.3. Development policies for semi mountainous regions in Greece**

The development policy for semi mountainous regions in Greece focuses on the promotion of the winter activity tourism (ski centers) and the promotion of alternative forms of tourism such as cultural tourism, naturalist tourism, sanative tourism (canoe and kayak, rafting, mountain bike, hiking, climbing) and religious tourism. Those forms of tourism in Greece are described in the Background Spatial Planning and Sustainable Development and also to the Mountainous Areas Development Plan which separate mountainous and semi mountainous regions into 3 categories:

-Relatively developed regions, which include areas with enough permanent population and sustainable economic structure, economies that are based on the stock farming, tourism and holiday tourism, forest exploitation, traditional industry and the Community support policies.

-Dynamic regions with undeveloped resources, which includes areas with descending population and deteriorating economic base and abandonment of the agricultural sector

-Interior regions, which includes areas with almost total population abandonment without the presence of agricultural resources and with environmental degradation.

(Ministry of Environment Planning and Public Works. 2000, [www.minenv.gr](http://www.minenv.gr))

## Summary

It is obvious that a certain policy of local development must be established for the underdeveloped areas according to their special characteristics and advantages. Although, each region has its own characteristics, there are some, that are common in every region. Those characteristics are the low living standards, the low productivity level, the large proportion of unexploited natural resources, the shortage in capitals and the dependence of the primary sector. The problems that mountainous and semi mountainous areas face are due to natural limitations, therefore they limit the development of the financial activity. The high altitude doesn't allow the use of machines for the production causing lower productivity. The low productivity causes income reduction and the migrations of the population to the big cities. The population starts to deteriorate differentiating its composition. The absence of motivations prevents the adoption of a new production mode, especially in the restricted areas where the alternatives are fewer. The long distance from the decision making centers limits the possibilities for rural areas to face their needs. The cost, not only in time but also in money for the transportation of basic products is extremely high, due to the lack of transport infrastructures that don't allow the transportation of the products that the regions need.

As priority solutions for local development must be the improvement and the accessibility of rural areas with the improvement of networks connecting those areas with the big city centers, the improvement of the infrastructure of the production units and the promotion of the local initiatives. In order to achieve local development, government must deal with all those problems that rural areas faces and reveal the potentials that those areas have. The center of development mustn't be a single sector but the total exploitation of the comparative advantages of all the sectors of the region (economy, culture, society, infrastructures). The exploitation of the natural resources should be the key goal to achieve local development. Every rural area, mountainous and semi mountainous, is gifted from nature with a vast amount of agricultural resources. Its abundance in unexploited resources, natural and cultural, gives the opportunity for the growth in the area's productivity.

The creation of agricultural infrastructure is a very expensive procedure that requires high fixed investments and high capital expenditures. However, when it is achieved, it

improves the production and increases the productivity of the area. That is why agricultural infrastructure is being provided from the government or the government finances a large proportion of that infrastructure.

The attraction of investments in rural areas, the improvement of means of transportation, the new technologies and communication technologies are factors that restrict the disadvantages from being located far from the city centers. Those factors limits the distances between regions, populations and activities (between the place where the product is being produced and the place where it is being sold). That means the reduction of the transportation cost for the rural areas and by that, those areas wouldn't have to lack basic supplies.

The training of young people who live in semi mountainous areas through special seminars is crucial especially for the primary sector. With the training and the specialization every farmer stops using only the traditional production ways. He uses new production methods, combines alternative crops, makes his production more competitive and uses new technological equipment. The use of new technology in production, machinery, product processing systems, has immediate and visible profitable and effective results. The use of all the above improves the quality and productivity of the products, also reducing working hours. Moreover, it increases the incomes providing better living standards for the people. The primary sector and its products becomes more competitive as the transportation cost lowers. The existence of cooperative activities is also essential because they provide working relationships with neighboring activities creating new jobs and allowing the exchange of information between one another.

Apart from the creation of an overall financial and social environment, the politics concerning the local development must be conducted through specially designed programs for each region they are going to apply in order to solve the particular problem that this region faces and satisfy the region's needs.

The European Union acknowledged the importance of the support of the regions that face problems and so the content of the Union's policy contains all sectors of economic development. The policy concentrates to the environment, culture, commerce, tourism, transports and communication, training and other related activities. It also promotes innovation from local groups and local initiatives.

Those programs are financed by specific funds that have specific actions. Regarding the Union those funds are the European Social Fund, the European Regional Development Fund and others. Within the country the main responsible for those funds is the government and its ministries.

However, due to the diversity of the semi mountainous and mountainous regions the politics that have been used didn't have the results that all expected. Some programs like LEADER focused in local culture, the preservation of tradition and the exploitation of the cultural heritage whereas other programs like INTERREG focused on the promotion of cooperation between rural areas and to the launch of common action between those areas.

It is a common fact that regions with the same geographical characteristics face difficulties applying to the same programs for their development. That is because they have different composition and education of population. The solution for that problem in order to achieve local development is a way for those regions to display their different characteristics.

The best actions for that problem are:

- The financing of local businesses
- To provide services in local level
- The improvement of the infrastructure in services and communications
- The strengthening of local entrepreneurship
- The creation of sales networks

This way each region displays its special characteristics and secures that the programs will fit to its needs in order to achieve future local development.

## CHAPTER 3

### Analysis of the region under study

#### 3.1. Basic geographic and administratively characteristics of the region

The Region Thessaly, in which the Municipality of Ellassona belongs possesses strategic place in the main developmental axis of country. It is the fifth in extent and third in population region of Greece. It has total surface 14.037 square kilometers (percentage of 10,68% of the total extent of the country) and permanent population of 740.115 residents (inventory 2011) with density of population 52,73 res./sq.km. The territory of the region is at 45,6% mountainous, at 17,4% semi mountainous and at 37% flat



In Thessaly five urban centers are located, that is to say settlements with population over 10.000 residents. The economic physiognomy of the region continues today to be based on the rural sector with important problems (lack of sufficient quantities of water for the irrigated cultures, small size of agricultural exploitations, lack of complementarities in animal and plant production, low educational level of farmers, organizational lacks in the circuit of production, transformation and marketing of products that are combined with lacks in the infrastructures), while the secondary sector is respectively characterized by the geographically anisomeric industrial growth and his declining attendance in the crude product of the region, the lack of infrastructures, the lack of program in the arrangement of modern methods of production.

As for the developing tertiary sector it is marked that in its composition prevail mainly the commercial activity and the sector of various services, mainly the services of tourist service and those that arises from the operation of the University of

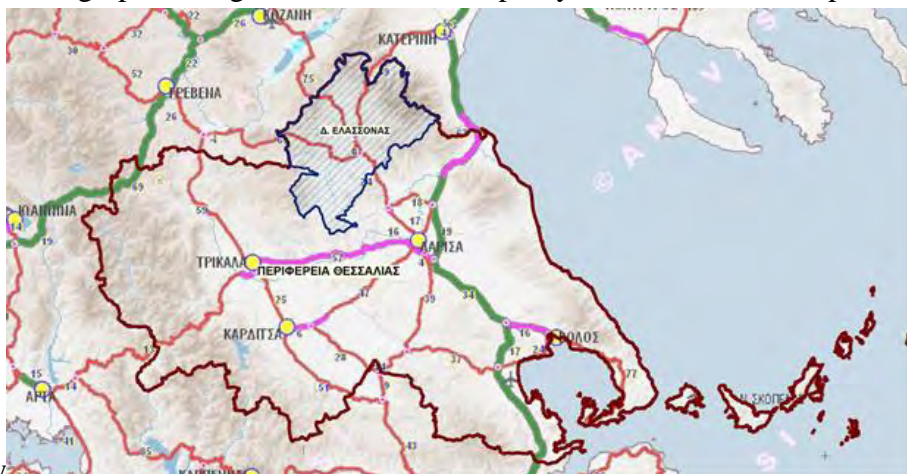
Thessaly. The trade is assembled in the capitals of the prefectures and mainly in Larissa and Volos that constitute the most important export centers of the prefecture. In the prefecture of Larissa the tourist movement is connected closely with the commercial and remaining tertiary activities of urban center of Larissa, the seasonal residence, as well as with the mountainous tourism of mountainous volumes of Down Olympus and Ossa. Important problems of tertiary sector are the lack of supporting infrastructures of (mainly road network), regional markets, standardization and modern organization of marketing of the products.

In the region important natural ecosystems of international value are located, more specifically areas "NATURA 2000", aesthetic forests, landscapes particular natural beauties and preservable monuments of nature (Pilion, National Marine Park Alonnisoy, National Drymos of Olympus, Valley Tempwn, and other.). From the historical and cultural view the region of Thessaly was settled in the beginning of Pre historic season (Medium Paleolithic season 100000 - 50000 B.C) and a lot of Neolithic settlements have been found many of which have been excavated. In the north east corner of the region is the mountain Olympus, the holy mountain of ancient Greeks, the residence of Gods.

### **Municipality of Elassona**

The municipality of Elassona geographically occupies the north-western department of the prefecture of Thessaly and its seat is the homonym city of Elassona. The Kallikratian municipality of Elassona resulted from the conjunction of preexisting municipalities Antixasion, Elassonas, Livadiou, Olympus, Potamias, Sarantaporoy as well as Communities Verdjkoysas, Karyas and Tsaritsanis. Thus, it is globally constituted by 9 municipal Units and 60 settlements. According to the data of the Greek National Statistic Organization (inventory 2011), the total permanent population of the municipality amounts in 32.121 residents, while its extent amounts in 1.568,14 sq.km.

Picture 2: Geographic integration of the municipality of Elassonas in the prefecture of



Thessaly

The municipality of Elassona is characterized by intense terrain, given that in the bigger percentage (78%) it is characterized mountainous (38%) and semi mountainous (40%), while few only extents are flat (22%). In the region lies the taller mountain of Greece, the Olympus and in particular certain of the tallest tops (Mytikas 2917 m., Skolio' 2911 m., Frangou Alwni 2684 m.). The orographic of the province supplement the mountainous volumes of Titaroy, Kamvoyniwn, Antihasiwn and the hills of Melouna.

The municipality of Elassona constitute unique point of report on the activities of residents of the wider region of northern department of the prefecture of Thessaly. This particularity, which was shaped and developed historical in the base of local conditions, has important social and economic endings in the current existing situation. Particularly, the seat of municipality – Elassona - henceforth has been changed into a transport node of not only local but also supralocal character, since it constitutes a point of connection between the central and the north-western country. It has an appreciable local market which assembles the bigger part of economic transactions of the region and, accordingly, constitutes the center of all local social relations.

Due to the help of developmental programs that is financed by the national and Community authorities, materialize in the wider region of Elassona today investments in various sectors of economy.

The works of infrastructures that are materialized or will be materialized in the city and also in the remaining settlement aim to give in the municipality a modern aspect so it will become an evolving dynamic region that will provide high level of quality of life not only to its residents but also in the visitors.

The municipality of Ellassona presents unique geophysical characteristics and natural beauties. In Ellassona, a lot of appreciable work has been already completed and in particular is still continued also the implementation of many works of infrastructure (sewerage of Ellassona, Biological Cleaning, Station of Transshipment of Litter, replacement of network of water supply, etc). Still, there is an abundance of cultural infrastructures (Intellectual Centre, Municipal Library, Museum of Natural History, Band, Faculty of Traditional Dances, Musical Faculty, Open Theatre, etc), that renders Ellassona a modern city which can comfortably offer high level of quality of life.

### 3.2. Municipal Modules

Picture 3: The municipality of Ellassona and its municipal modules



The municipal units that compose the municipality of Ellassona are nine (9) in total. In the table that follows are presented analytically the settlements of municipality of



Elassona, per municipal unit and municipal/local unit, as these have been recorded by the Greek statistical service.

Table 1: Settlements of Municipality of Elassona, per municipal unit and municipal/local unit

| <b>Municipal Unit</b>                  | <b>Municipal/Local Community</b>         | <b>Settlement</b>        |              |
|--|--|--------------------------|--------------|
| <b>Municipal Unit<br/>Antixasiwn</b>   | Municipal Community Kraneas<br>Elassonas | Kraneia Elassonos        |              |
|  | Local Community Akris                    | Akri                     |              |
|  | Local Community Loutro Elassonos         | Loutro                   |              |
| <b>Municipal Unit<br/>Verdikoussis</b> | Municipal Community Verdikoussis         | Ampelia                  |              |
|  |  | Varkos                   |              |
|  |  | Verdikoussa              |              |
|  |  | Koutsoufliani            |              |
|  |  | Paliampela               |              |
|  |  | Paliaska                 |              |
| <b>Municipal Unit<br/>Elassonas</b>    | Municipal Community Elassonas            | Agioneri                 |              |
|  |  | Aetoraxi                 |              |
|  |  | Elassona                 |              |
|  |  | Mikro Eleutheroxori      |              |
|  | Local Community                          | Valanidas                | Valanida     |
|  |  | Galanovrysis             | Kleisoura    |
|  |  | Galanovrysis             | Galanovrysi  |
|  |  | Drimou                   | Drimos       |
|  |  | Evagelismou<br>Elassonas | Euagelismos  |
|  |  | Evagelismou<br>Elassonas | Euagelismos  |
|  |  | Kefalovrysou             | Kefalovryso  |
|  |  | Palaiokastrou            | Palaiokastro |
| Local Community Stefanovounou          | Leuki                                    |                          |              |
|  | Stefanovouno                             |                          |              |
| <b>Municipal Unit<br/>Karyas</b>       | Local Community Karyas                   | Karua                    |              |
|  | Local Community Kruovrysis               | Kruovrysi                |              |
|  | Local Community Sikamineas               | Sikaminea                |              |
| <b>Municipal Unit<br/>Livadiou</b>     | Local Community Livadiou                 | Livadi                   |              |
|  | Local Community Dolixis                  | Dolixi                   |              |
| <b>Municipal Unit<br/>Olympou</b>      | Local Community Kallitheas<br>Elassonas  | Kallithea                |              |
|  |  | Petroto                  |              |
|  | Local Community Kokkinogeiou             | Kokkinogi                |              |
|  | Local Community Kokkinopilou             | Kalivia                  |              |
|  |  | Kokkinopilos             |              |
|  | Local Community Lofou                    | Asproxoma                |              |
|  |  | Lofos                    |              |
| Local Community Olympiadas             | Olympiada                                |                          |              |
| Local Community Puthiou                | Sparmos                                  |                          |              |
|  | Puthio                                   |                          |              |

|                                    |   |                      |
|------------------------------------|---|----------------------|
|                                    |   | Brysopoules          |
|                                    |   | Sparmos              |
|                                    |   | Skopia               |
|                                    | Local Community Flampourou              | Flampouro            |
| <b>Municipal Unit Potamias</b>     | Local Community Amouriou                | Amourion             |
|                                    | Local Community Vloxogianniou           | Blaxogianni          |
|                                    | Local Community Domenikou               | Domeniko             |
|                                    | Local Community Magoulas                | Magoula              |
|                                    | Local Community Megalou Eleutheroxoriou | Megalo Eleutheroxori |
|                                    | Local Community Mesoxoriou              | Mesoxori             |
|                                    | Local Community Praitoriou              | Praitori             |
|                                    | Local Community Sukeas                  | Sukea                |
| <b>Municipal Unit Sarantaporou</b> | Local Community Azorou                  | Azoros               |
|                                    | Local Community Geranias                | Gerania              |
|                                    | Local Community Giannotas               | Giannota             |
|                                    | Local Community Lukoudiou               | Lukoudi              |
|                                    | Local Community Mileas                  | Sukia                |
|                                    | Local Community Mileas                  | Milea                |
|                                    | Local Community Sarantaporou            | Sarantaporo          |
|                                    | Local Community Tsapournias             | Tsapournia           |
|                                    | Farmaki                                 |                      |
| <b>Municipal Unit Tsaritsanis</b>  | Local Community Tsaritsanis             | Tsaritsani           |

### 3.3. Municipal Unit of Ellassona

The Municipal Unit of Ellassona includes:

- The municipal unit of Ellassona: it is constituted by four (4) settlements, the Ellassona, the Agioner, the Aetorahi and the Mikro Eleycerohwri.
- The local community of Valanida: it is constituted by two (2) settlements, the Valanida and the Kleisoyra.
- The local community of Galanovrysi: it is constituted by a (1) settlement, the Galanovrysi.
- The local community of Drymos: is constituted by a (1) settlement, Drymo'.

- The local community of Eyaggeljsmos: it is constituted by a (1) settlement, Eyaggeljsmos.
- The local community of Kefalovryso: is constituted by a (1) settlement, Kefalovryso.
- The local community of Palaiokastro: is constituted by a (1) settlement, Palaiokastro.
- The local community of Stefanovoyno: is constituted by a (1) settlement, the Stefanovoyno.

According to the data of the 2011's inventory, the permanent population of the municipality of Elassona amounts in 11.044 residents. Its character is primarily agricultural veterinarian, with emphasis in the livestock-farming, an important manufacturing activity, located mainly in the transformation of veterinary surgeon products, and finally in the tertiary sector (trade, hotels – restaurants and remaining services) in the center of the municipality of Elassona.

The city of Elassona is built amphitheatrically in the foothills of the southern side of Olympus, the tallest mountain of Greece and home of the twelve gods of the ancient Greek mythology. The Elassonitis (or Elassonitikos) river flows through Elassona, which contributes with the Titarisios and flows in Pinios, the biggest river of Thessaly. The river separates the city in two parts, the old city that is built in the foothills of Olympiotissas an old monastery and is named Varosi and the new city that is extended on the right bank of river. The two parts of the city are connected with three bridges and one old stone arched bridge, that constitutes one of the city's sightseeing. A characteristic place name of the region it is the monastery of Virgin Mary Olympiotissas, which is dated back to the 13th century. It constitutes substantially the most recognizable place of the city and at the same time the most important monument of the wider region. Elassona has transport node between central and north-western Greece, linking the prefectures of Larissa, Pieria, Kozani and Grevena. It is located 38 km from Larissa, and 22 kilometres from Tyrnavo, 70 km from Katerini and 78 km from Kozani.

The city of Elassona is the home of the homonym municipality, which includes in total 60 settlements with total permanent population of 32.121 residents, according to the inventory of 2011, and is organized in 9 municipal units totally.

Apart from the Holly Monastery of Virgin Mary of Olympiotissa, there are also other appreciable places, such as the museum of Natural History, the Intellectual Cultural Centre and the museum of National Resistance. Also, one of the most important sightseeing of the region is the old arched bridge in the foothills of Olympiotissas ( of the 13<sup>th</sup> century). Moreover, the lake of Kefalovryso, as well as the path in the forest street from the Olympiotissa to Drymos, constitute parts of the natural and cultural heritage of the town and of the wider region.

### **3.4. Basic Demographic characteristics of the region**

In this part the characteristics of the municipality of Elassona will be examined, that concern the demographic development, the age-related structure (in the total and per sex) and the educative level of residents (in the total of population but also per sex). The presentation of statistical data is being made in level of the municipality but also in individual municipal units, when it is possible, so that the comparative diachronic development– presentation can be seen and the export of secure conclusions on present and future tendencies, as well as on needs of service of population can also be secured. For the above-mentioned needs, we have used the statistical data of the Greek statistical service from the census of 2001 and from the recent census of 2011.

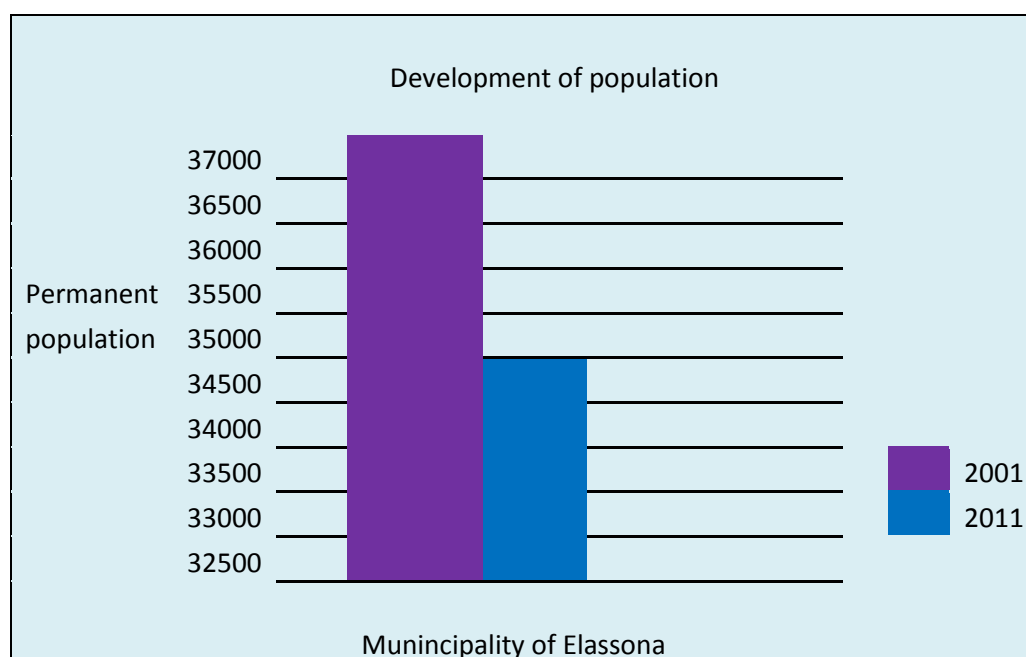
#### **Population**

According to the data of the last censuses, the population of the municipality of Elassona presents a reduction of roughly 7%. Over time, the population of Elassona appears in the following table and is portrayed in the diagram that follows. In 2001 the permanent population of the municipality reached the 36.679 residents, while the next decade it was decreased by 2.500.

Table 2: Diachronic development of the population of the municipality of Ellassona (2001-2011)

| Municipality of Ellassona | Permanent population |        |
|---------------------------|----------------------|--------|
|                           | 2001                 | 2011   |
| <b>Ellassona</b>          | 36.679               | 32.121 |

Diagram 1: Diachronic development of population of municipality Ellassonas (2001-2011)



The table that follows presents the demographic data that resulted from the censuses of 2001 and 2011, not only for the municipality of Ellassona but also for the municipal units. The bigger percentage change presented the municipal units of Sarantapo and Ellassonas. The municipal unit of Verdikoussis presented positive change of 6,02%.

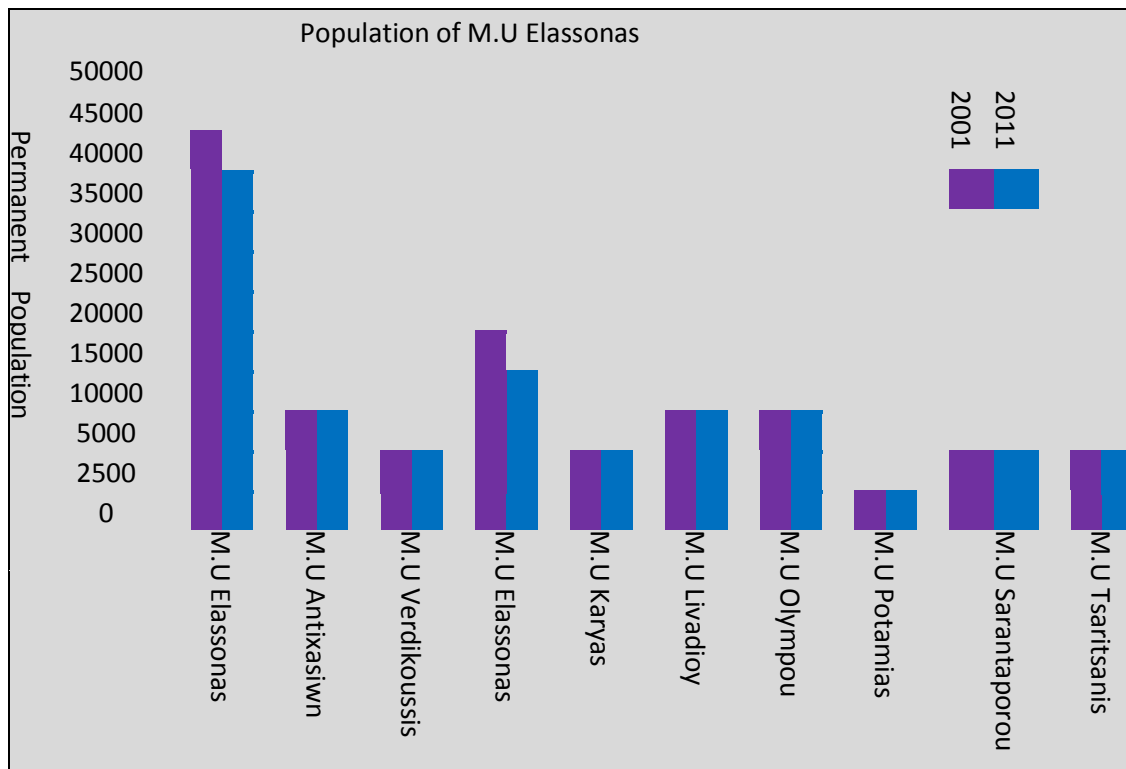
Table 3: Development of population of Municipality Ellassona's per Municipal Unit

| <b>Geographical Level</b>   | <b>2001</b> | <b>2011</b> | <b>CHANGE %</b> |
|-----------------------------|-------------|-------------|-----------------|
| Municipality of Elassona    | 37.679      | 32.121      | -14,75%         |
| Municipal Unit Antixasion   | 3951        | 3584        | -9,28%          |
| Municipal Unit verdikoussis | 2126        | 2254        | 6,02%           |
| Municipal Unit Elassonas    | 14291       | 11044       | -22,72%         |
| Municipal Unit Karyas       | 874         | 719         | -17,73%         |
| Municipal Unit Livadiou     | 2983        | 2674        | -10,36%         |
| Municipal Unit Olympou      | 3446        | 3164        | -8,18%          |
| Municipal Unit Potamias     | 4753        | 4187        | -11,90%         |
| Municipal Unit Sarantaporou | 3337        | 2455        | -26,43%         |
| Municipal Unit Tsaritsanis  | 2321        | 2040        | -12,10%         |

As we observe the bigger demographic change is recorded in the municipal unit of Elassona with reduction of the population at 22,72% and after that in the municipal unit of Sarantaporo (26,43%). It must be noticed that an increase of population in a specific season of the year (period of peak – tourist period, etc) is not observed, however the phenomenon of periodical quartering of immigrants for economic mainly reasons, at the months of summertime is observed. However, not only their number but also their attendance - their departure is difficult to be measured.

An overtime development of the population of the municipality of Elassona and of the municipal units appears in the diagram that follows:

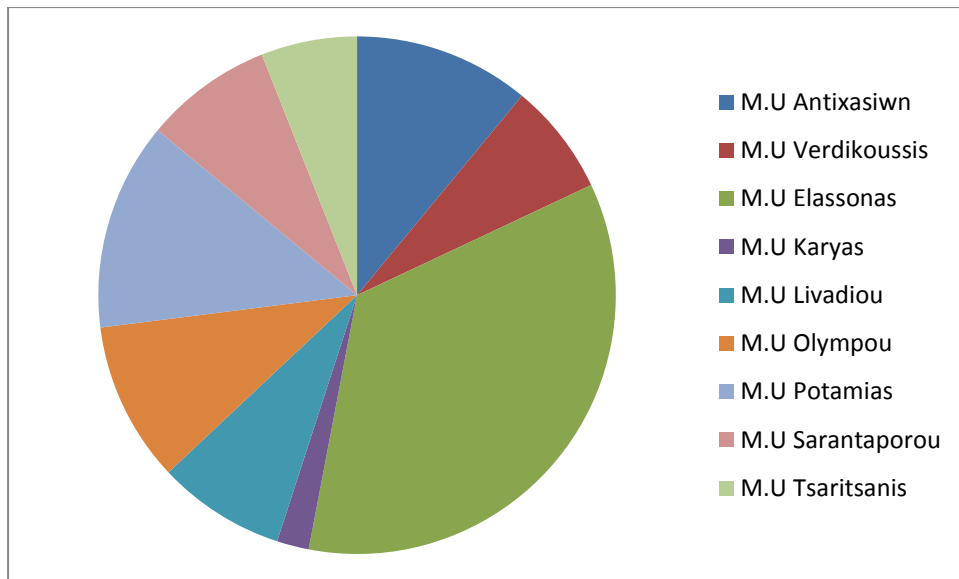
Diagram 2: Comparative depiction of population of the municipality of Ellassonas and of the municipal units (2001, 2011)



Particularly, the home of the municipality, Ellassona, being a town of intermediate size and as a sovereign one of the built-up network of the Municipality, profits from the dynamic that Larisa has acquired the last years, as the center of the prefecture of Thessaly but also as developmental pole of Greece. However, this dynamic is progressively absorbed and it is incorporated in the capital of the prefecture, with result cities – satellites as Ellassona to develop but at the same time to lose important pieces of their population, which migrates to bigger cities in search of better conditions of life and employment.

As it appears, in the total of the municipality of Ellassona, the municipal unit of Ellassona occupies demographically the biggest part of the total population (34,38%).

Diagram 3: Percentage distribution of population of the municipal unit of the municipality of Ellassona



|                  |     |
|------------------|-----|
| M.U Antixasiwn   | 11% |
| M.U Verdikoussis | 7%  |
| M.U Elassonas    | 35% |
| M.U Karyas       | 2%  |
| M.U Livadiou     | 8%  |
| M.U Olympou      | 10% |
| M.U Potamias     | 13% |
| M.U Sarantaporou | 8%  |
| M.U Tsaritsanis  | 6%  |

In the level of municipality we observe reduction of population in the age-related teams up to 59 years that constitute productive population ages, while an increase in the age-related teams over 60 years is shown, a fact that implies a reduction of births and consequently an increase of over aged population. This phenomenon is also intensified by the reduction of population that was marked in the same decade. In level of municipal units and communities precisely the same picture and no differentiations are located is observed.



Table 4: Age-related structure of the population for the municipality of Elassona and the municipal units.

|                                 | 1991   |       |       |       |       |       |       |
|---------------------------------|--------|-------|-------|-------|-------|-------|-------|
|                                 | TOTAL  | 0-14  | 15-29 | 30-44 | 45-59 | 60-74 | 75 +  |
| <b>M.U. ANTIXASION</b>          | 4.175  | 889   | 851   | 820   | 797   | 582   | 236   |
| <b>M.U. VERDIKOUSSIS</b>        | 2.865  | 755   | 689   | 514   | 429   | 348   | 130   |
| <b>M.U. ELASSONAS</b>           | 15.419 | 2.870 | 3.356 | 2.855 | 3.184 | 2.290 | 864   |
| <b>M.U. KARYAS</b>              | 1.075  | 138   | 170   | 142   | 237   | 248   | 140   |
| <b>M.U. LIVADIOU</b>            | 3.376  | 637   | 595   | 634   | 768   | 531   | 211   |
| <b>M.U. OLYMPOU</b>             | 4.251  | 793   | 843   | 703   | 926   | 669   | 317   |
| <b>M.U. POTAMIAS</b>            | 5.270  | 948   | 1.003 | 879   | 1.145 | 935   | 360   |
| <b>M.U. SARANTAPOROU</b>        | 3.519  | 525   | 544   | 558   | 896   | 723   | 273   |
| <b>MUNICIPALITY OF ELASSONA</b> | 39.950 | 7.555 | 8.051 | 7.105 | 8.382 | 6.326 | 2.531 |
|                                 | 2001   |       |       |       |       |       |       |
|                                 | TOTAL  | 0-14  | 15-29 | 30-44 | 45-59 | 60-74 | 75 +  |
| <b>M.U. ANTIXASION</b>          | 3.548  | 484   | 643   | 626   | 756   | 764   | 275   |
| <b>M.U. VERDIKOUSSIS</b>        | 2.126  | 425   | 458   | 392   | 343   | 372   | 136   |
| <b>M.U. ELASSONAS</b>           | 14.291 | 2.222 | 2.705 | 2.787 | 2.524 | 3.108 | 945   |
| <b>M.U. KARYAS</b>              | 874    | 87    | 133   | 114   | 132   | 277   | 131   |
| <b>M.U. LIVADIOU</b>            | 2.983  | 347   | 542   | 500   | 611   | 716   | 267   |
| <b>M.U. OLYMPOU</b>             | 3.446  | 402   | 581   | 570   | 649   | 959   | 285   |
| <b>M.U. POTAMIAS</b>            | 4.753  | 632   | 830   | 772   | 879   | 1.217 | 423   |
| <b>M.U. SARANTAPOROU</b>        | 3.337  | 349   | 491   | 498   | 629   | 1.028 | 342   |
| <b>MUNICIPALITY OF ELASSONA</b> | 35.358 | 4.948 | 6.383 | 6.259 | 6.523 | 8.441 | 2.804 |

The table that follows presents the percentage of the age-related structure of the population for the years 1991 and 2001. the younger age-related team (0-14) presents a reduction of roughly 6 percentage from 18,9% in 1991 in 14% in 2001, while the elder team of (60-74 years) presents increase at 8,1 percentage units from 15,8% in 1991 in 23,9% in 2001, a fact that shows an intense tendency of ageing in the municipality of Elassona with simultaneous internal immigration and reduction of births.

Table 5: Percentage of the age-related structure of population of the municipality of Elassona (Comparative presentation of two last censuses)

|                                 | 1991  |       |       |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|
|                                 | TOTAL | 0-14  | 15-29 | 30-44 | 45-59 | 60-74 | 75 +  |
| <b>M.U. ANTIXASION</b>          | 100%  | 21,3% | 20,4% | 19,6% | 19,1% | 13,9% | 5,7%  |
| <b>M.U. VERDIKOUSSIS</b>        | 100%  | 26,4% | 24,0% | 17,9% | 15,0% | 12,1% | 4,5%  |
| <b>M.U. ELASSONAS</b>           | 100%  | 18,6% | 21,8% | 18,5% | 20,6% | 14,9% | 5,6%  |
| <b>M.U. KARYAS</b>              | 100%  | 12,8% | 15,8% | 13,2% | 22,0% | 23,1% | 13,0% |
| <b>M.U. LIVADIOU</b>            | 100%  | 18,9% | 17,6% | 18,8% | 22,7% | 15,7% | 6,3%  |
| <b>M.U. OLYMPOU</b>             | 100%  | 18,7% | 19,8% | 16,5% | 21,8% | 15,7% | 7,5%  |
| <b>M.U. POTAMIAS</b>            | 100%  | 18,0% | 19,0% | 16,7% | 21,7% | 17,7% | 6,8%  |
| <b>M.U. SARANTAPOROU</b>        | 100%  | 14,9% | 15,5% | 15,9% | 25,5% | 20,5% | 7,8%  |
| <b>MUNICIPALITY OF ELASSONA</b> | 100%  | 18,9% | 20,2% | 17,8% | 21,0% | 15,8% | 6,3%  |
|                                 | 2001  |       |       |       |       |       |       |
|                                 | TOTAL | 0-14  | 15-29 | 30-44 | 45-59 | 60-74 | 75 +  |
| <b>M.U. ANTIXASION</b>          | 100%  | 13,6% | 18,1% | 17,6% | 21,3% | 21,5% | 7,8%  |
| <b>M.U. VERDIKOUSSIS</b>        | 100%  | 20,0% | 21,5% | 18,4% | 16,1% | 17,5% | 6,4%  |
| <b>M.U. ELASSONAS</b>           | 100%  | 15,5% | 18,9% | 19,5% | 17,7% | 21,7% | 6,6%  |
| <b>M.U. KARYAS</b>              | 100%  | 10,0% | 15,2% | 13,0% | 15,1% | 31,7% | 15,0% |
| <b>M.U. LIVADIOU</b>            | 100%  | 11,6% | 18,2% | 16,8% | 20,5% | 24,0% | 9,0%  |
| <b>M.U. OLYMPOU</b>             | 100%  | 11,7% | 16,9% | 16,5% | 18,8% | 27,8% | 8,3%  |
| <b>M.U. POTAMIAS</b>            | 100%  | 13,3% | 17,5% | 16,2% | 18,5% | 25,6% | 8,9%  |
| <b>M.U. SARANTAPOROU</b>        | 100%  | 10,5% | 14,7% | 14,9% | 18,8% | 30,8% | 10,2% |
| <b>MUNICIPALITY OF ELASSONA</b> | 100%  | 14,0% | 18,1% | 17,7% | 18,4% | 23,9% | 7,9%  |

## Structural Indicators

Table 6: Structural Indicators for the municipality of Elassona per municipal unit

|                                 | 1991            |                        |                 | 2001            |                        |                 |
|---------------------------------|-----------------|------------------------|-----------------|-----------------|------------------------|-----------------|
|                                 | Aging indicator | Youthfulness indicator | Dependency rate | Aging indicator | Youthfulness indicator | Dependency rate |
| <b>M.U. ANTIXASIWN</b>          | 13,32           | 21,29                  | 52,93           | 20,66           | 13,64                  | 52,21           |
| <b>M.U. VERDIKOUSSIS</b>        | 11,45           | 26,35                  | 60,77           | 18,16           | 19,99                  | 61,67           |
| <b>M.U. ELASSONAS</b>           | 13,19           | 18,61                  | 46,64           | 20,66           | 15,55                  | 56,75           |
| <b>M.U. KARYAS</b>              | 26,70           | 12,84                  | 65,38           | 35,24           | 9,95                   | 82,46           |
| <b>M.U. LIVADIOU</b>            | 15,70           | 18,87                  | 52,83           | 23,77           | 11,63                  | 54,80           |
| <b>M.U. OLYMPOU</b>             | 15,74           | 18,65                  | 52,42           | 26,29           | 11,67                  | 61,18           |
| <b>M.U. POTAMIAS</b>            | 16,66           | 17,99                  | 53,02           | 26,03           | 13,30                  | 64,81           |
| <b>M.U. SARANTAPOROU</b>        | 19,27           | 14,92                  | 51,94           | 29,73           | 10,46                  | 67,18           |
| <b>MUNICIPALITY OF ELASSONA</b> | 14,92           | 18,91                  | 51,13           | 23,26           | 13,99                  | 59,36           |

Regarding to the structural indicators of ageing, youthfulness and dependence that are presented in table 5:

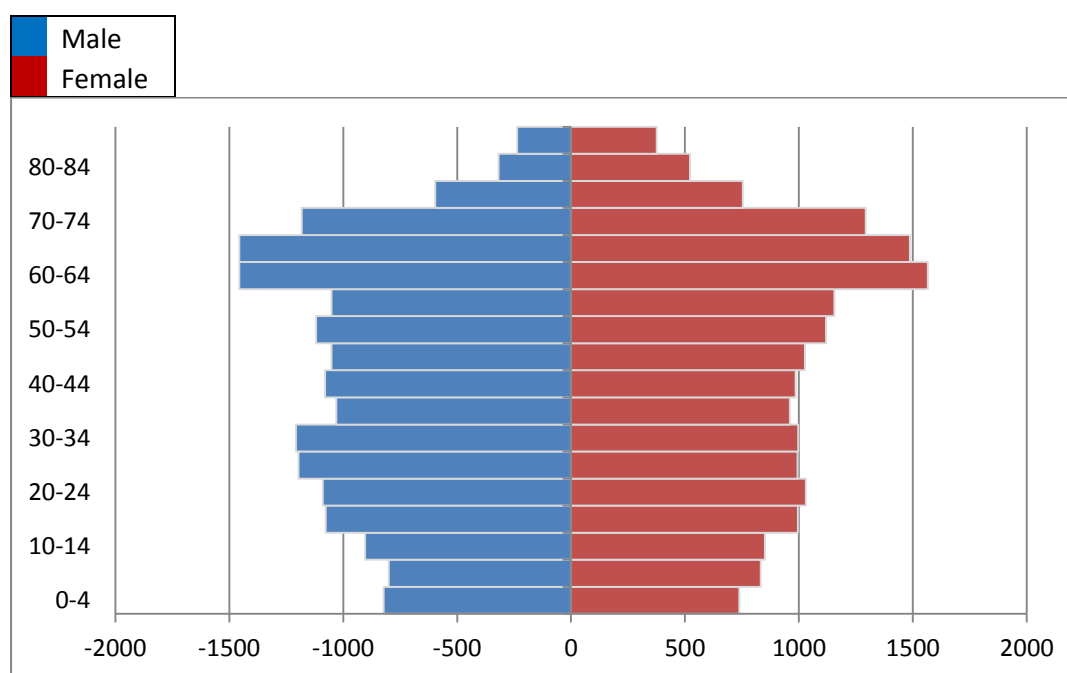
- The indicator of youthfulness calculates the percentage of individuals that belongs in the age-related team of 0-14 years for the total of the population of the municipality. This indicator marks reduction not only in the total of the municipality of Elassona but also in the individual municipal units in the decade 1991 – 2001. The bigger reduction is observed in the municipal unit of Antixasiwn.
- The indicator of ageing, which shows in the 100 individuals form the age of 0-14 years the number of individuals above 65 years, presents important increase in municipality level, while the same picture is presented and in the individual municipal units with the bigger increase to be observed in the municipal unit of Karya.
- Regarding in the indicator of dependence, which declares how many individuals from the age of 0-14 years as well as above 65 years, depend from the active population (that is to say the individuals between the age of 15-64), we observe a relative increase the last decade from 51% in 59%, a fact that implies that more and

more individuals depend considerably from the active population of the municipality of Ellassona. The bigger increase of the indicator of dependence is shown in the municipal unit of Karya.

Deductively by the examination of structural indicators of the decade 1991 – 2001 it is observed the intense tendency of ageing of the population, which is expected to influence negatively the productive base of the municipality the next years.

Important elements for the population of the municipality of Ellassona are exported from the demographic pyramid of 2001. Thus, from the form of the pyramid results the conclusion that the population is characterized 'mature' or even aged, after the base of pyramid is smaller than the center, while the top is particularly developed regarding the age-related teams of 60 – of 69 years. More concretely, the age-related teams with the bigger demographic cover are those of 60-64, 65-69, which include the population that ages. Increased are presented the age-related teams of 25-29 years and 30 – of 34 years that constitute the productive ages of population. The proportion of men – and women in the total of the municipality of Ellassona is presented balanced with the women lightly surpassing the men, that is 17.684 women against 17.674 men.

Diagram 4: age pyramid of the municipality of Ellassona (2001)



### Education level

The next table shows a presentation of the data that concerns the education and the level of training that have the residents of the region of study. More concretely, are presented data for each separate unit, not only for the total of the municipality but also for the each municipal units and communities, according to the census of 1991 - 2001.

Regarding the total of the municipality, the majority of residents in 2001 are graduates of elementary education with certificate of studies of Public school (roughly 37%) and the graduates of medium education with percentage 25% follow. The graduates of higher education and the holders of postgraduates or doctoral titles occupy very small percentage of population. In decade 1991 – 2001 the level of the education of the population marks a small improvement with the graduates of elementary education to present a reduction 20% and the graduates of medium education to show an important increase, a fact particularly encouraging for the region. Also an increase 27% roughly mark the graduates of Polytechnic Colleges, etc. On the contrary a reduction at 11% mark the holders of postgraduate and doctoral title. Particularly positive development for the municipality is the big reduction of 48,5% that is marked in illiterate people

(individuals that do not know writing and reading) a fact particularly encouraging for the development of productive base of the population.

Table 7: Level of education of the population of the municipality of Elassona and the municipal units.

| <b>MUNICIPALITY OF ELASSONA</b>                          |             |             |                   |
|--|-------------|-------------|-------------------|
| <b>Education Level</b>                                   | <b>1991</b> | <b>2001</b> | <b>Change (%)</b> |
| Doctorate, Post graduate                                 | 28          | 25          | -10,7%            |
| University degree  | 1.101       | 1.151       | 4,5%              |
| Technological Education Degree                           | 322         | 410         | 27,3%             |
| Postsecondary Degree                                     | 0           | 599         | -                 |
| School Sertificate                                       | 3.086       | 4.179       | 35,4%             |
| TEL Degree   | 144         | 427         | 196,5%            |
| TE degree  | 215         | 319         | 48,4%             |
| High school Degree                                       | 3.211       | 3.742       | 16,5%             |
| Elementary school Degree                                 | 16.699      | 13.285      | -20,4%            |
| People that gave up school but knows reading and writing | 6.464       | 6.752       | 4,5%              |
| People that doesn't know reading and writing             | 8.680       | 4.469       | -48,5%            |

### **3.5.Basic Social characteristics of the region's Local Authority**

#### **Population composition**

The last years in our country the phenomenon of immigration of population from neighboring and not, countries (Albania, Bulgaria and others) is intense, having as a result the abrupt increase of population of certain municipalities of the country. This is also confirmed by the data of the table that follow, in a level of region and prefecture.

Table 8: Composition of population (alien, native) in the wider frame of the municipality of Ellassona

|      |  | Thessaly      | Prefecture of Larisa |
|------|--|---------------|----------------------|
| 1991 | Alien registered in the municipality                 | 3763          | 1200                 |
|      | Citizens voting in different town to where they live | 145758        | 61411                |
|      | Citizens of the municipality                         | 585325        | 208001               |
|      | <b>Total</b>   | <b>734846</b> | <b>270612</b>        |
| 2001 | Alien registered in the municipality                 | 33782         | 14213                |
|      | Citizens voting in different town to where they live | 130982        | 53388                |
|      | Citizens of the municipality                         | 589124        | 211704               |
|      | <b>Total</b>   | <b>753888</b> | <b>279305</b>        |

Thus, in a decade, the foreigners that registered in the region of Thessaly was increased roughly ten times, while respectively region's citizens presented a small increase of 0,6%. The foreigners in level of prefecture increased dramatically, touching upon eleven times the numbers of the census of 1991. Once again the region's citizens only present a small augmentative tendency. According to the data from the municipality of Ellassona, at the last census (year 2010) were registered 1.270 foreigners in total.

### **Vulnerable population groups**

The socially vulnerable population groups in Thessaly are the following :

- Disabled
- Released prisoners
- Juvenile Delinquents
- Single – parent families
- Unemployed over the age of 45
- Detoxified people
- Gypsies
- Repatriates
- Immigrants

### **Prosperity indicators**

The tables that are mentioned below give an indicative picture for the situation of the prosperity of the municipality of Ellassona, taking into consideration the comforts and the infrastructures of the residences.

Comparing data from 1991 and 2001, it is observed that the regular residences with both present important increase in all the municipal units and communities with the bigger increase marked in the municipal community of Verdikoysia with 84,4% and the smallest marked in the municipal unit of Ellassona with a percentage of 28,7%. This means that in the municipal unit of Ellassona that is a more urbanized region the residences allocated already this comfort therefore the percentage that acquired it after 1990 is smaller comparing with the most urbanized municipal units or municipal communities. The residences allocated heating showed also an increase in the same decade in all the municipal units and communities with the bigger percentage to be marked in the municipal unit of Olympus with 42%. The differentiation between the municipal units is bigger giving that in the municipal unit of Livadi the increase is hardly 0,5%, in the municipal units of Antihasiwn, Potamias and Sarantaporoy the corresponding increase is below 10%, while in the municipal unit of Ellassona and in



the municipal community of Verdjkoysia and Karya is above 10%. In level of municipality the corresponding increase is leveled in 10,4%.

With regard to in the residences that allocate cooker in the decade 1991 – 2001 marked an increase 9,6% in level of municipality. The bigger increase was shown in the municipal unit of Olympus with 30%, while the smallest in the municipal unit of Livadi with 0,2%.

Deductively the residences in all the municipal units and communities of the municipality of Elassona improved considerably their comforts in the decade 1991 – 2001.

Table 9: Regular residences in the municipality of Elassona depending on the comforts that they allocate

|                           | Regular residences |        | With bath |        | With heat |        | With cooker |        |
|---------------------------|--------------------|--------|-----------|--------|-----------|--------|-------------|--------|
|                           | 1991               | 2001   | 1991      | 2001   | 1991      | 2001   | 1991        | 2001   |
| M.U. ANTIXASIWN           | 1.478              | 1.467  | 1.073     | 1.431  | 1.354     | 1.416  | 1.447       | 1.466  |
| M.U. ELASSONAS            | 5.486              | 6.225  | 4.606     | 5.926  | 4.887     | 5.697  | 5.442       | 6.107  |
| M.U. LIVADIOU             | 1.285              | 1.265  | 886       | 1.157  | 1.204     | 1.210  | 1.261       | 1.264  |
| M.U. OLYMPOU              | 1.617              | 2.219  | 1.250     | 1.858  | 1.354     | 1.923  | 1.607       | 2.089  |
| M.U. POTAMIAS             | 1.865              | 1.890  | 1.282     | 1.801  | 1.698     | 1.799  | 1.823       | 1.844  |
| M.U. SARANTAPOROU         | 1.413              | 1.502  | 1.074     | 1.405  | 1.337     | 1.468  | 1.413       | 1.486  |
| M.C. VERDIKOSSIS          | 776                | 848    | 372       | 686    | 716       | 822    | 737         | 834    |
| M.C. KARYAS               | 625                | 648    | 420       | 560    | 506       | 613    | 622         | 644    |
| TOTAL OF THE MUNICIPALITY | 14.545             | 16.064 | 10.963    | 14.824 | 13.056    | 14.948 | 14.352      | 15.734 |

Table 10: Percentage change 1991 – of 2001 regular residences in the D. Elasso'nas depending on the comforts that they allocate

|                           | <b>REGULAR RESIDENSE</b> | <b>RESIDENSE WITH BATH</b> | <b>RESIDENSE WITH HEAT</b> | <b>RESIDENSE WITH COOKER</b> |
|---------------------------|--------------------------|----------------------------|----------------------------|------------------------------|
| M.U. ANTIXASIWN           | -0,7%                    | 33,4%                      | 4,6%                       | 1,3%                         |
| M.U. ELASSONAS            | 13,5%                    | 28,7%                      | 16,6%                      | 12,2%                        |
| M.U. LIVADIOU             | -1,6%                    | 30,6%                      | 0,5%                       | 0,2%                         |
| M.U. OLYMPOU              | 37,2%                    | 48,6%                      | 42,0%                      | 30,0%                        |
| M.U. POTAMIAS             | 1,3%                     | 40,5%                      | 5,9%                       | 1,2%                         |
| M.U. SARANTAPOROU         | 6,3%                     | 30,8%                      | 9,8%                       | 5,2%                         |
| M.C. VERDIKOSSIS          | 9,3%                     | 84,4%                      | 14,8%                      | 13,2%                        |
| M.C. KARYAS               | 3,7%                     | 33,3%                      | 21,1%                      | 3,5%                         |
| <b>TOTAL MUNICIPALITY</b> | <b>10,4%</b>             | <b>35,2%</b>               | <b>14,5%</b>               | <b>9,6%</b>                  |

### **Households**

The number of members in each household is a indicative criterion not only for the increase of births and for the tendency of cohabitation of many members, but also for the continuation of the traditional large family in a lot of local regions of the country. Between the two censuses, the big reduction of the households with more than 3 members it is obvious, while at the same time an increase for the households with 1 or 2 members, which is an explicit clue for the low birthrate that plagues the country over the last years exists. Only in the municipal unit of Sarantaporo and in the municipal community of Karya is shown a small increase

of households with 6 members and more, however in absolute numbers it constitutes a negligible quantity.

Table 11: Members of households in the municipality of Elassona and per municipal unit

|                                 | 1 member |       | 2 members |       | 3 members |       | 4 members |       | 5 members |       | 6 members and more |      |
|---------------------------------|----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|--------------------|------|
|                                 | 1991     | 2001  | 1991      | 2001  | 1991      | 2001  | 1991      | 2001  | 1991      | 2001  | 1991               | 2001 |
| M.U. ANTIXASIWN                 | 104      | 195   | 322       | 445   | 193       | 205   | 242       | 157   | 200       | 110   | 125                | 98   |
| M.U. ELASSONAS                  | 415      | 711   | 977       | 1.346 | 811       | 890   | 1.112     | 959   | 622       | 426   | 417                | 287  |
| M.U. LIVADIOU                   | 72       | 118   | 227       | 304   | 198       | 173   | 189       | 147   | 115       | 82    | 140                | 107  |
| M.U. OLYMPOU                    | 95       | 209   | 338       | 456   | 201       | 193   | 200       | 164   | 137       | 102   | 177                | 75   |
| M.U. POTAMIAS                   | 154      | 217   | 380       | 477   | 274       | 258   | 279       | 222   | 184       | 128   | 218                | 184  |
| M.U. SARANTAPOROU ΣΑΡΑΝΤΑΠΙΟΡΟΥ | 97       | 170   | 438       | 479   | 184       | 176   | 167       | 139   | 137       | 81    | 94                 | 99   |
| M.C. VERDIKOSSIS                | 34       | 63    | 101       | 170   | 83        | 77    | 133       | 105   | 108       | 83    | 181                | 84   |
| M.C. KARYAS                     | 65       | 75    | 132       | 143   | 76        | 38    | 45        | 29    | 24        | 12    | 31                 | 32   |
| TOTAL MUNICIPALITY              | 1.036    | 1.758 | 2.915     | 3.820 | 2.020     | 2.010 | 2.367     | 1.922 | 1.527     | 1.024 | 1.383              | 966  |

Table 12: Percentage change of members for the households in the municipality of Elassona and per municipal unit

|                    | 1 member | 2 members | 3 members | 4 members | 5 members | 6 members and more |
|--------------------|----------|-----------|-----------|-----------|-----------|--------------------|
| M.U. ANTIXASIWN    | 87,5%    | 38,2%     | 6,2%      | -35,1%    | -45,0%    | -21,6%             |
| M.U. ELASSONAS     | 71,3%    | 37,8%     | 9,7%      | -13,8%    | -31,5%    | -31,2%             |
| M.U. LIVADIOU      | 63,9%    | 33,9%     | -12,6%    | -22,2%    | -28,7%    | -23,6%             |
| M.U. OLYMPOU       | 120,0%   | 34,9%     | -4,0%     | -18,0%    | -25,5%    | -57,6%             |
| M.U. POTAMIAS      | 40,9%    | 25,5%     | -5,8%     | -20,4%    | -30,4%    | -15,6%             |
| M.U. SARANTAPOROU  | 75,3%    | 9,4%      | -4,3%     | -16,8%    | -40,9%    | 5,3%               |
| M.C. VERDIKOUSIS   | 85,3%    | 68,3%     | -7,2%     | -21,1%    | -23,1%    | -53,6%             |
| M.C. KARYAS        | 15,4%    | 8,3%      | -50,0%    | -35,6%    | -50,0%    | 3,2%               |
| TOTAL MUNICIPALITY | 69,7%    | 31,0%     | -0,5%     | -18,8%    | -32,9%    | -30,2%             |

Regarding the number of rooms that exists in each household, according to the elements of the Greek Statistical Service the results are the followings:

In level of the municipality of Elassona in the decade 1991 – 2001 the households that allocate 1 -3 rooms decrease, while on the contrary the households with 4 rooms and more increase, a fact that shows in combination with the data mentioned before for the comforts of the residences that the quality of the population's residences is considerably improving. More specifically the reduction of the households that resides in 1 room reaches the 34,3% in level of the municipality, the households that reside in 2 rooms reaches the 15,3%, while there is a small reduction of the households that resides in 3 rooms (0,2%). Respectively the increase of the households that resides in 4 rooms and more reaches the 9,9% in the same decade.

In level of municipal units and communities the differentiations are small. In the municipal unit of Olympos an increase of the households in all the categories of rooms is observed, while a reduction of the households that resides 3 rooms and more is marked in the municipal communities of Verdikoussia and Karya as well as in the municipal units of Antihasiwn and Livadi.

Table 13: Rooms of households in the municipality of Elassona (1991)

|                    | <b>1 room</b> | <b>2 rooms</b> | <b>3 rooms</b> | <b>4 rooms</b> | <b>5 rooms and more</b> |
|--------------------|---------------|----------------|----------------|----------------|-------------------------|
| M.U. ANTIXASIWN    | 59            | 206            | 342            | 313            | 258                     |
| M.U. ELASSONAS     | 46            | 296            | 802            | 1534           | 1609                    |
| M.U. LIVADIOU      | 2             | 23             | 249            | 398            | 258                     |
| M.U. OLYMPOU       | 5             | 99             | 200            | 387            | 445                     |
| M.U. POTAMIAS      | 7             | 84             | 204            | 537            | 645                     |
| M.U. SARANTAPOROU  | 12            | 93             | 217            | 475            | 308                     |
| M.C. VERDIKOSSIS   | 10            | 53             | 124            | 241            | 194                     |
| M.C. KARYAS        | 2             | 15             | 109            | 160            | 84                      |
| TOTAL MUNICIPALITY | 143           | 869            | 2247           | 4045           | 3801                    |

Table 14: Rooms of households in the municipality of Elassona (2001)

|                    | <b>1 room</b> | <b>2 rooms</b> | <b>3 rooms</b> | <b>4 rooms</b> | <b>5 rooms and more</b> |
|--------------------|---------------|----------------|----------------|----------------|-------------------------|
| M.U. ANTIXASIWN    | 38            | 200            | 323            | 389            | 226                     |
| M.U. ELASSONAS     | 24            | 238            | 808            | 1723           | 1730                    |
| M.U. LIVADIOU      | 1             | 28             | 215            | 462            | 216                     |
| M.U. OLYMPOU       | 12            | 104            | 218            | 383            | 471                     |
| M.U. POTAMIAS      | 3             | 42             | 229            | 600            | 592                     |
| M.U. SARANTAPOROU  | 4             | 73             | 224            | 496            | 342                     |
| M.C. VERDIKOSSIS   | 11            | 41             | 144            | 226            | 155                     |
| M.C. KARYAS        | 1             | 10             | 82             | 152            | 84                      |
| TOTAL MUNICIPALITY | 94            | 736            | 2243           | 4431           | 3816                    |

Table 15: Percentage change of residences depending on the rooms that they allocate in decade 1991 – 2001

|                    | <b>1 room</b> | <b>2 rooms</b> | <b>3 rooms</b> | <b>4 rooms</b> | <b>5 rooms and more</b> |
|--------------------|---------------|----------------|----------------|----------------|-------------------------|
| M.U. ANTIXASIWN    | -35,6%        | -2,9%          | -5,6%          | 24,3%          | -12,4%                  |
| M.U. ELASSONAS     | -47,8%        | -19,6%         | 0,7%           | 12,3%          | 7,5%                    |
| M.U. LIVADIOU      | -50,0%        | 21,7%          | -13,7%         | 16,1%          | -16,3%                  |
| M.U. OLYMPOU       | 140,0%        | 5,1%           | 9,0%           | -1,0%          | 5,8%                    |
| M.U. POTAMIAS      | -57,1%        | -50,0%         | 12,3%          | 11,7%          | -8,2%                   |
| M.U. SARANTAPOROU  | -66,7%        | -21,5%         | 3,2%           | 4,4%           | 11,0%                   |
| M.C. VERDIKOSSIS   | 10,0%         | -22,6%         | 16,1%          | -6,2%          | -20,1%                  |
| M.C. KARYAS        | -50,0%        | -33,3%         | -24,8%         | -5,0%          | 0,0%                    |
| TOTAL MUNICIPALITY | -34,3%        | -15,3%         | -0,2%          | 9,5%           | 0,4%                    |

### 3.6.Social infrastructures, services and activities

#### Education

The presence of the school youth in the region under study is particularly dynamic, because it numbers 2.300 students, which study in the first degree, secondary as well as postsecondary education. It is important that the students and also big portion of the residents of the municipal unit of Elassona come in daily contact with the local authorities and so they constitute substantial part of the "active population". Below, are presented the infrastructures for education of the municipality of Elassona, according to the last data from the Ministry of Interior:

Table 16: Infrastructures of first degree education and number of organic places in the municipality of Elassona.

| <b><math>\alpha / \alpha</math></b> | <b>Primary SCHOOLS</b>                      | <b>Organic Places</b> |
|-------------------------------------|---|-----------------------|
| 1                                   | Full day school of Verdikoussia             | 6/P                   |
| 2                                   | Vlaxogianiou                                | 6/P                   |
| 3                                   | Megalo Eleutheroxori                        |                       |
| 4                                   | Special primary school of Galanovrysi       | 3/P                   |
| 5                                   | Full day school of Elassona                 | 8/P                   |
| 6                                   | Galanovrysi- Stefanovouno                   |                       |
| 7                                   | Drymos                                      |                       |
| 8                                   | 2 <sup>nd</sup> Full day school of Elassona | 12/P                  |
| 9                                   | 3 <sup>rd</sup> Full day school of Elassona | 12/P                  |
| 10                                  | Full day school of Evagelismos              | 8/P                   |
| 11                                  | Kallithea                                   | 6/P                   |
| 12                                  | Karya                                       | 2/0                   |
| 13                                  | Full day school of Kranea                   | 6/P                   |
| 14                                  | Full day school of Livadi                   | 6/P                   |
| 15                                  | Full day school of lykoudi                  | 4/P                   |
| 16                                  | Sarantaporo                                 | 2/P                   |
| 17                                  | Full day school of Tsaritsani               | 6/P                   |
| 18                                  | Loutro                                      | 3/P                   |
| <b>Kindergarten</b>                 |   |                       |
| 1                                   | Ampeli                                      | 1/P                   |
| 2                                   | Verdikoussa                                 | 1/P                   |
| 3                                   | Vlaxogianni                                 | 1/P                   |
| 4                                   | Special nursery school of Galanovrysi       | 1/P                   |
| 5                                   | Dolixi                                      | 1/P                   |
| 6                                   | Domeniko                                    | 1/P                   |
| 7                                   | Drymos                                      | 1/0                   |

|    |   |     |
|----|---|-----|
| 8  | 1 <sup>st</sup> Elassonas                     | 2/0 |
| 9  | 2 <sup>nd</sup> day school of Elassona        | 2/0 |
| 10 | 3 <sup>rd</sup> day school of Elassona        | 2/0 |
| 11 | 4 <sup>th</sup> Elassonas                     | 1/0 |
| 12 | Evangelismos                                  | 1/0 |
| 13 | Kalitheia                                     | 1/0 |
| 14 | Karya   | 1/0 |
| 15 | Kefalovryso                                   | 1/0 |
| 16 | 1 <sup>st</sup> Kranea                        | 1/0 |
| 17 | Livadi  | 1/0 |
| 18 | Loutro  | 1/0 |
| 19 | Mesoxori                                      | 1/0 |
| 20 | Milea   | 1/0 |
| 21 | Olympiada                                     | 1/0 |
| 22 | Pretori                                       | 1/0 |
| 23 | Sarantaporo                                   | 1/0 |
| 24 | Stefanovouno                                  | 1/0 |
| 25 | 1 <sup>st</sup> full day school of Tsaritsani | 2/0 |

Table 17: Infrastructures of secondary education in the municipality of Elassona

| A/A | NAME   | MUNICIPAL UNIT |
|-----|--|----------------|
| 1   | 1 <sup>ST</sup> HIGH SCHOOL OF ELASSONA        | ELASSONA       |
| 2   | 1 <sup>ST</sup> SENIOR HIGH SCHOOL OF ELASSONA | ELASSONA       |
| 3   | 1 <sup>ST</sup> TECHNICAL SCHOOL OF ELASSONA   | ELASSONA       |
| 4   | VOCATIONAL SCHOOL OF ELASSONA                  | ELASSONA       |
| 5   | VOCATIONAL SCHOOL OF ELASSONA                  | ELASSONA       |



|    |                                   |             |
|----|-----------------------------------|-------------|
| 6  | HIGH SCHOOL OF VERDIKOUSSA        | VERDIKOUSSA |
| 7  | SENIOR HIGH SCHOOL OF VERDIKOUSSA | VERDIKOUSSA |
| 8  | HIGH SCHOOL OF DOMENIKO           | POTAMIA     |
| 9  | SENIOR HIGH SCHOOL OF DOMENIKO    | POTAMIA     |
| 10 | HIGH SCHOOL OF KALLITHEA          | OLYMPOU     |
| 11 | SENIOR HIGH SCHOOL OF KALLITHEA   | OLYMPOU     |
| 12 | HIGH SCHOOL OF KARYA              | KARYA       |
| 13 | HIGH SCHOOL OF KRANIA             | ANTIXASIWN  |
| 14 | SENIOR HIGH SCHOOL OF KRANIA      | ANTIXASIWN  |
| 15 | HIGH SCHOOL OF LIVADI             | LIVADI      |
| 16 | SENIOR HIGH SCHOOL OF LIVADI      | LIVADI      |
| 17 | HIGH SCHOOL OF TSARITSANI         | TSARITSANI  |

### Health and welfare

The residents of the municipality of Elassona are served by the Centre of Health that exists in the city of Elassona. The personnel occupied in the Centre of Health appear in the table that follows:

Table 18: Occupied Personnel in the Centre of Health of Elassona

|                       |    |
|-----------------------|----|
| Doctors               | 14 |
| Nurses                | 15 |
| Midwives              | 3  |
| Supervising Nurses    | 3  |
| Radiologist assistant | 3  |
| Microbiologist        | 3  |
| Ambulance crew        | 7  |
| Technical curator     | 7  |
| Secreterial service   | 6  |
| Cleaners              | 3  |

Apart from the Centre of Health in Elassona, in the wider region functions 12 Regional Surgeries, each one from which covers its own area of responsibility, without excluding of course the service for residents from neighboring municipalities or other regions.

Table 19: Regional surgeries in the province of Elassona

|                                |             |
|--------------------------------|-------------|
| Regional clinic of Verdikoussa | Verdikoussa |
| Regional clinic of Domeniko    | Domeniko    |
| Regional clinic of Evagelismos | Evagelismos |
| Regional clinic of Kallithea   | Kallithea   |
| Regional clinic of Karya       | Karya       |
| Regional clinic of Krania      | Krania      |
| Regional clinic of Livadi      | Livadi      |
| Regional clinic of Likoudi     | Likoudi     |
| Regional clinic of Magoula     | Magoula     |
| Regional clinic of Milea       | Milea       |
| Regional clinic of Pretori     | Pretori     |
| Regional clinic of Pithio      | Pithio      |

Regarding the future situation of Regional Surgeries, a proposal to the Ministry of Health has already been sent regarding the land-planning redeployment, or the unification of some of the rural surgeries so that they become more effective in the cover of the areas of responsibility.

Still, in the region of Elassona, the Common Benefit Enterprise of the municipality of Elassona (K.E.D.E) operates, which has undertaken the program "Help in the House". Still, in the municipality function the Center For Elderly Citizens, with main aim the protection of the elderly, the supply of medical protection in the old individuals of the municipality of Elassona, the supply of help in the intellectual and mental alleviation of persons of the third age and the creation of the conditions for the creative employment, entertainment and cultural activity of old men. It is also in operation the Social Protection, Solidarity and Education Organization of the municipality. In combination with the Center for Elderly Citizens, functions also the Club of the Elderly people of Elassona, while also functions an office for Individuals with Disabilities.

### **Administration-Justice-Public Order**

- a) Organization For The Occupation Of The Work Force, Centre of Agricultural Activities, Organization Of Social Security, Greek Telecom, National Electrical Company, Greek Post, Forest inspection, Working Centre, Service of Layout,

Public Economic Service, Land registry, Notary's offices, National Bank, Commercial Bank, Agrotiki Bank, Eurobank, ALPHA Bank, Bank Piraeus.

- b) County court
- c) Police Department of Elassona, Police Department of Livadi, Department of Border Guard Service, Firefighting Department.

## Sports

The residents of Elassona activates in all sectors. Characteristically, it must be noticed the action of more than 16 Athletic Associations with more than 2.000 members, as well as a big number of Cultural Associations and Institutions with appreciable presence in the intellectual and cultural life of the region.

Table 20: Sports infrastructures in the municipality of Elassona

| <b>Municipality of Elassona</b>           |             |
|---|-------------|
| <b>Indoor Sport Centers</b>               | Home        |
| Indoor sport center of Elassona           | Elassona    |
| <b>Outdoor Sport Centers</b>              |             |
| Municipal Stadium of Elassona             | Elassona    |
| Football pitch of the M.C. of Valanida    | Valanida    |
| Football pitch of the M.C. of Evagelismos | Euagelismos |
| Football pitch of the M.U. of Drymos      | Drymos      |

|  |              |
|--|--------------|
| Football pitch of the M.C. of Kefalovryso  | Kefalovryso  |
| Football pitch of the M.C. of Galanovrysi  | Galanovrysi  |
| Football pitch of the M.C. of Stefanovouno | Stefanovouno |
| Football pitch of the M.C. of Palaiokastro | Palaiokastro |
| Football pitch of the M.C. of Kranea       | Kranea       |
| Football pitch of the M.C. of Karya        | Karya        |
| Football pitch of the M.C. of Olympiada    | Olympiada    |
| Football pitch of the M.C. of Sarantaporo  | Sarantaporo  |
| Football pitch of the M.C. of MILEA        | Milea        |
| Football pitch of the M.C. of Giannota     | Giannota     |
| Football pitch of the M.C. of Gerania      | Gerania      |

|   |                     |
|---|---------------------|
| Football pitch of the M.C. of Azoro               | Azoro               |
| Football pitch of the M.C. of Mikro Eleutheroxori | Mikro Eleutheroxori |
| Mini soccer pitch                                 | Elassona            |
| 2 Tennis courts                                   | Elassona            |
| Volley court                                      | Elassona            |
| 2 Basketball courts                               | Elassona            |
| Football pitch                                    | Elassona            |
| Hang Gliding facilities                           | Olympou             |

## Culture

The cultural physiognomy of the municipality of Elassona is particularly intense. In the region there are a lot of cultural activities, associations, events but also cultural infrastructures that encourage the continuation of the tradition and the maintenance of the morals and customs of the region. This cultural identity pops up through a line of cultural and religious events, which the visitor can experience throughout the year. The table that follows, includes the infrastructures that are related with the culture and are sited in the municipality of Elassona.

Table 21: Cultural infrastructures in the municipality of Elassona

| Municipality of Elassona                           |             |
|--|-------------|
|  | Home        |
| <b>Museums</b>                                     |             |
| Natural History Museum                             | Elassona    |
| National Folklore Museum                           | Galanovrysi |
| Folklore museum                                    | Potamia     |
| Folklore museum                                    | Verdikoussa |
| Folklore museum                                    | Lykoudi     |
| Museum of national resistance – historic, folklore | Elassona    |
| Museum of the battle of Sarantaporo                | Sarantaporo |
| Folklore museum                                    | Livadi      |
| Folklore museum                                    | Kranea      |
| <b>Theaters</b>                                    |             |
| Outdoor theater                                    | Elassona    |
| Theater hall <<Vasileios Farmakis>>                | Elassona    |
| Cultural center’s event hall                       | Elassona    |
| Cultural center                                    | Aetoraxi    |
|  |             |
| <b>Libraries</b>                                   |             |
| City library                                       | Elassona    |

|  |             |
|--|-------------|
| 2 <sup>nd</sup> High school library          | Elassona    |
|  |             |
| <b>Cultural centers</b>                      |             |
| Cultural center                              | Elassona    |
| Cultural center of the mitropoli of Elassona | Elassona    |
| Cultural center                              | Aetoraxi    |
| Cultural center                              | Karya       |
| Cultural center                              | Vlaxogianni |
| Cultural center                              | Livadi      |
| Cultural center                              | Domeniko    |
| Pantelopouleion Cultural center              | Sarantaporo |
| City library                                 | Elassona    |
| High school-senior high school library       | Elassona    |
| High school-senior high school library       | Tsaritsani  |
| Cultural center                              | Kranea      |
| <b>Conference halls</b>                      |             |
| Cultural center's conference hall            | Elassona    |
|  |             |
| <b>Information centers</b>                   |             |
| Youth information center                     | Elassona    |
| Environmental education center               |             |

Also, in the wider region of Elassona, one can find a few abbeys and monasteries, most of which were used as shelters during the liberating war. The most famous from all, which constitutes and a mark for the region, is the Abbey of Olympiwjtjssas Elassonas. It is found in the hill Kamares, where the acropolis of the ancient city of Olossona was found. The construction of the catholic was made by the churchmen Konstantinos and Theodoros, who are portrayed as donors in the northern wall.

### **Unions**

The associations that are activated in the wider region of Elassona have intense the element for the continuation of the tradition (cultural associations) or promote and encourage the residents to attend in activities of various types (athletic associations). Following tables includes these associations:

Table 22: Cultural Associations that are activated in the municipality of Elassona

|  |
|--|
| KEDE   |
| Cultural Association Varosiou                    |
| Ski mountaineering club of Ellassona             |
| Cultural consulate                               |
| Pontian association of the province of Ellassona |
| Folklore archeological association of Ellassona  |
| Province association network 'PERRAIVIA'         |
| Women association of the province                |
| Association of Koupatsaraiwn                     |
| Assiciation of Samarinaiw                        |
| Association of Sarakatsanwn                      |
| Olympus friends association                      |
| Association of Livadi                            |
| Traditional dances research academy              |
| Cultural association of Aetoraxi                 |
| Cultural association of Azoro                    |
| Ethnographic museum of Aradosivia                |
| Cultural association of Aradosivia               |
| Cultural association of Valanida                 |
| Cultural association of Vlaxogianni              |
| Cultural association of Giannota                 |
| Women association of Dolixi                      |
| Cultural association of Dolixi                   |
| Cultural association of Drymos                   |
| Cultural association of Euagelismos              |
| Cultural association of Kallithea                |
| Cultural association of Kokkinogi                |
| Cultural association of Livadi                   |
| Cultura association of Loutro                    |
| Cultural association Lofou                       |
| Cultural association of Lykoudi                  |
| Cultural association of Mikro Eletheroxori       |
| Women association of Mikro Eletheroxori          |
| Cultural association of Olympiada                |
| Cultural association of Palaiokastro             |
| Cultural association of Pithio                   |
| Women association of Sarantaporo                 |
| Ski mountaineering association of Sparmos        |
| Women association of Tsaritsani                  |
| Cultural association of Tsaritsani               |
| Cultural association of Krania                   |
| Cultural association of Farmaki                  |

Also in the sector of sports, activates the following associations:

Table 23: Athletic Associations that are activated in the municipality of Elassona

| <b>Athletic Associations</b>          |
|---------------------------------------|
| Cycling club                          |
| Ski mountaineering association        |
| Doxa Vloxogianniou                    |
| Elassona's football club              |
| ATHLOKINISI                           |
| Athletic association of Euangelismos  |
| Athletic association YGEIA (Handball) |
| Volleyball club                       |
| Basketball club                       |
| Apoel                                 |
| Deukalion Kraneas                     |
| Wrestling club                        |

### **Events**

The city of Elassona is also home of the Holy Metropolis of Elassona in the territory of which, apart from the province of Elassona, the municipal unit of Deskati is also included. The memory of 'Agios Arsenos, is celebrated festively on 7<sup>th</sup> of May.

In the municipality two very important events are celebrated: The first is the celebration of the city's freedom, when the liberation of Elassona from the Turks is celebrated, on 6 October 1912 and the other and more famous event, due to its Pan-Hellenic projection, is the Pan-Hellenic Feast of feta cheese that is organized by the municipality of Elassona in collaboration with other institutions in September, every two years.

Many visitors come to Agioneri for the festival of Zwodohoy Pigis (2<sup>nd</sup> of May) for traditional Greek celebration with music, dance and song. Other celebration events are carried out on the Sunday of the Carnival and on Clean Monday.

In summertime, locals and foreigners flock together in Aetorahi in order to participate in fest of Agiwn Anargirwn (1 July), since the Cultural Association tries to give accent in the maintenance of pontian tradition with dances, songs and feasts accompanied by tasty pontian dishes.

One of the most famous festivals of the region is that of Saint Friday of (25 - 26 July) in Mikro Eleutheroxori, with traditional music and dance groups, live orchestras and known artists.

A lot of visitors visit Valanida on the occasion of the festival of Saint Trinity. The educative association organizes the day of the festival, traditional music and dance events and songs.

The festivals and events that are carried out in Galanovrysi in the festival of Saint George, the 1<sup>st</sup> of May and in the Carnival assemble many visitors. The Educative Association of the village tries to maintain vividly the traditions and customs with the traditional pontic groups and the festival of dance "Aradosivia", with international attendances that are carried out on the last Saturday of August. The festival has been established as important cultural institution of the region, with high artistic level. In the past it has entertained dancing groups from Ethiopia, Armenia, Bulgaria, Georgia, Yugoslavia, Cuba, Kurdistan, Romania, Russia, Sierra Leone, Sri Lanka, as well as crowd of Greek attendances.

Particularly perceptible is the attendance of many people, which gather in Drymos for the famous festival of Profitis Ilias of (20 July), where a feast with traditional music and dance groups and live orchestra is prganized. Separate is also the New year's revival of the custom "Koydoynaraiwn", as well as the traditional marriage and cheerful carnival customs. Other events with traditional dances are carried out on Sunday of Lazarus and Easter, where it is also being made the revival of the feast of "Lazarus" and "Lazarinas". Many local and foreigners come to Eyaggelismos on 2 May for the festival with traditional music and dance events.

Many visitors come to Kefalovryso on the occasion of the events that become in the festival of Agios Dimitrios (26 October) but also in order to live an unforgettable first of May in in the beautiful natural environment, next to the lake, in the place Mati (where of course they can also go fishing).

Many people also come to Palaiokastros for the festival of the Agios Kwnstantinos and Eleni of (21 May) and Agios Athanasios of (18 January). The Educative Association attends also for cheerful traditional happenings in the Carnival. In the village there are cafes and taverns that serve all time homemade tsipouro and chosen local products.



### 3.7. Archaeological resources of the municipality of Elassona

#### Archaeological sites

The municipality of Elassona constitutes a region with rich archaeological interest and rich historical tradition. This comes from the abundance of the region's monuments, archaeological sites as well as Byzantine elements (churches, etc). The table that follows includes all official archeological declared sites in the territorial region of the municipality of Elassona from the corresponding archaeological services.

Table 25: Declared archaeological sites in the municipality of Elassona

| Name   | Region      | Descriptive Details           |
|--|-------------|-------------------------------|
| Thessalian Olympus (ancient cities of Pithio, Olosson, Gonnoi, Limoni)     |             |                               |
| Church Agiwn Anargirwn in Livadi   |             | Livadi                        |
| Cave in place "Kalioura" in Aetoraxi                                       | Aetoraxi    | "Kalioura"                    |
| Cave in place "Gortsia" in Aetoraxi. Scenery of exceptional natural beauty | Aetoraxi    | "Gortsia"                     |
| Church Agiwn Anargirwn in Valanida   | Valanida    |                               |
| Church Agias Triados in Valanida   | Valanida    |                               |
| Church Profiti Ilia in Drymos  | Drymos      |                               |
| Turkish mosque in Elassona   | Elassona    |                               |
| Church Olympiwtisas in Elassona  | Elassona    |                               |
| Old customs building in Elassona   | Elassona    |                               |
| Zone determination developing control in the region of Elassona            | Elassona    |                               |
| Church Agias Kuriakis in Elassona  | Elassona    |                               |
| Church Eisodiwn Theotokou in place Varosi in Elassona                      | Elassona    | "Varosi"                      |
| Building in the streets of N. Fokas and N. Ouranou                         | Elassona    | Street N. Foka and N. Ouranou |
| Church Agiou Athanasiou in Evagelismos                                     | Evagelismos |                               |
| Church Agias Paraskeuis in Evagelismos                                     | Evagelismos |                               |
| Church Evagelismou Theotokou in Evagelismos                                | Evagelismos |                               |
| Church Kanalwn Karyas Olympou  |             |                               |
| Church Agiou Nikolaou in Karya   | Karya       |                               |
| Church Agiou Dimitriou Kryovrysi   | Kryovrysi   |                               |

|  |              |           |
|--|--------------|-----------|
| Church Agias Triados Sykaminea   | Sykaminea    |           |
| Church Metamorfoseos Dolixi  | Dolixi       |           |
| Mansion 'Taze' in Livadi   | Livadi       |           |
| Church Agiou Konstantinou in Livadi  | Livadi       |           |
| Church Agias Triados and the paintings of the chapel Agiou Xaralampous in Livadi | Livadi       |           |
| Church Agiou Antoniou in Kokkinogi   |              | Kokkinogi |
| Church in Sparmos  | Sparmos      |           |
| Church Agias Paraskeuis Kokkinopilos   | Kokkinopilos |           |
| Church Agiou Iwannou Prodromou in Pithio   | Pithio       |           |
| Church Panagias Theotokou in Pithio  | Pithio       |           |
| Church Agias Kuriakis in Pithio  | Pithio       |           |
| Church Timiou Staurou in Pithio  | Pithio       |           |
| Church Taxiarchwn in Pithio  | Pithio       |           |
| Church Agiou Nikolaou in Flampouro   | Flampouro    |           |
| Church Analipseos Swtira in Sykea  |              |           |
| Church Agiou Nikolaou in Mikro Eleutheroxori                                     |              |           |
| Church Agias Paraskeuis in Amouri  | Amouri       |           |
| Church Agiou Georgouli in Domeniko   | Domeniko     |           |
| Church Visarionos in Domeniko  | Domeniko     |           |
| Church Geniseos Theotokou in Domeniko  | Domeniko     |           |
| Church Agiou Georgiou in Domeniko  | Domeniko     |           |
| Church Agiou Dimitriou in Domeniko   | Domeniko     |           |
| Church Agiou Athanasiou in Domeniko  | Domeniko     |           |
| Church Agiou Nikolaou in Domeniko  | Domeniko     |           |
| Church Agiou Georgiou in Magoula   | Magoula      |           |
| Church Agias Paraskeuis in Sykea   | Sykea        |           |
| Church Agiou Dimitriou in Sykea  | Sykea        |           |
| Church Agias Paraskeuis in Azoro   |              |           |
| Church Agias Triados in Gerania  | Gerania      |           |
| Church Agias Triados in Giannota   | Giannota     |           |

### **Buildings of traditional architecture**

| <u>BUILDING</u>   | <u>DESCRIPTION</u>                   | <u>PLACE</u> |
|---|--------------------------------------|--------------|
| TOWER OF LAZAROS<br>MAMTZOURIDIS                                      | Property of Lazaros<br>Mamtzouridis  | Tsaritsani   |
| OIKONOMEIOS SCHOOL  |                                      | Tsaritsani   |
| OLD CUSTOMS BUILDING  |                                      | Elassona     |
| MANSION "TAZE"  | Property of Maria Anastasiou<br>Taze | Livadi       |
| TOWER   | Property of Sofia Vougiaza           | Tsaritsani   |
| TOWER TSARMAZAXOU   |                                      | Tsaritsani   |
| BUILDING IN THE STREET<br>MITROPOLITI VEROIAS<br>IAKOVOU POLUKARPOU 6 | Property of Athanasios<br>Kontofakas | Tsaritsani   |

### **3.8.Natural resources and natural environment of the municipality of Elassona**

#### **Meteorological and climatic characteristics**

The climate of the Municipality of Elassona is characterized as continental and concretely transient from Mediterranean to central-european, because the big annual thermometric breadth (> 200C) the hot and dry summer and the cold and humid winter. This thermometric breadth however decreases when the height of mountainous regions converging to corresponding central-european increases.

#### **Hydro-geologic data**

Regarding the surface and the underground waters of the region of Elassona we can see that:

##### **Surface water**

The region cross the river Titarisios or Voulgaris (tributary of Penaeus), which collects the waters of the basin that covers the bigger part of the province of Elassona. In the Titarisios river two big torrents contribute: the Elassonitis, that assembles waters from the hills of Olympus and the Xerias, that springs from the region of Deskati. An important supply of water is also the sources of Amoyrioy and Kefalovrysoy, in which a small artificial lake has been created. In the region, there aren't any natural lakes only small artificial, which were created with dams

and serve mainly irrigation activities. Between the mountains are valleys, like the valley of Potamias, of Karya and other. There are also streams in the regions with supply that present big seasonal fluctuations and is influenced by the height of rainfalls. From the existing rain falling data it appears that the annual rainfall is satisfactory and this explains the manufacture of the dams in Livadi and in Agioneri, as well as the number of smaller irrigation dams.

### **Underground water**

In the region of Elassona there are a lot of Community drillings that are used for water supply. The big number of drillings that exist in the region and the drillings that are used to cover the irrigation needs and livestock-farming in combination with the high benefits that they present, implies the existence of important underground aquatic potential. The rich underground water table has been also certified by hydro-geological studies.

Barrages have been constructed aiming at the creation of the aquatic pocks with ecological positive consequences not only for the flora and the fauna of the region but also for the enrichment of the underground water table. These works aim in the saving of aquatic resources, the more efficient use of those resources, the improvement of the conditions of irrigation, the improvement of production and the increase of the income.

### **Natural resources**

The region of study is characterized by an appreciable and rich natural environment. In the region the mountainous mass of Olympus the biggest mountain in Greece and in Balkans dominates. It covers an area of roughly 500 sq.km., diameter of 25 km and perimeter of 80 km.. Characteristic is that the 2/3 of it is found in the limits of the municipality of Elassona. As for the flora, we see mainly low bushes with most characteristic of all, the thyme. A little higher, in 300 - 700m, we see the second area of vegetation, named "makia" which is

constituted mainly by poyrnaria, koymaries, blackberry bushes, platania, sfendamia, paliyria, leykes, ities and reikia.

Going up above and reaching up to 2000m we realize that the flora of Olympus is mainly forestry. In there, the pine (well-known "rompolo", the pine of Olympus) dominates, while one can see other species of trees such as kranees, ptelees, firs and beeches. From 2000 m. and above, the flora is Alpine and it is composed of smaller plants and flowers, because the snow dominates here in most months of the year. Generally, in the Olympus there have been recorded 1700 species of plants, a number that constitutes the 25% of the Greek flora, with more than 23 of those, which thrive only in Olympus and nowhere else in the world. For this reason botanists from all over the world visit the mountain for study. The fauna of Olympus is also rich and includes important variety of species. In the mountain live almost all mammals of Greek forests, wolves, deer, coyote, wild goat, wild boars, koynavia, hares, badgers, squirrels and other. In Olympus also live a lot of species of birds (above 100) such as eagles, vultures, woodpeckers, falcons, partridges, tsixles, kotsyfia, nightingales as well as the well-known butterflies of Olympus.

For the protection of Olympus three protection arrangements in total exist:

- Olympus according to the parliament ordinance 9-6-1938 was nominated as a National Park – the first that was nominated in our country, and from the oldest in the world – and includes the one tenth of (1/10) its mountainous mass(roughly 44,5 sq.km. on a total of 500 sq. km.)

- In the 15-12-1981 it was declared "Reserve of Biosphere" from the Unesco, under the monitoring of the UN. Its declaration was considered necessary for the protection and the safeguarding of its sensitive natural environment.

- The program of the European Union "Natura 2000" (Nature 2000).

Also all the region of Olympus has been characterized by the Ministry of Culture, according to decision 21159/939 from 18-06-1987, as an archaeological and historical region that has direct relation with the history of Hellenism.

The ecosystems of Olympus constitute a monument of nature not only for the Greeks, that's why they must be protected from the human interventions such as the illegal hunting, the fires, rubbish dumps and the land clearances. Olympus must be protected, for its history, for its mythology of the twelve gods of ancient Greece, for its natural environment and in order to contribute in the agro-touristic growth of the regions next to it. Also, the National Park of Olympus must be reorganized and function effectively for the protection of this mythical mountain. In this frame, the triptych of growth for the region is NATURE – HISTORY-CULTURE and it is connected immediately with the local products and mainly with the veterinary surgeon products.

PICTURE 4 – Olympus



More specifically, the undertaking of collaboration in trans regional level with all the adjacent municipalities, such as the municipalities of Dion of - Olympus, Katerinis, Tempon and the municipality of Serbion-velvento could contribute considerably in the protection of this mythical mountain and to its growth with actions of ecotourism growth via the creation of a Network of Ecotourism Growth and Environmental Education of the region of Ellassona.

The action of this Network mentioned above should be connected with the achievement of certain objectives that will bring the desirable results for the growth of Olympus. Indicatively these actions should concern:

- In the creation of a Model Mountaineering Centre in the Kokkjinopilo.
- In the creation of ecotourism shelters.
- In the organization of the existing mountaineering shelters in the Places, Vrysopoyles and Xristaki.
- In the creation of a forest-village in Livadi.
- In the consolidation of the archeological sites of Perraivia
- In the creation of an online library of the World's Mythology in Olympiada
- In the promotion of the region's local products
- In the promotion of alternative forms of sports
- In the promotion of the region near the mount Olympus

In the sector of the energy mining, particularly important is the layer of lignite of Ellassona, which currently is not under exploitation. In the basin of Ellassona and more specifically in the region's north-west department are located two lignite layers near the settlements of Domeniko and Amouri. Moreover, in regard to the excavation of inert materials, the mining region in Agioneri Ellassonas has been determined.

The exploitable reserves of the two layers are appreciated in 155 mill. tons of lignite with middle Inferiorly Thermogenic Force, roughly 2100 Kcal/kg. According to the opinions of the NATIONAL ELECTRICAL COMPANY, in case of an energy exploitation of these layers, it is appreciated that these reserves would suffice roughly for 45 years for the power supply of a station of production of electric energy (force 500 MW roughly). The potential integration of a Lignite Unit in the region of Ellassona will be appreciated and investigated in next stages, taking into consideration the new shaped conditions in the sector of purchase of electric energy in the frame of total national energy planning (NATIONAL ELECTRICAL COMPANY).

In regard to the exploitation of the lignite layers of Ellassona, the municipal council of Ellassona decided unanimously and with the assent opinion of other social units (eg Working Centre, Commercial Association etc.) that they do not wish the industrial development via the exploitation of the lignite reserve and they propose the form of growth via biological and other environment-friendly actions). Such adevelopment via the exploitation of the lignite reserves not only

does not constitute developmental prospect for the wider region but will involve desertification of an important piece of the cultivable extent, with incalculable repercussions for the environment. The fact that the government tries to extend the energy background of the country and decreases its energy dependence from the other countries is respectable but this must be done through the direction in energy fields, friendly to the environment and to the person.

### **Cave Oxyas**

In southern hills of Olympus is found a cavern, a natural underground cavity that communicates with the surface with a visible aperture. It is speculated that the entry of this cave is near the settlement Palaia Sykaminea and particularly in the place "Mandrinia", and that it communicates with the settlement of Karya. In this cave exist stalactites and it presents a historical, archaeological, paleontological and tourist interest. The cave was used as a place of residence, grave and shelter for the first persons of Olympus. The archaeological interest is supported by the existence of an ancient Castle on the top of the mountain, while from historical view it is said that the chieftain of Olympus, Gewrgjos Tzaheilas, hid his weapons in this cave. Consequently, the exploration and exploitation of this cavern is necessary, which is able to constitute a pole of attraction for many visitors.

Still, in the region are located many caves, which can in the future constitute a layer of new tourist proposals. Apart from the Cave of Oxyas, indicatively they can be mentioned: a) The Cave "Apati Trypa" in the municipal unit of Kefalovryso with length of 1800 m., v) The Spilaiovarathro Valanidas, c) The Spilaiovarathro Palaiokastro, d) The Cave Moria Karyas, e) The Spilaiovarathro Skamnia's Olympus f) The Cave Melissotrypa in Ellassona, g) The Cave of Tsaritsani, h) The Cave Arkoydotrypa in Sarantaporo, which are rich in stalactites and stalagmites and of course important efforts of exploration for their exploitation must start. Caves also exist in the region Gkortsia of Aetoraxi in Ellassona, which has been characterized as "Landscapes of particular natural beauties" (936V/1971).



### **Environmental dangers that the region faces**

It is a fact that, the threats for the environment from the human interventions in all the sectors become continuously more intense. However, the activities with developmental character cannot stop, and so the process of development must have as little repercussions as possible for the environment. The term "viability" does not concern only in the wealth-producing resources but also in the various characteristics of soil, in the climatic conditions, in the protection and promotion of the cultural heritage, in the manmade environment. Particularly in a regional unit, as Larissa, and by extension in a municipality such as Ellassona, with their particular characteristics (agricultural exploitations, intensive culture, pesticides, etc) strict policies must be followed with regard to the environmental protection but also in the re-establishment of erroneous movements and to the future planning. The important environmental factors, that must be given into consideration are the aquatic resources (Ellassonitis river, etc), their protection, enrichment and their prudent management. Phenomena such as desertification, the exhaustion and pollution of the underground and surface aquatic potential must be minimized. The problems that are related to water are attribute to a line of reasons such as the lack of planning, the bad management of aquatic reserves, the destruction of forests, the scorn of natural laws that concern the hydrological circle, the reduction of rainfalls because of the climatic changes, etc. For the protection, the ecological balance and the increase of competitiveness the infrastructure for the withhold of the wintry flows, the storage of wintry waters of the rivers and the springs and of improvement and saving of irrigation water, must be improved.

## CHAPTER 4

### **Economic and urban characteristics of the region under study**

#### **4.1. Economic activity of the municipality of Elassona**

The municipality of Elassona has mainly an agricultural veterinarian character. This is due to the intense morphological terrain, to the under developed natural and cultural resources, to the lack of industrial units and to the limited presence of craft-based units. The limited choices for employment and the low rural income force a lot of residents to migrate from the settlements to the city of Elassona and from Elassona to the capital of the prefecture, Larissa. A small relative percentage migrates to foreign countries in order to secure better conditions.

#### **Agriculture**

In the municipality of Elassona according to the data of the National Statistic Service, in 2000 were recorded 5.568 agricultural exploitations, by which the 4.029 exploitations are irrigated ( 72%), which is a high percentage. Most of the exploitations are located in the municipal unit of Elassona, while fewer are located in the municipal community of Karya.

Regarding to the irrigated lands, they occupy 85.686,1 str. in total, from which the bigger percentage (36%) is included in the municipal unit of Elassona followed by the municipal unit of Livadi with 18,5% and the municipal unit of Olympus with 15,8%. Respectively the irrigated lands correspond in level of municipality in 66.352,7 str. and present distribution similar to that of the irrigated and their biggest percentage is located in the municipal units of Elassona, Livadi and and Olympus.

Table 26: Agricultural exploitations and irrigated lands per municipal unit/community

| Geographical level       | Number of farms | Irrigated farms | Irrigating lands | Already irrigated lands |
|--------------------------|-----------------|-----------------|------------------|-------------------------|
| M.U. ANTIXASIWN          | 215             | 114             | 2.090,4          | 2.041,4                 |
| M.U. ELASSONAS           | 1.894           | 1.330           | 31.218,6         | 21.985,7                |
| M.U. LIVADIOU            | 507             | 283             | 8.033,8          | 8.028,8                 |
| M.U. OLYMPOU             | 753             | 572             | 13.563,8         | 10.457,8                |
| M.U. POTAMIAS            | 969             | 804             | 15.890,7         | 13.815,1                |
| M.U. SARANTAPOROU        | 780             | 544             | 6.894,7          | 5.972,6                 |
| M.C. VERDIKOSSIS         | 281             | 237             | 3.436,7          | 2.431,7                 |
| M.C. KARYAS              | 169             | 145             | 4.557,4          | 1.619,6                 |
| MUNICIPALITY OF ELASSONA | 5.568           | 4.029           | 85.686,1         | 66.352,7                |

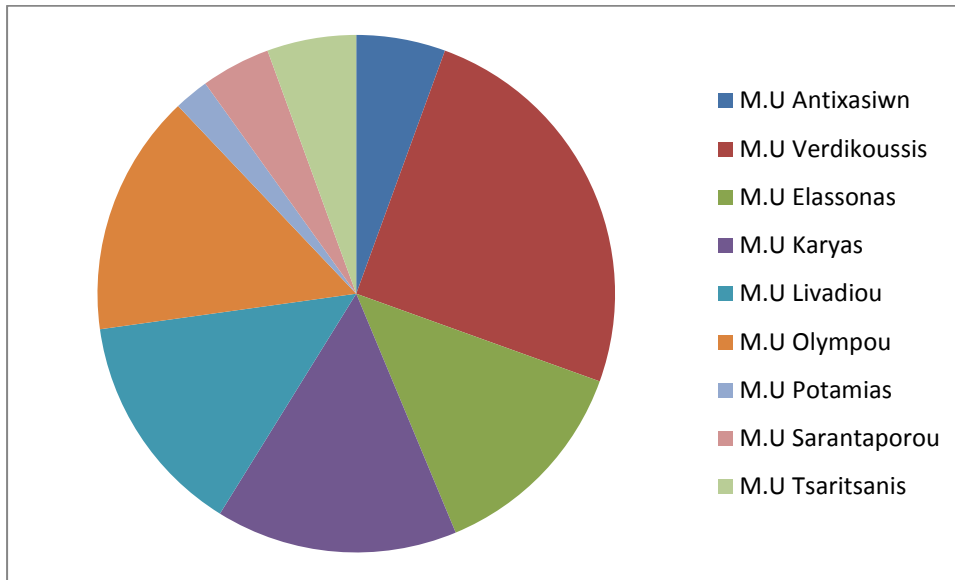
The biggest rate of the exploitable ground is covered by annual crops which occupies an extent of 252.267,2 str. and corresponds in 4.810 exploitations. The bowery crops follow with 200.719,4 str. that corresponds in 4.347 exploitations. Considerably less ground occupy the remaining crops and specifically the vineyards with 9.174,3 str., the meadows – pasture lands with 1.716,8 str., the family kitchen gardens with 14.724,6 str and the remaining crops with 533,7 str. Regarding the analysis at municipal unit level the municipal unit of Elassona presents the higher percentages of annual crops and arborized crops. The higher percentage of vineyards presents the municipal unit of Sarantaporo, also very high percentage of vineyards presents the municipal units of Elassona and Potamia, while the higher percentage in kitchen gardens has the municipal unit of Livadi. Regarding the fallows, in the total of the municipality occupy 25.245,4 str. from which the bigger percentage 53,6% is included in the municipal unit of Livadi.

Regarding to the distribution of exploitations and cultivated land by municipal unit it is observed that the biggest number of exploitations is found in the municipal unit of Elassona as well as the bigger percentage of cultivated land of 26,4% that corresponds in 158.314,8 str. followed by the municipal units of Olympus and Sarantaporo with percentage of 16% each, the municipal unit of Potamia with percentage of 14,8% and the municipal unit of Livadi with percentage of 14%. The rest municipal units assemble much smaller percentages of cultivated lands.

Table 28: Total of exploitations and cultivated lands

|                          | <b>EXPLOIT.</b> | <b>LANDS</b> | <b>PERCENTAGE</b> |
|--------------------------|-----------------|--------------|-------------------|
| M.U. ANTIXASIWN          | 1.027           | 35.424,6     | 5,9%              |
| M.U. ELASSONAS           | 4.842           | 158.314,8    | 26,4%             |
| M.U. LIVADIOU            | 1.632           | 84.062,4     | 14,0%             |
| M.U. OLYMPOU             | 1.909           | 96.307,8     | 16,0%             |
| M.U. POTAMIAS            | 2.827           | 88.903,6     | 14,8%             |
| M.U. SARANTAPOROU        | 2.244           | 96.196,8     | 16,0%             |
| M.C. VERDIKOSSIS         | 665             | 13.866,4     | 2,3%              |
| M.C. KARYAS              | 511             | 27.501,8     | 4,6%              |
| MUNICIPALITY OF ELASSONA | 15.657          | 600.578      | 100,0%            |

Diagram 5: Distribution of cultivated lands per municipal unit



|                  |        |
|------------------|--------|
| M.U Antixasiwn   | 5,90%  |
| M.U Verdikoussis | 26,40% |
| M.U Elassonas    | 14%    |
| M.U Karyas       | 16%    |
| M.U Livadiou     | 14,80% |
| M.U Olympou      | 16%    |
| M.U Potamias     | 2,30%  |
| M.U Sarantaporou | 4,60%  |
| M.U Tsaritsanis  | 5,90%  |

According to the next table the medium extent of exploitations in level of the municipality of Elassona is 53,74 str. and the medium extent per land is 7,45, data that confirms one from the basic structural problems of the rural sector in Greece that is the splitting of the exploitations in a lot of lands.

In level of municipal units the higher price of medium land per exploitation marks the municipal unit of Livadi with 82,9 acres and the municipal community of Karya with 81,85 acres, while the lower price presents in the municipal community of Verdikoysas. Regarding to the medium extent per land the higher prize has the municipal unit of Livadi with 18,2 acres and follows the municipal community of Verdikoysas with 11,83 acres, while the lower price has the municipal community of Karya with 5,02 acres.

### **Agricultural land of great productivity**

In the prefecture of Larissa the agricultural ground of high productivity includes mainly: a) the total of flat land that is in general irrigated, v) the semi mountainous extents regions with permanent crops in the province of Agia, c) the riverine area in the province of Ellassona.

### **Certified products - Biological agriculture**

Regarding the local products, the region of Ellassona is widely known as a tobacco growing region. At the same time however, it also produces the feta cheese, which is internationally recognized, most excellent quality dairy products, the vegetable products of Kefalovryso, the traditional pies (cheese pie, kloyropita), sweets, sour and sweet frumenty, honey, almonds, oregano, as well as other local products. Worth of reporting are also the exceptional quality handmade cigars called "DOMENICO" of the municipality of Potamia, which have a great success. All these biological and traditional products, as the sweets and the pastas, can be found individually in small enterprises or in Feminine Cooperatives (Livadi). Most municipal units are known for their biological products (M.U.. Sarantaporoy, M.U. Antixasiwn, M.U. Verdikoysis, etc).

Overall, it can be said that the municipality of Ellassona presents a particular interest from the side of animal production. A big activity is developed in the transformation of milk for the production of dairy products. Remarkable is the fact that in the region functions over 17 cheese dairies.

Big interest present also the dairy products of protected name of origin that they are produced in the municipality and which are the feta cheese, the Galotyri, the Kaseri, Manoyri and Mpatzos, which are sold allover Greece and abroad. Recently Ellassona acquired the advantage for the production of certified products "Arnaki Ellassonas" and "Katsikaki Ellassonas."

Concisely, the main problems of this rural sector are:

- The lack of sufficient quantities of water for the irrigated crops,
- The lack of planning and the irrational exploitation of aquatic resources,
- The small size agricultural exploitations,
- The lack of complementarity in animal and plant production,
- The downgraded pasture lands,

- The lack of training for farmers,
- The organizational lacks in the circuit of production, transformation and marketing of products that combine with the lacks in the infrastructures (lack in building, mechanical equipment and services).

### **Livestock farming**

In the municipality of Elassona exist particularly big numbers of animal population that constitute the basic source of income for the residents. This region assembles the biggest population of sheep and goats as well as cattle, in combination with a region of the province of Tyrnavos. The extensive mountainous pasture lands encourage the growth of livestock-farming, which constitutes the more dynamic sector in quantity and value, and contributes with the subsidies at 45% of the crude total income of the region. In the region of study are raised the 35% of sheep and goats of all the prefecture of Larissa and simultaneously are produced dairy products of very good quality, which are also easily promoted not only in the local market but in other markets as well.

However, a stagnation and a lack of important movements for investments in the region is observed, after the younger ages do not follow the sector of livestock-farming. In opposition, the cow farming presents augmentative tendencies (organized units, in stables or in free pasture). Thus, if someone wanted to create a local developmental program for the region, this would pass via the growth of livestock-farming and more specifically the breeding of sheep and goats, which attributes to the 68% of total income of the animal production in a level of province.

### **Forest areas**

In the region exist pine forests, firs, dryas and beech, that produce useful timber and firewood but their exploitation is not satisfactory enough. This is due to the lack of important infrastructure, the forest road network that cannot serve simultaneously the livestock-farming and the mountainous tourism and to the fact that the required equipment for timber harvesting and wood processing does not exist. A negative factor in the growth and exploitation of the forest wealth of the

region constitutes the limited projection of the forest as a resort of relaxation and recreation.

### **Economically active population by productive sector**

Regarding the economically active population of the municipality, this includes 14.037 individuals and it constitutes a percentage of 43,6%, while the remainder constitute the economically inactive population.

Table 30: Economically active and inactive population per sector of production in the municipality of Elassona and in the municipal units

| Municipal Units/Communities | Economically Active |          |            |       | Economically inactive |
|-----------------------------|---------------------|----------|------------|-------|-----------------------|
|                             | Total               | Employed | Unemployed |       |                       |
|                             |                     |          | Total      | Young |                       |
| M.U. ANTIXASIWN             | 1.385               | 1.211    | 174        | 94    | 1.831                 |
| M.U. ELASSONAS              | 5.818               | 5.243    | 575        | 440   | 7.050                 |
| M.U. LIVADIOU               | 1.163               | 1.019    | 144        | 56    | 1.606                 |
| M.U. OLYMPOU                | 1.393               | 1.302    | 91         | 62    | 1.804                 |
| M.U. POTAMIAS               | 1.935               | 1.859    | 76         | 57    | 2.411                 |
| M.U. SARANTAPOROU           | 1.210               | 1.108    | 102        | 90    | 1.902                 |
| M.C. VERDIKOUSIS            | 859                 | 763      | 96         | 73    | 985                   |
| M.C. KARYAS                 | 274                 | 260      | 14         | 14    | 539                   |
| MUNICIPALITY OF ELASSONA    | 14.037              | 12.765   | 1.272      | 886   | 18.128                |

In level of municipality the rate of employment in 2001 amounts in 90,9% which is considered high enough. In level of municipal units, the municipal unit of Potamia presents the higher employment rate with percentage of 96,1% and follows the municipal community of Karya with percentage of 94,9%. The lower percentage presents the municipal unit of Antihasiwn with 87,4% and the municipal unit of Livadi with 87,6%.

Regarding the employment by sector of economic activity an important reduction is marked for the people occupied in the primary sector of a percentage 24,7%, in the sector of manufactures at 17,6%, in the sector of transports and storage at 17,6%, in the sector of trade at 3,4% and in the sector of education at 2,2%. An increase is marked for the employments in the sectors of transformation at 9,1%, in hotels, cafes and taverns at 49,7, the public administration and generally in all the tertiary sector.



Table 31: Employment at sector in the municipality of Elassona in the decade 1991 – 2001

| <b>MUNICIPALITY OF ELASSONA</b>     |             |             |                   |
|-------------------------------------|-------------|-------------|-------------------|
| <b>Sectors of economic activity</b> | <b>1991</b> | <b>2001</b> | <b>Change (%)</b> |
| A.Agriculture,Livestock             | 9098        | 6852        | -24,7%            |
| B.Fishing                           | 1           | 1           | 0,0%              |
| C.Mines and Quarries                | 6           | 6           | 0,0%              |
| D.Manufacturing industries          | 977         | 1066        | 9,1%              |
| E.Electicity,water,gas supply       | 56          | 59          | 5,4%              |
| F.Contructions                      | 966         | 796         | -17,6%            |
| G.Wholesale, retail                 | 1044        | 1008        | -3,4%             |
| H.Hotels, restaurants               | 398         | 596         | 49,7%             |
| I.Transports., communication        | 393         | 324         | -17,6%            |
| J.Financial institutions            | 79          | 87          | 10,1%             |
| K.Operating activities              | 102         | 190         | 86,3%             |

|                                  |     |     |         |
|----------------------------------|-----|-----|---------|
| L.Public administration.         | 475 | 559 | 17,7%   |
| M.Education                      | 542 | 530 | -2,2%   |
| N.Health.                        | 219 | 230 | 5,0%    |
| New unemployed                   | 0   | 0   | -       |
| Services of social aspect        | 201 | 233 | 15,9%   |
| P.Domestic servants              | 6   | 20  | 233,3%  |
| Q.Organizations and institutions | 1   | 0   | -100,0% |

### **Unemployment**

Regarding to the unemployment in level of municipality it reaches the 9,1% with the young persons to be affected more as the percentage of unemployed for the young persons to amount in 6,3%. The higher rates of unemployment have the municipal unit of Antihasiwn with 12,6% and the municipal unit of Livadi with 12,4%, while the lowest percentage is located in the municipal unit of Potamia with 3,9%. In the unemployed of young persons the higher percentage is located in the municipal community of Verdikoysis with 8,5%, while the lowest is located in the municipal unit of Potamia with 2,9%. It appears therefore that the

municipal unit of Potamia presents the most optimal picture in sizes of employment and unemployment from all the municipal units of the municipality of Ellassona.

Table 32: Proportion of employed and unemployed persons per municipal unit

| Municipal Units          | Employed | Unemployed |       |
|--------------------------|----------|------------|-------|
|                          |          | Total      | 'new' |
| M.U. ANTIXASIWN          | 87,4%    | 12,6%      | 6,8%  |
| M.U. ELASSONAS           | 90,1%    | 9,9%       | 7,6%  |
| M.U. LIVADIOU            | 87,6%    | 12,4%      | 4,8%  |
| M.U. OLYMPOU             | 93,5%    | 6,5%       | 4,5%  |
| M.U. POTAMIAS            | 96,1%    | 3,9%       | 2,9%  |
| M.U. SARANTAPOROU        | 91,6%    | 8,4%       | 7,4%  |
| M.C. VERDIKOSSIS         | 88,8%    | 11,2%      | 8,5%  |
| M.C. KARYAS              | 94,9%    | 5,1%       | 5,1%  |
| MUNICIPALITY OF ELASSONA | 90,9%    | 9,1%       | 6,3%  |

### Structural Characteristics of the exploiting farms

From 1991 up to 2001, the various reformations of crops, which made in the frame of Common Rural Policy (CAP) and of the implementation of the Community Frames of Support (KPS), led to a relative reduction of the number of the exploitations not only to the municipality of Ellassona but also to the prefecture of Thessaly in general.

### The Common Agricultural Policy of the European Union

The change of the rural policy of the European Union brought drastic changes in the priorities and the choices for the agriculture, particularly in those forms of agriculture which were connected with the highly subsidized intensive culture of irrigated plains. Therefore, the subject of compatibility and cohesion of objectives of the revised CAP with the choices of agricultural growth which is forecasted to serve the rural part of the total developmental proposal for the municipality of Ellassona is placed.

The traditional use of the productive activities of the primary sector creates dangers, that can be avoided only if a change in the integrated farming, the culture

of biological products, in Products of Name of Origin, in agro-touristic activities, occurs. For all these actions it is very important, so much for the agriculture – livestock-farming and for the total viable growth of the region, the safeguarding of natural environment and its protection from the overexploitation.

In this direction and despite the existence of many and important institutions of support and innovation, a low cover in the technological needs for the development of new activities in the primary sector is observed, like the use of new technologies and methods of production, manufacture, transformation and packing of rural products, certification and modern methods of disposal of products. Moreover, in the Prefecture of Larissa there aren't any enterprises of high technology in the sectors of production of rural technologies or biotechnology.

### **Secondary sector**

In the wider region of Ellassona the secondary sector of production (industry, manufacture) is not particularly developed because it is limited in small family units, that concern mainly the sectors of transformation of produced agricultural veterinarian products. Units of such type are the cheese dairies and the flour mills.

### **Tertiary sector (tourism and services)**

The tourism in the region is not particularly developed, as there is insufficient infrastructure and the tourist resources of the region have not been developed suitably. Only in Ellassona and in few other settlements (Karya, Livadi, Verdikoysia, Kokkinopilos) exist lodgings and suitable infrastructures capable of attracting visitors. However, the region has archaeological sites (Azwros, Pythio), important Byzantine and post byzantine monuments (Virgin Mary Olympiwtsa, Abbey Kanalwn, Abbey of Analypseos, etc), natural beauty (National Park of Olympus), suitable regions that are advisable for open air activities (walk, mountaineering, ascension, mountainous mountaineering, crossing of canyons, riding, ski, etc) and beautiful routes in marked paths (E4, O2) which have not been developed sufficiently, so that they can attribute economically, create

incomes for the residents of the region and succeed in retaining the young people in their place of origin.

In the region of the municipality of Ellassona are hotel lodgings, rented rooms, guest houses and mountainous shelters, which serve the needs of visitors.

Regarding the future growth of the tourist sector for the region of Ellassona, the existing municipal authority believes that the seasons of the ski centers have long expired. They believe in other sorts of tourism (archaeological, religious, agro-touristic, mountaineering, walk, mountainous biking, etc), culture and biological veterinary products of Ellassona. They believe that the growth of the region can be achieved through a model of growth which takes into consideration the comparative advantages of the region, the tradition of place and the soft approach of such action.

## **4.2.Urban characteristics of the municipality of Ellassona**

### **Settlement organization of the municipality of Ellassona**

Larissa constitutes a 1<sup>st</sup> level settlement, as the capital of the Prefecture, while regarding the municipality of Ellassona the residential hierarchy is as follows:

Ellassona, seat of the homonym municipality, constitutes a 2<sup>nd</sup> level settlement because according to the following sectors, there have been sited the following:

Health-Welfare: Medical center

Education: 1 high school, 1 senior high school, vocational training school

Culture: Municipal music school

Sports: Municipal football stadium, football clubs of Ellassona

Remaining services: Forest inspection, County court, Land registry, Office of Urban planning, Police department, tax office, GREE POST, GREEK TELECOM, NATIONAL ELECTRICAL COMPANY, Banks, ORGANIZATION OF SOCIAL SECURITY, ORGANISATION FOR THE OCCUPATION OF THE WORK FORCE. However, Ellassona while it is reported as a 2<sup>nd</sup> level settlement, does not have the social and the administrative equipment that the prefectural centers suppose

to have, which is expected given that it does not constitute the capital of the prefecture. It constitutes an appreciable center, with social and administrative equipment which approaches that of the other settlements of the 3<sup>rd</sup> level but more strengthened.

### **Institutional framework and status (approved plans, traditional villages, etc)**

Traditional houses, old stone bridges, watermills, compose the landscape of the settlements of the municipality of Elassona, which is inherently linked with the tradition and the activities of the residents.

The urban operation in the overwhelming majority of the settlements of the municipality is common: the square constitutes the main public space, where at both sides are assembled most of the uses (commercial, leisure and other). The residences are mainly two-storey with a stone or tile roof and narrow windows.

The bridges that today stand picturesque and forgotten but in the past they connected the settlements are characteristic. Most of them are single arched, stone and made with a lot of craftsmanship. The most important and known bridge is the bridge of Elassoniti in Elassona and Giannainas.

Near the running waters of the rivers, the residents constructed mills that functioned with the force of water and were useful for the milling of cereals or the production of olive. The last watermills stopped their function in the late 1970's.

### **Traditional settlements**

In the wider region of Elassona the mountainous traditional settlement of Livadi Elassonas exists. It is located about 35 km from the city of Elassonas. The dry climate and the vital place of – It is found in the point where the mountain ranges of Olympus Kamvoyniwn and Pierias are met – justifies the great number of people who visit the region.

In the municipality of Elassona, however, a characterized traditional settlement does not exist, even if it is particularly promoted the highlight of the traditional settlements given the place, the particular architectural structure, the tradition, the particular local products, the cultural and historical traditions, which can constitute poles of attraction for visitors from all over Greece and from abroad.

## **Institutionalized urban development plans**

From the total of settlements of the municipality, only Ellassona has an approved General Urban Drawing from 1988 (Decision of the Ministry of Environment Planning and Public Works 79033/4303. Tsaritsani has an approved General Urban Drawing (Decision 80788/5306/5-10-1993). All the remaining settlements have no General Urban Drawing.

### **4.3. Technical infrastructure**

#### **Transportation – Traffic**

The municipality of Ellassona crosses:

- Highway 13, which consists the secondary National Road Network.
- Highway 26, which consists the tertiary National Road Network.

Parts of the secondary provincial road network and more specifically:

- The provincial road no 13 Tyrnavos - Melouna – Ellassona
- The provincial road no 17 Siding of Ellassona and National Road Larissa - Kozani.
- The provincial road no 18 Ellassona – Tsaritsani.
- The provincial road no. 19 Ellassona – Agioneri.

The road connection of the municipality is satisfactory but more improvements can be done. The table that follows, presents the kilometric distance of each settlement from the seat of the municipality.

Table 34: Road Distances of the settlements from the seat of the municipality

| <b>Settlements</b>          | <b>Kilometric distance</b> |
|-----------------------------|----------------------------|
| <b>Primary road network</b> |                            |
| Kranea                      | 26                         |
| Akri                        | 43                         |
| Loutro                      | 33                         |
| Verdikoussa                 | 25                         |
| Ampelia                     | 22                         |
| Agioneri                    | 6                          |
| Aetoraxi                    | 11                         |

|                         |    |
|-------------------------|----|
| M.Eleutheroxori         | 8  |
| Valanida                | 15 |
| Kleisoura               | 24 |
| Galanovrysi             | 4  |
| Drymos                  | 8  |
| Evangelismos            | 8  |
| Kefalovryso             | 12 |
| Palaiokastro            | 16 |
| Stefanovouno            | 4  |
| Karya                   | 38 |
| Dolixi                  | 21 |
| Kallithea               | 12 |
| Kokkinogi               | 20 |
| Kokkinopilos            | 30 |
| Sparmos                 | 20 |
| Flampouro               | 21 |
| Skopia                  | 17 |
| Amouri                  | 22 |
| Vlaxogianni             | 25 |
| Domeniko                | 11 |
| Magoula                 | 15 |
| Megalo<br>Eleutheroxori | 33 |
| Mesoxori                | 22 |
| Praitori                | 18 |
| Sukea                   | 15 |
| Kaluvia                 | 17 |
| Azoros                  | 18 |
| Gerania                 | 18 |
| Giannota                | 22 |
| Likoudi                 | 14 |
| Milea                   | 21 |
| Srantaporo              | 27 |
| Tsapournia              | 30 |
| Farmaki                 | 23 |
| Livadi                  | 35 |
| Tsaritsani              | 4  |

Regarding the quality of road network, inside the settlements are observed problems in the paving due to the age of the paving and to the works that are being done. The road networks that connect the municipal units they have many problems that are related to the closeness and to the great number of turns that they have.

## **Urban - Long Distance Transportation**

The municipality of Ellassona is served by a satisfactory daily program of itineraries of long distance Buses. Daily, there are itineraries that start from Ellassona to the remainder settlements of the municipality. Many settlements are also served by passing itineraries, which have more distant destinations but facilitate the residents of the region. Moreover, Ellassona is connected with the capital of the prefecture, Larissa, with more than 15 itineraries in a daily bases.

## **Energy**

The prefecture of Larissa crosses two electric energy transportation lines of 400 KV (double circuit) that belong in the interconnected national system and connect the energy center of thermoelectric power stations of Ptolemaida and Kozani with the wider region of Athens. It regards the following air lines of high tendency: a) Kardia - Larissa - Larymna and b) Agios Dimitrios - Larissa - Larymna. According to the planning of the NATIONAL ELECTRICAL COMPANY, it is not forecasted the creation of a new transport line of electric energy > 400 KV.

Regarding the alternative energy forms, the wider region of the municipality of Ellassona appears to allocate exploitable wind power potential, without however the existence of an official recording of that power, while the production of electric energy via the solar panel systems are minimum due to the big cost of those systems.

## **Irrigation**

The municipality of Ellassona serves its needs for water supply from the Ellassona's Municipal Enterprise of Water supply and Sewerage (DEYAEL). In the wider region of Ellassona, there have been manufactured and they are drawn dams and tanks, works that facilitates the needs of irrigation, as it also appears in the table that follows:



Table 35: Irrigation Projects of the municipality of Elassona

| <b>Dams and Tanks</b> |                               |                                |
|-----------------------|-------------------------------|--------------------------------|
| <b>Name/Place</b>     | <b>Watershades</b>            | <b>Main purpose</b>            |
| Kalouda Elassonas     | Voulgari (Penaeus confluent)  | Irrigation with Penaeus runoff |
| Agioneri              | Elassonitikos                 | Irrigation 16.000-20.000 acres |
| Livadi                | Lakkas Rema                   | Irrigation 4.000-5.000 acres   |
| Palaiomonastiro       | Elassonitikos                 | Irrigation with Penaeus runoff |
| Drymos Elassonas      | Stream of Mikro Eleutheroxori | Irrigation dam                 |

### **Water supply**

The settlements of the municipality of Elassona are watered by sources and drillings of the region. The settlements of Elassona – Drymos – Mikro Eleutheroxori – Stefanovoyno – Galanovrysi - Aetoraxi and Agioneri have a single network of water supply. The settlements Euangelismos, Palaiokastro, Kefalovryso and Kleisoyra as well as the most local communities have autonomous network of water supply. Every settlement has water meters, while their sufficiency is satisfactory during all season. Only in Elassona problems during the summer months where neighborhoods in the higher points of the city exist and do not have enough water supply. This problem will be faced with the work of the transportation of water from the sources of Kefalovryso, a work which is under construction nowadays.

### **Drainage**

In the municipality of Elassona exists a separate network of sewerage for urban wastewaters and rain waters only in one of settlement of Elassona, which is now in operation. In the remain settlements only a limited network of sewerage for rain waters exists. The recipient of urban sewages is the Biological Cleaning center that has been created in Elassona. Apart from the settlement of Elassona, in the future it will serve the municipal communities of Galanovrysi ,Stefanovoyno and Tsaritsani, of

which the current sewerage network is under construction. The wastewater treatment in the biological cleaning has a third level degree and the recipient of this procedure is the river Elassonitis.

## **Wastes**

The municipality of Elassona participates in the United Association of Solid Waste Management of the prefecture of Larissa, in which will participate all the municipalities and which is composed from the landfill of Larissa and three Stations of wastes transshipment (SMA). The Association has the obligation of the collection and burial of the wastes that is gathered by the three SMA, one of which functions in Elassona in the place Asprogia. The purpose of the association is the picking, the transport and the deposition of wastes, but also the development of studies, the operation and the management of the facilities, the creation of modern processing units and other. Its duration is rated in 30 years.

## CHAPTER 5

### **Prospects and development tendencies of the municipality of Ellassona**

This chapter tries to make a reference to the future role of the municipality of Ellassona not only to a district but also to a national level. The tendencies and prospects that emerge in the region are closely related to the events and the policies that occurred over time. It is imperative to say that when the predictions about the future are not based on longitudinal data then they are only hypothetical cases. For that reason, this chapter primarily clarifies the factors that play important role to the regions progress and then documents the tendencies regarding the region's progress according to the collected data.

From the analysis above, it has become clear that during the regions course through time, the factors that played an important role where the history of the region, the tradition, the life style of the region's people and the available resources like the workforce, the raw materials, the fixed capital, the land resources, the educational system and the entrepreneurship. However, due to globalization basic sectors and industries of production were led to a total restructuring because of the international realignment of capitals and competition.

#### **5.1. Population**

The progress of a region's population is a function of the region's development and economic organization. The limited possibilities for promoting new activities or improving the existing, makes the region less attractive not only to young people's settlement but also to the attraction of foreign investments. However, from the data collected above it can be seen that the feeling that derives from the population's progress is positive because after a deep reduction, the last decade there is a small recovery. Of course, it would be rather dashing to conclude that this would be the future perspective because this recovery is very small. But given the current circumstances of deep recession that leads the people away from the city centers we can be rather optimistic about the increase of the rural areas population.

The increase of the population would not be significant due to the rate of weddings, births and deaths. The stagnation of the wedding rate, the decrease of the births both followed by the increase of deaths state a restrain to the progress of the municipality's

population. The increase in women's educational level and their entry in the labor market makes the idea of starting a family less important than the creation of a career. While at first, the connection between income and birthrate was reverse, nowadays it is formed proportional. It is a fact that in Greece there are wealthy people with a lot of children, while there are low paid people who have a few children or none. The residence's comforts are constantly growing, improving the life of the people and their dynamic. That situation increases rapidly, stating that the municipality of Ellassona can have promising aspects and can achieve integrated progress always with the help of the state and the Union.

The educational level trends show that the number of young people being accepted to universities is constantly growing and also with the help of training seminars people of older ages can also develop certain activities or improve the existing ones. This change signifies a step forward in progress which can secure a higher educational level in the population and help develop the entrepreneurship of the people and also introduce new cultivate methods and new technologies.

From all the above, it is clear that the municipality shows progress trends which requires the restrain of the area's population in order to exploit the local resources and the promotion of the advantages of that semi mountainous area. This can be the first step of a new economic development which requires the renewal of the workforce, the growth of the local initiatives, the creation of scale economies, the creation of regional interfaces, the increase of the local income and thus the ability to save and invest money.

The policies that are being applied in Ellassona over the last years tend to that direction, keeping as a primary goal the strengthening of the semi mountainous and all the regions that face problems. The funded programs are trying to inform and support the endogenous workforce and help it take innovative actions. They provide the necessary equipment to the municipality in order decrease the isolation and help the municipality to interact with other areas not only in a national but also in an international level. If those efforts succeed, the local development will start to activate and new potentials will emerge. The first early results of those actions can be seen in a municipality that tries to free from the isolation.

Every policy that regards regions with problems must take into consideration the population's tendencies and then form a strategy, always trying to empower the endogenous workforce.

## **5.2. Economy**

The economically active and inactive population according to data tends to decrease due to the economic structure of the municipality and the increase of the training population. The perspectives that emerge are different between the two genders. While the number of male employed decreases, the number of female employed increases. This situation is obvious in the municipality of Elassona due to the fact that the female entrance in the workforce was mass, confining the unemployment of the productive groups. To that situation, contribute the young women's education and the staffing of key posts in the job market and also the initiatives that women took in the primary sector. Local authorities try to include programs to the local community in order to create favorable conditions for local development. The degree of success, requires dynamic actions which they will provide new jobs for the people of the region deterring them from migrating to the big city centers and also strengthen the people's initiatives.

### **Primary sector**

The structure of the primary sector in the area under study changed over time, reducing the sector's importance as a key sector. That caused the migration to the big cities and the development of other activities. With the implementation of the Common Agricultural Policy, important potentials had given to the production, manufacturing and to the marketing of agricultural products. The basic principles, regarding the creation of a common market, Community aid and financial solidarity has set new rules and settings. While at first, those boosts concerned only the production of a specific product, later on new structural measures had been taken concerning the agriculture in general. Those measures concerned the support of the mountainous and semi mountainous areas, the manufacturing and the trading of the agricultural products and also the support of the producers unions.

The results of those measures were the increase of the agricultural productivity and the increase of the agricultural income, the sufficiency in consumption products and the creation of surplus. Every mountainous or semi mountainous area according to their possibilities favored from that policy and showed improvement through the use of those grants. Greece was favored from that policy after 1981 when it joined the European Economic Community. In the municipality of Ellassona those measures became obvious with the establishment of new technological equipment, evidence of the progress which would follow. The production of agricultural products such as corn and cereals increased. The stock farming became an important sector of the region's economy and other products related to the stock farming such as cheese dramatically increased their demand. That not only helped the region's economic growth but also created new jobs preventing the young people from migrating to the city centers. It also gave the chance for those regions to export their products to the international markets.

However, the new Common Agricultural Policy that the Union promotes emphasizes to the environmental protection and limits the level of production for all the regions. The Union's financial aids for the production sectors are being reduced while the aid for the environmental protection increases. That is a problem for the future development of the regions that face problems and of course for the municipality of Ellassona. The workforce of the primary sector is reducing and those who keep on working in that sector look for a second job to support their incomes. The new policy regarding the reduction of the fertilizers and the pesticides and the turn to the organic crops can create positive perspectives. In order to succeed however, it is imperative for the people to understand the importance of that policy and to be thoroughly informed for the benefits it can bring. We cannot ignore the fact that the workforce of the primary sector is rather aged, since young people turn to other activities in other sectors. Therefore, new actions and motives for the attraction of young people to the primary sector must be taken. The region of Ellassona follows the general tendency that exists in Greece after the Common Agricultural Policy's reform. The new orientations of the Union will impact to the geographical distribution of the agricultural production. A part, from the land formerly used by the traditional cultivates may be left for other agricultural activities with high added value, while the agricultural area which will withdraw from the production (with the help of the new

policy which targets the limitation of the production) will vary according to the size of the farms and the weight of the cultivates. Moreover, in order to limit the excessive concentration of intensive production methods which are harmful for the environment, the new Common Agricultural Policy promotes the import of European products through competing prices. (Europe 2000+ page 114-117)

Although the municipality's products cannot characterize as competitive, due to their high prices from the use of the traditional methods of production and from their high transportation cost of the products being transferred to other regions, there are still ways for the promotion of the region's products. Through the creation of agricultural products cooperatives, the region's products can increase their demand through advertisement. Moreover, the combination of the agricultural products with the production of other new products which fit to the natural conditions of the region can create new perspectives to the sector. Some of those products which are produced in specific climates and regions cannot be competing to other due to their uniqueness and so in time there can be a distinct market for consumers who seek natural, healthy products despite their high prices. In the municipality of Elassona, the dairy products can play a significant part in the region's progress acquiring interfaces with special markets. They have the ability to claim the label of the protected designation of origin.

Although there have been made efforts towards that direction, an important role for the future development of the region of Elassona plays the Special Development Program for the Region of Elassona which includes both local and prefectural authorities. The fact that this program intervenes to the development of only one specific region is rather positive because it focuses to the region's needs and suggests ways to solve the problems the region faces. Besides through the EU's policies it can be seen that the primary goal is to strengthen the economic development according to the specific characteristics of the region. The protection of the environment is a key goal through the search for natural products and environment-healthy productions methods which will improve the region's dynamic in the years to come. The diffusion of the know-how which is achieved through seminars is an important factor for the use of new production methods and for the rational management of the resources and of the environment in general. A very important role for the information about the resources and the environment plays Environmental Education Center which can

choose the right strategies for the economic development and the environmental protection.

Furthermore, the possibilities of the primary sector in our region seem to be enhanced due to the use of specific instructions and regulations of the EU and of the Greek government. Some of those instructions regard increased motives for the restructuring of the exploitation methods for the semi mountainous regions and also the enhanced support for the new farmers. They also contain motives for investing in agriculture and in stock farming, while they also adopt measures for the improvement of the manufacturing and marketing conditions of the agricultural products. The Second Community Support Framework played an important role to the current situation, through the national level programs which help the development of the primary sector. One of those programs is the Regional Operational Program of Thessaly which supports the efforts for the improvement and promotion of local products.

### **Secondary sector**

The tendencies and prospects of the secondary sector in the municipality of Ellassona doesn't seem favorable. So much in the sector of excavation and also in the sector of manufacturing, are not developed important initiatives. In our region the general growth of small and medium-sized enterprises (SME) is not followed as it is followed in the rest of the country and that is promoted through programs and aids. Likely they constitute policy of local growth, however because the restrictive factors they are found in low level. The interest of Community for the growth of small regions prompted in the issuing of loans with favorable terms on their installation. The SME were considered institutions of innovation, more flexible and better equipped for the confrontation of problems that were created by the reformation of local economy. It was appreciated that their contribution in the creation of new jobs was much bigger than that of big units that their arrangement had also more requirements. The financing is enough via the European Bank of Investments, the European Regional Development Fund, the European Social Fund as well as other funds like the New



Community Means (NIC) and the Integrated Mediterranean Programs (IMP). It was adopted the belief that the most encouraged regions cannot be based exclusively on the processes of exogenous growth and that the exploitation of endogenous potential owed to be promoted with each means necessary.(Potamianos G. 1991)

However in the municipality of study the results of policy were not the expected and energies did not attribute. All the enterprises that exist do not occupy above 10 workers each and they are addressed in the local consumption. They are often connected with the economic structure of region, where on one side the restriction primary sector decreased the possibilities for growth of craft-based units and on the other side the spread of tertiary increased those that are related to the residence and the tourist lodgings (enterprises that are addressed in the building and the furniture). Developing elements of previous decades, the secondary sector constituted the basic export sector, while with the benefit of suitable motives it has the possibilities to develop and to escape from the narrow limits of local market.

The European program LEADER that is developed in the municipality gives motives of application of innovations as well as rational exploitation of local resources. Certain business dexterity and proportional education are required, however, through the seminars that are in use people acquire the essential knowledge of undertaking of initiatives and use of technology. Many are the products that could be placed in the scale of specification of "name of origin" giving impulse in the sector and shaping the physiognomy of region. In combination with the agriculture and the livestock-farming that they present tendencies of abandonment, could be created organized units of production of various goods of dairy products (yoghurt, cheese) with the traditional methods. This would cause the interest of both foreign and local markets to buy those products, that constitute heritage particularity for the region.

An important spark in the future course will also give the better and further exploitation of the Regional Development Program of Thessaly. In the substance it is the objective of balanced growth of mountainous and semi mountainous regions of Thessaly such as Ellassona and also and the dissuasion of immoderate dependence of economy of region and the decreasing the escape of population to the urban centers of Thessaly, in order to stop the progressive desolation and isolation of those regions. That program also tries to provide motives of undertaking activities for the secondary

sector. For the success of those measures, specific actions must be taken. Some of those actions are the modernization of productive equipment of manufacturing enterprises, the creation or relocation of productive enterprises, the certification of systems to guarantee the quality of produced products as well as the qualitative control and finally the projection and promotion of products. The prospects for completing this program for the municipality of Elassona can be considered favorable, however, it also requires big size financing. The tradition in domestic preparations and other local products is known from the past. The history has shown successful undertaking of similar activities in the past. (RDP of Thessaly)

### **Tertiary sector**

In the municipality the possibilities of growth of tertiary sector are presented particularly encouraging. The services, the tourism and the trade, function interrelate, giving impulse in their development.

Ellassona, as capital of the homonym province, was established as local center of offer for services contributing in the growth of an integrated region. Because of the role and its location, it assembles all the services and occupies big percentage of workers. The available resources are not enough in order to offer in each settlement the suitable infrastructure and the services that are required for his growth. Thus, with the benefit and creation of the essential and elementary infrastructure in the municipality, efforts are being made for the development of the connection with all the district. The road network is improving, the transports is getting better, the telecommunications network is being developed and finally the beauty of landscape is being exploited.

Consequently the municipality can be developed as an ecosystem, that its production will be dominated from intangible goods, while its maintenance will require the import of basic products. This of course, is not in effect absolutely because the productivity in basic types covers the local needs. In the growth of services contributed also the promotion of tourism. The form of soft tourism that was presented over the last years, constitutes an element of invigoration for the municipality. It has local character and it is the tourism of the region. It begins from the local initiatives and its management is made from local institutions. The repercussions are limited in local scale and it aims in the exploitation of local tradition, culture and natural landscape. The continuous ascendant course of rural-

tourism does not appear that it will be broken away in the direct future. Basic component of his growth in the region is the effort of the residents to guarantee an additional income. Because of the fact that this type of tourism is characterized as something "new" in the region and relatively recent, it has not presented marks of saturation or massification. Also, this dissemination of rural-tourism even in the most removed villages, has begun, always supported by the motives and the subsidies that are given for the creation of tourist lodgings. The uniqueness of landscape that they offer and the improvement of accessibility and essential infrastructures of service, places it in the circle of future development course.

The increase of visitors, not only in the municipality, but in the entire the province as well, encourages the increase of employment through the creation of new jobs. It is a fact that the tourist sector is characterized to a large extent by "intensity of work" and increases the number of jobs in the place of reception. Of course, the employment will be influenced by the tourist lodgings (their type, the capacity, the quality of provided services), the growth of enterprises that supplies the tourist sector with goods and services, as well as expenses of tourists in the region through the satisfaction of their needs as visitors (public services, health). Consequently, three types of employment are being created, direct, indirect and arising and everyone is influenced but also influences the development of tourism in the region.

Of course, the rural tourism can be presented as lever of local growth, however, it does not constitute end in itself but strategy of growth for the sensitive and disadvantageous regions. It is not important for the autonomous growth of tourism, but the process of its growth concerning the other activities, the peculiarities and the characteristics of place, the population. The rural-tourism can act in the municipality in three ways, the production of income and jobs, the creation of infrastructures, the production of possibilities for exchanges and cooperation between municipality and the wider region. Simultaneously, it is important to maintain the physiognomy (the culture with the particularities in customs, the landscape with the unique flora and fauna, the mountainous volumes and the natural beauty, the architecture with the marks of heritage) and the restructuring of the region, in order to offer services of high quality. Therefore, the interest is focused no in whether the promotion of local tourism is "good" or "bad" for the region but whether it is feasible the maximization of profits and the minimization of costs, in order for the local society to gain profit. It is

believed that the suitable planning of the region but also of the entire province, having as a goal the rejection of the massification, the import of foreign elements and the depreciation of local traditional elements, can ensure the successful application of sustainable rural tourism. Thus, the region might cope with the international competition and become basic model of growth. The growth of tourism influences the development of trade. The imports of various products increases, and the need to cover the needs of tourists leads to the creation of new shops. The demand for the local products increases the volume of production that is often intended for the trade and is put in the local market.

The trade eventually, follows the economy of the region. It is found in a stage of transition that the various situations contribute in its course. It is connected with the capacity of the other activities and also of the development of the population as well as the place of municipality in the wider region. The improvement of road network that is carried out in the province will lead to more frequent transportations and supplies of essential goods to all the isolated villages and this will render the municipality as a basic center of supply and service. This will also contribute in the improvement of the level of existence and in the withholding of population in the removed settlements.

#### **5.4. Infrastructure development**

In the last years we observed the perceptible improvement of infrastructures in the entire province of Ellassona. The priority that was given in the road network rendered possible the communication even with the most removed village. The increase of the transports allowed the continuous transportations throughout the municipality but also throughout the prefecture and also the supply of those regions with all kinds of goods without the previous overvaluations. The motives that are given for the withholding of population in the mountainous and semi mountainous regions still have not brought the expected results, because the application of these measures required basic infrastructure. Thus, the undertaking of such initiatives, not only in a local level, but also with the contribution of the government create positive prospects. INTERREG II

contributed to the improvement of road axes and the better possible communication of regions.

Regarding the health sector the prospects cannot be characterized particularly good. The non-transformation of the Centre of Health into hospital and the not satisfaction of needs of entire province, create an unpleasant situation. An essential intervention in its organization is required and not only in local level, provided that, the various energies did not attribute, but from government owned responsible institutions, in order that its equipment is placed in operation. The disposal of basic departments with official specifications could serve the province and limit the locomotion to the hospital of Larisa. Also, the benefit of first aids from the rural surgeries in the villages would face urgent and extraordinary situations. The proportion of doctors/ residents may seem proportional to the prefecture and bigger than previous years, however the reality is different. The job exist but the doctors don't work in daily base.

The water supply network does not present problems and the municipality in all the extent is served sufficiently. The regular controls in the rivers provide a secure and good quality of water. For the sewerage impure that becomes with absorbent cesspools, nothing has been done. Perhaps the absence of direct problems renders the intervention in this network less important. However, the repercussions in the environment without the proportional estimate can lead later to its degradation, to the restriction of territorial wealth and to the danger of loss of species of flora and fauna.

With the redistribution, the irrigation network was developed and covers almost the entire extent of plain providing prospects in the growth of the crops. Even if problems are presented at the periods of peak, however, efforts are being made for their mitigation through the development of the network and the providing of more liters of water per hour.

### **5.5. Prospects in the natural-cultural environment**

The exploitation of natural wealth and cultural heritage constitutes the more basic lever of local growth. Up to today a lot of rural regions depend on their effective exploitation of ground and natural resources and follow ascendant course. The municipality of Elassona presents tendencies to this direction and tends to develop activities friendly to the environment and to the local peculiarities.

These actions, that are being made for the protection of the environment and its exploitation renders the landscape attractive for visit and growth of friendly activities. The briefing on environment issues initially was not sufficient so activities were developed which downgraded even the protected space. Later however, after certain regulations by the European Community and after the establishment of environmental policy in the country, positive prospects were shaped. The European Union adopted three action plans for the protection of environment, receiving at the same time and a series of environmental meters. The Single European Act of 1987 imported for the first time, in the Treaties of European Communities explicit provisions that forecasted the growth of a common policy for the environment. Important improvements in the environmental policy of Union imported also the treaty of Maastricht.

Particularly the municipality of Elassona because of its geographic place, the landscape and the biodiversity that it allocates, has profited by these motives, projecting its unique natural form. However, the meters and the policies that are applied are not enough, in order to decrease the degradation of natural landscapes. Often agricultural tactics involve realignments in natural or artificial landscapes, which has as a result, at this moment the state to take resolution of these problems.

In the municipality of study a lot of energies regarding the environment were supported or limited by the use of regulations and contributed in its rational exploitation. The briefing on the questions for the protection of the environment was strengthened by the seminars of rural-tourism and by the constitution of the Centre of Environmental Education. The growth of athletic activities with main characteristic the peculiar landscape and their projection via the conduction of sport events in the region, promotes the local initiatives and contribute in their positive course. These energies, place as an objective, the exploitation of the natural landscape, so the prospects that emerge are directed to the maintenance of the infrequent natural and animal species and to the quality of natural landscape and its surface. It constitutes a positive fact that the initiatives that are undertaken emanate from the local society, which after all knows better the importance of natural peculiarities and the way that might render the municipality a region with unique possibilities.

The economic activities do not cause serious problems in the degradation of the environmental quality, which is owed to the restriction of the use of pesticides (for

biggest output) from the EU. The policies regarding the extensional exploitation and the reduction of production contributed in the use of less fertilizers and agrochemical. The danger of pollution never stopped existing, because with the rainfalls the chemical fertilizers are routed in the rivers. The intensive cultures are not particularly developed and this helps in the maintenance of the environmental quality. The other sectors apart from the primary do not harm the environment because they are depending, to a large extent from the growth of environmental conscience and from general directions of protection.

Regarding the cultural environment, strategic reasons impose its maintenance. Culture, is not only the arts and the letters, but also the way of life, the tradition and the values. No region in the sector of culture is classified as an unfavorable one. The local particularities blunt their narrow geographic limits and him place those regions to the center of interest. All the forms of culture however, are susceptible to the effect of the media, which with their wide distribution, can promote various messages that would lead to the highlight of a region. The municipality of Elassona in its course shaped its own unique history. Its culture constitutes heritage and it makes perceptible its exploitation.

The programs that are being applied and continue to developed in the region of study, are directed to this direction and they give motives for the maintenance of the traditional elements and cultural heritage. While at the same time, local institutions and associations intervening in the exploitation of unique buildings that testifies the history of the municipality (listed buildings, archaeological spaces and other) are activated. The programs LEADER specifically, were applied with success creating favourable prospects for the entire region via briefing and the use of motives for the maintenance of the traditional element, architecture and local physiognomy. Those programs allowed the experimentation with innovative approaches, that were carried out by local action groups and their aid in the component of growth, in the frames of this small region constitute precious help through the Community Frames of Support. Thus, those programs, contributed in the exploitation of cultural particularities and in the growth of resembling activities such as rural-tourism.

Consequently, the climate that is shaped portends a future with positive prospects for all the extent of the mountainous and semi mountainous regions of the country, as

long as a good organization of the system that undertakes the initiatives will take place.



## CHAPTER 6

### **Conclusion and suggestions**

In this chapter, with the analysis that preceded, is attempted the formulation of conclusions and proposals. The time horizon as near as it may be, it does not allow the precise forecast of future developments, because an unforeseen fact can contribute in the inversion of affairs and shape new conditions. For this reason the alternative scripts are based on the existing situations. The proposals that accompany those scripts are governed by the objective of compatible and friendly to the environment growth. It is connected with the management of resources that is found in harmony with the environmental protection, not only from quantitative but also from qualitative opinion, when the main objective is the use of resources until their point of resistance. The viable growth is related with the maximization of clean profit of economic growth, under the condition of the maintenance of the services and quality of natural capital over time.

In the mountainous and semi mountainous regions the turn to the sustainable growth is placed as fundamental objective, but is required the progressive adaptation. The choice of tools should be determined according to the needs of the region and with the collaboration of all the rungs of administration. The indication of mechanisms and energies which can help in the implementation of proposals, should concern all the sectors and should aim particularly in the aid of the less developed regions.

At this point, we will try to present two different scenarios that could come up on whether the actions and the proposals from the strategies and programs described above will be used correctly.

In the first scenario, where the above solutions are put in good use, the population continues to increase and the policies that are applied continue to render, programs, legislation and developmental laws encourage a climate of improvement and prospects of growth for the municipality. The aid coming from subsidies and financing of initiatives, to each economic sector lead to the creation of new professions, the undertaking of innovative activities and the support of the existing. Each new initiative contributes in the reduction of unemployment via the increase of jobs for the local population and in the increase of incomes. The consuming needs for

the local produced products and services increase resulting to the attraction of capital and the installation of units for the service of the needs. The newly established activities cease henceforth to be the supplement for the family income and they constitute basic autonomous occupations. In Ellassona, the growth of specific activities relevant with the sports (canoe-kayak, rafting, mountaineering and other) but also with the production of local products (dairy) shape a new turn in their confrontation as professions that promote the region, attracting new persons. The income that is shaped creates new demand in goods, which has as a result the increase of the productivity but also of the imports. The trade becomes basic sector in a region where before its production was limited only in the narrow geographic frames of municipality or province and the commercial relations was limited. The result from the above is the increase of investments and the benefit of better technical and social infrastructure.

The region with the motives for investments that provide the developmental laws and the programs, becomes more attractive in units of transformation of mainly agricultural products as well as in their companies of distribution. The connection, the collaboration and the interdependence of the sectors of production, with the establishment of a manufacture company near in raw material and in the market of products decreases the cost of transportation. Economies of scale are also developed and according to the theory of "pole of growth" and "diffusion", the growth by the municipality might be diffused in the entire province rendering it into a powerful center in a semi mountainous and disadvantageous district. Basic condition for these units is that they are "friendly" to the environment.

The landscape plays decisive role in the installation of both units and individuals. The possibility of investment and the rational use can combine that type of growth and attract human resources. The life near nature is considered ideal way of existence mainly from high educative persons. These are usually executives of enterprises that seek the element of calm. As the problems are being solved, on one side via policies and on the other side via initiatives of local institutions, the region's established companies and the people working in them, will find continuously more reasons to remain in the region provided of course that the basic services will be ensured to them. If that happens, the population will follow a rising course, the incomes and the demand will increase, there will be new needs and new meters of confrontation will be are required. The composition of ages will change, the pyramid will alter, declaring

the dynamic of the region and the new prospects and possibilities of growth. The cost of investments will decrease provided that the public work is addressed in a big number of individuals and the social profit is priceless. The intervention of state in the completion of basic works will attract also the private capital that will hurry to exploit the high profit of installation of the former unit.

Regarding the traditional economic sectors (agriculture, livestock-farming) that they support their production in limited methods of technology, they will strengthen with the support of EU policies and programs. The subsidies for cultures and products that are produced with "friendly" to the environment processes will extend their demand. Of course, the intensification of the production is connected also with the irrigated extent that in the municipality covers the entire space of the agricultural exploitations. The irresponsible irrigation however, will create problems in the aquatic reserves in the total of the province.

In order for that waste to be avoided it is necessary that the irrigation will be measured in the cost of production. This means increase of the price of water with simultaneous protection of the producer. This increase will be compensated by the subsidies that will be given in the producer that makes rational use of reserves (lower price of water).

However, these results that are presented and forebode positive developments, is not performed only with the implementation of favorable policies and laws. The policies are usually referring in the total of the unfavorable semi mountainous regions and in their common problems and their weaknesses. Their particularities are not taken into consideration which has as a result the individual (without the local collaboration) intervention to not have the expected results.

Therefore, it is also required an effort from the part of the local society, provided that it knows better the problems and the difficulties that the region faces and also knows the importance of the exploitation of local resources. Therefore, the collaboration of local institutions in the undertaking of basic energies that is supported by national or international organisms, as well as the collaboration of the local authorities with the decision-making centers will contribute in their successful completion. The creation small-region with common characteristics and problems makes more effective the completed implementation of policies.

Of course, this growth is required to keep pace with the rational management of local resources, the exploitation of the renewable resources and the maintenance of biodiversity in the nature. The promotion of the cultural heritage is very essential for the promotion of the municipality that has unique elements and particularities to show. This objective could achieve to the fullest with the constitution of a local institution that will connect with other national institutions for subjects of maintenance for the natural –cultural physiognomy of the region. It will inform and propose alternative ways of exploitation of local resources. It will be more flexible, allowing the access, to those who are interested in Community financing. There are a lot of examples (Spain, France) in the creation of such centers of support for each sector of production. Such center could also be created in the municipality but with various departments, so that it aims in the horizontal, completed growth.

In the second scenario, where the above policies are not applied correctly and the policies regarding the semi mountainous regions are limited, the population remains stagnant or decreases. In this case, where the policies are decreased, or not applied at all, the consequences are not particularly favorable. Local society has the first role in the undertaking of energies. The reduction of interventions via motives and subsidies functions suspensory in the developmental course and prevents the exploitation of basic dynamic elements. The investments from the state do not suffice for the attraction of production units or for the aid of the already existing and the big cost drives back the intervention of the private sector. This situation it is likely to influence negatively the increase of population, provided that the jobs are limited with the removal or the closure of manufactures (because of the lack of basic work in infrastructure) having impact and on the other sectors of economy. The result is the change of the population's composition creating conditions of ageing with long-lasting clues the fall of the birthrate and the increase of mortality. With the restriction of policies, the local society is required to act to the biggest for the withholding of the population giving motives of improvement.

The support of local economy in the primary sector cannot be continued because of the high cost of production that is required by the use of limited technology. The products cease to be competitive in the market, provided that in their price is also added the cost of transport. The municipality therefore, begins to function as incomplete ecosystem with imports that exceed the exports. The weakening of the

primary sector stops the ascendant course of the secondary sector in the transformation of agricultural products.

Thus, it is proposed the activation of local institutions so that they cover the absence of the policies and via local interventions to strengthen the undertaking of initiatives in each sector. The connection between the local society and the decision-making centers constitutes a particularly important process, provided that the relations of collaboration between the local society and the province are being developed.

In the effort for the aid of the local economy, the collaboration between producers and tradesmen through cooperatives for the organization of the market constitutes a basic lever for the development. That collaboration will ensure a market for the local products and their prices might be accessible in all the consumers. Of primary importance is that the products cover initially the local needs and supply the existing production units. The organization of a product disposal system through a special office would strengthen the production and also the collaboration of the economic sectors. This collaboration ensures higher prices of sale in the local market, because it bypasses the intermediaries. This situation will influence positively the enterprises of the tertiary sector (tourism, trade), because they will become more competitive and the added value of the products of the primary sector will be diffused in the region. The implementation of such a type of collaboration requires horizontal relations of the organizations and institutions and mainly requires big efforts in level of local authority.

The withholding of the population can also be achieved in this scenario, if the municipality exploits the activation of general developmental objectives, laws and regulations, as well as its particular characteristics. The municipality could develop and exploit a lot of public buildings that are found outside, near the nature, granting them in private individuals. The creation of refreshment stands in a beautiful environment attracts residents not only of neighboring settlements but also from other regions. This will increase the jobs, even if they are seasonally. Of course, the seasonal employment can be changed into permanent with the configuration of the existing abandoned buildings into types of lodgings for the visitors that seek to pass a few days near nature.

Therefore, the protection and the promotion of the environment constitute a basic advantage and a main lever of projection for the region, increasing the number of the visitors. The initiatives to this direction requires the mainly guidance of the local institutions and associations, that knows the resources of the municipality as well as the possibilities of the population for their exploitation and the undertaking of innovative activities. The aids therefore that could be given for the support of that effort, concerns initially the supply of basic infrastructure and the guarantee of correspondence of the product in the markets.

Apart from the above however, towards the removed regions economic development, equally important is also the particularity of ecosystems and the growth of soft forms of tourism (rural-tourism, ecotourism) and the biological agriculture, is possible, via suitable planning, to lead to the upgrade of the mountainous and semi mountainous regions in the frames of sustainable growth.

The agriculture and the tourism are two sectors where they influence each other via the soft forms of tourism. The particular forms of tourism, and the biological agriculture, provide flexibility for additional and parallel work, in the case where the possibilities of employment in the exploitation are limited, contributing in the maintenance of economic activity but also to an acceptable level of population in the rural regions, because they provide the possibility of acquisition of satisfactory familial income. Also, these two sectors can play an appreciable role in the maintenance of the ecological and social balance of the mountainous and semi mountainous low population regions moderating the dangers of disorganization.

### **Rural tourism**

The rural tourism constitutes a form of alternative and mild tourism, which was developed, in rural regions, not only because of the big urban and industrial centers residents need for to be found near nature and in a quiet environment but also because of the rural areas residents which deal with the primary sector, to search for additional income. Moreover, rural tourism has wider targets:

- Collaboration of the primary, secondary and tertiary sector of local economy for the better confrontation of the increase of the demand from visitors

- Regional development and creation of infrastructure work, so it will become possible the access and the hospitality of visitors
- Growth of local initiatives in the rural community for the promotion of the endogenous forces, aiming at the creation of new activities
- Efforts for the restriction of the environmental and ecological burdens, which can result due to the increase of the number of visitors
- Aid of the rural family income and improvement of the local economic prosperity
- Retaining of the population in their areas
- Exploitation and protection of the natural, cultural and historical heritage resources
- Dissemination of the local traditional products and local traditions

Thus, in Ellassona, the appearance of rural tourism was also connected with the growth of new activities mainly in the tertiary sector. The aid via policies and programs attributed positively and contributed in the projection of the region's particularities. The natural wealth, the infrequent flora and fauna, the unique cultural elements attracted more visitors.

In order for this favorable course to continue is required the awareness, initially by the local institutions and residents of the need for rational management of the resources, the exploitation the renewable and the safeguarding of the unique advantageous elements (landscape, tradition), as the natural wealth that is protected in National Park of Olympus.

The traditional element is what attracts the visitors, for this the biggest care should be given in the preservable buildings, in their restoration with proportional materials and no the covering with reinforced concrete that destroys their greatness. The traditional look of the city should be maintained and the import of foreigners, opposite to the local tradition characteristics should be avoided.

The constitution of an information center, not only for the residents, but also for the tourists, for conducting of tours in unique landscapes and places, will promote each point of the municipality under study. The organization of such center requires

individuals that know the region, sensitized on environment and cultural heritage issues and that have the possibility, via collaboration with other centers, of attracting more tourists. The objective should be the number of arrivals but the quality of these, so that mass organized tourism that is addressed in all, could be avoided.

Those who still wish get involved with the agriculture, alternative and equally efficient solution constitutes also the biological or ecological agriculture. It is a method of agricultural production that respects the environment and the biological circles of ecosystems, because it is a culture of low intensity of capital, exempted from inorganic fertilizers and chemical pesticides that cause dangers in the environment and in the health of consumers.

The rural tourism is expected to contribute in the economic growth of municipality. The rural production is increased, provided that it is increased the demand of local products, that is cultivated without the use of chemists. Their prices are high due to the absence of competition. The same also stands and for the transformation of agricultural products, which is considered essential. Thus they are developed not only the trade but also the services, for the cover of the various needs of the tourists. New posts are created, the farmer woman enters in the productive process and the depopulation is slowed. A lot of economic sectors are being developed, the already existing are being supported and strengthened and the increase of the income creates conditions for saving and investments.

### **Ecotourism**

Relevant with the rural tourism, is also another activity the ecotourism or ecological tourism. It is based on the promotion, exploitation and protection of the natural resources of the region with scientific and aesthetics importance. The visitors, who ask for services of ecotourism, reside in simply lodges or tents that are near protected regions, such as water biotopes, aquatic resources, forest areas and other. Their vacation program can include activities concerning the mountain or water, such as mountaineering, walk, walks in ecological paths, swimming. The ecotourism it is from its nature a clearly anthropocentric activity, that is expressed with intense way



from the local initiative and it is characterized by the sensitization, the training, the collectiveness, the common collaboration and the inventiveness, so that there can be drawn and rightly applied the developmental policies for the unfavorable regions, always with respect to the environment (Komilis P. 2001).

In the Elassonas ecotourism resources are areas

Natura 2000 , which are:

- Mount Olympus: Olympus the taller mountain of Greece and second (in height) in the Balkan peninsula, is relatively small in extent, compact, and almost circular form mountainous volume of diameter of 25 km, rocky, with acute tops, extensive ridges-ridge-cut and big abrupt sides that are precipitated by deep ravines. It was the residence of the twelve gods of the ancient Greek mythology and was announced as a National Park in order to preserve the region's natural environment and the other cultural values.
- Mount Vasilitsa: A mountainous region with meadows and forests that are developed exclusively in an ophiolitic rock. The forests are mainly black pine, beech as well as white pine and oak. In the forests of the region also live bears and in the streams the otter.

The eco-touristic activities that can be done in Elassona are the following:

- Climbing:

During the winter *months* appreciable ascents can be made in all the mountains of the region. More important than all the ascents are for sure the ascents to Mytika the tallest peak of mount Olympus, where exists very exigent routes of winter ascension.

- Hang Gliding

Route – Location: Kalyvia Elassonas. In the foot hills of Olympus, above the city of Elassona exists a shaped taking off floor for the lovers of this extreme sport. Up to the point of takeoff the road has asphalt. The landing can be done in an also shaped place outside of Elassona.

- Ski mountaineering:

Mount Olympus has the biggest natural ski slope in all Balkans and also has relatively smooth hillsides, which are offered for ideal tours or crossings with mountaineering skis. The ascents can begin and follow also the hiking routes. The period for the mountaineering ski is December until March.

Moreover, the municipality of Elassona can also promote and other types of tourism and take the necessary measures which can strengthen the region's economy and attract more and new types of tourists. The tourist growth of the wider region of Elassona, following the terms of viability and sustainability that are formulated, is able to move in the following axes of planning:

1. Growth of alternative forms of tourism: The type of growth that is attempted is the alternative tourism focusing on the qualitative upgrade of the provided product.
2. Growth of thematic tourism: The main forms of thematic tourism that can be developed in the wider region of the municipality given the existing resources and in the frame of soft tourist growth are the followings: cultural, naturalist and religious tourism, ecotourism, tour and athletic tourism (mountaineering, bike riding, mechanically-driven two-wheelers of irregular street, hang gliding), adventure tourism (ascension and other.)
3. Qualitative improvement of the provided services: It must be a priority the qualitative improvement of the provided services, which will contribute in the qualitative upgrade of the tourist activity.
4. Promotion/protection of the natural resources: The promotion of regions of big ecological value along with the protection of the natural environment, constitute important energies in the frame of growth of the soft forms of tourism.
5. Promotion and exploitation of the natural and cultural heritage: The promotion of archaeological discoveries, caverns, monuments etc.

6. Upgrade and development of tourist infrastructures: Upgrade of lodgings, reformations, maintenance/promotion of paths etc.
7. Encouragement of entrepreneurship in the tourist sector: Encouragement of entrepreneurship in the tourist sector in combination with the promotion of the networking.
8. Growth/training of human potential: The growth and training of human potential includes businessmen, farmers but also workers in the tourism sector.
9. Connection of tourism with the local productive activity and services: Disposal and promotion of local traditional products, promotion of cultural subjects etc.

From all the above, we can conclude that the combination of rural tourism and ecotourism creates the eco-rural-tourism, which can contribute positively in the sustainable local development. The mountainous areas of the region because of their bas-relief and the diversity of their landscape, have the possibility of growth not only of the eco-rural-tourism but also of the biological agriculture, because these activities are programmed, drawn and applied mainly in mountainous regions differentiating the local productive system, and promoting the local growth. The combination these two profits the farmers, because it extends the market of their products and increases their income, but also the tourists that enjoy calm vacations in the countryside and know the natural environment and the local traditions.

However during the differentiation of the rural system of the regions, an effort should be made, for the predominance of the eco-rural-tourism combination with the primary sector, so that the rural family of the mountainous regions could have the possibility to strengthen economically and to be renewed socially, without the danger of the alteration of the natural and rural environment.

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