

## **Sustainability of the development in the mountain – disadvantaged areas: the case of Nymfeon in Greece**

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### **Abstract**

*Economic globalisation is constantly testing the ability of regional economies to adapt and exploit or, at least maintain, their comparative advantages. In this difficult and volatile environment, mountain – disadvantaged areas are faced with multiple developmental difficulties.*

*Through strategic options, certain local communities are successful in achieving exemplary local and, more generally, regional development*

*In 2008 a research – study was conducted regarding the case of “Nymfeon in Florina”. Nymfeon, in the Prefecture of Florina, is a small community in the mountains of northern Greece that has formulated a development strategy based on the principles of mild and sustainable development*

*The purpose of the research, which is based upon a primary measurement, is to detect and evaluate the main factors that determine the viability of the development in mountainous regions. The conclusions of the study are mapping and managing sustainability of the mountain – disadvantaged areas.*

**Key words:** mountain – disadvantaged areas, regional development, social- environmental sustainability

**JEL Classification:** R11, R58

### **1. Introduction**

Economic globalisation is constantly testing the ability of regional economies to adapt and exploit or, at least maintain, their comparative advantages. In this difficult and volatile environment, mountain – disadvantaged areas are faced with multiple developmental difficulties.

The development prospects of these areas are an issue of concern to political authorities and researchers alike. Through strategic options, certain local communities are successful in achieving exemplary local and, more generally, regional development.

In 2008 a research – study was conducted regarding the case of “Nymfeon in Florina”. Nymfeon, in the Prefecture of Florina, is a small community in the mountains of northern Greece that has formulated a development strategy based on the principles of mild and sustainable development.

Nymfeon was selected as a case study over other mountain tourist areas because until 1994 the village was deserted and derelict and its revival was achieved within a period of fifteen years. In addition, three fundamental characteristics apply to mountainous Nymfeon, which facilitate

the generalisation of conclusions for similar areas: the village's relatively small size, a remarkable level of tourism development and the presence of local organisations with a high level of environmental awareness.

The object of the research is to measure the village's sustainable development, in other words to measure its economic, social and environmental sustainability and to audit the extent to which sustainability in the area is maintained.

Following a literature review, the research, whose methodology is based on the "Economic, Social and Environmental Footprint" method, was concluded through the completion of 284 questionnaires

## 2. Regional Development and mountainous areas

Two development strategies have dominated the international literature (Isard, 1960; North, 1955; Perrin, 1974; Richardson, 1969, 1978; Vanhofe et al, 1980; OECD, 1980) and practice as well. These are namely the models of «balanced development» and the «development of strategic objective». The balanced growth approach aims at the integrated development of all sectors of the region with development opportunities, whereas the strategic objective approach aims at developing an area that has a comparative advantage over other areas.

Worldwide, there are two forms of development policies, the non-binding and binding policy. In the former, the initiative comes from international bodies which define the objectives and guidelines for future actions at national and global level, while the latter includes treaties and conventions which bind the signing countries to take steps on a specific issue (Papadimatou and Rokos, 2001). In the non-binding international policy instruments belongs, among others, Agenda 21 since 1992, which proposes two areas for action in fragile mountain ecosystems:

- ♣ "the acquisition and enhancement of knowledge on the ecology and sustainable development of mountain ecosystems" and
- ♣ "the promotion of integrated development of areas that are independent hydrological units and the promotion of alternative opportunities to ensure livelihood".

For the "sustainable mountain development", sustainable natural resource management includes the integration of social and environmental costs in their value and their management by local groups, so that a part of the benefits to be distributed to local residents as compensation and / or profit (United Nations Commission on Sustainable Development, 1995).

In Greek reality, strategic development of mountain areas is designed to enhance synergy among the factors which promote the development process, the networking of institutional, sectoral and spatial form and the establishment of integrated packages of strategic plans, serving medium and long-term development scenarios (Konsolas, 1995).

The European Union through the Community Support Frameworks (CSF) plays a key role in the development process of modern Greece. The development options for the Greek mountainous area are identified in the General Framework of Spatial Planning and Sustainable Development (Article 6 of Law 2742/1999) and the Development Plan of the Mountainous Area (DPMA), a special section of the Regional Development Plan 2000 - 2006. The DPMA proposes the so called "integrated development of mountainous areas" as a

separate sub-program for each region and as sectoral activities of national operational programs as well.

The five priority axes recommended by the DPMA on the mountainous micro-regions are (Papadimatou and Rokos, 2001; Ministry for the Environment, Physical Planning and Public Works, 2000; Pindus, 2000):

- ♣ Transformation of agricultural activity.
- ♣ Extensive development of soft tourism.
- ♣ Support for small industry and handicraft.
- ♣ Establishment of mountain development centers per micro-region.
- ♣ Improvement of access to mountainous areas.

### **3. Characteristics of the physical and socioeconomic reality of mountain areas in Greece**

Greece is a predominantly mountainous country. The mountain area occupies 19,2 million acres, of which 17% is arable land, 47% pasture and 31% forests. An important feature of mountain areas of Greece is the great wealth of biodiversity. The mountainous regions of Greece, except in few cases, were a totally neglected field of interest, for purposes of planning, funding and all kinds of activities.

As for the anthropogenic environment, Greece is characterized by the large number of small sized mountain villages. The small size of settlements has contributed to preserving the mountain environment, water, soil and air, not abused by the massive over-water, intensive agriculture and monoculture and the accumulation of vehicles and industries. Thus, unlike the rural and urban lowland of Greece, and many European mountain areas, mountainous regions of Greece are have a unique range of natural wealth, which hosts a significant number of wild plant and animal species adapted to local conditions.

In Greece, the mountain communities were devastated in the period of mass migration abroad and urbanization, during the decades of 1950's, 1960's and 1970's. This exodus of the mountain population is largely due to the civil war conflicts and persecutions that followed the years of the national resistance to the German occupation. Each village proudly carries its own history of resistance and its toll in human lives and property damage from the ravages of war and civil division. The fact is that the villages have been devastated (Rokos 1980a, 1993, 1994) during the years 1950-1970, urban population has increased from 37.7% in 1951 to 58.1% in 1981 and rural population has reduced from 47.5% to 30.3% respectively.

Gradually the agricultural policy has been changed and the diversification of rural economies has been promoted in order stop depending solely on farm income. Mountainous areas have been under "special treatment". Specific chapters in national and European programs were devoted to the "development" of the mountainous areas. The main "apparent" natural resource of them is their beauty that can be exploited in accordance with the dominant "development" rationale for tourism businesses.

However, the mountainous areas are still underdeveloped, without adequate infrastructure in roads, hospitals, water supply, sanitation and communication systems and therefore the government policy is that money should be invested to change the profile of these areas.

One study (Ministry for the Environment, Physical Planning and Public Works, 2000) classifies the prefectures of the country according to their mountainous features, using population and land criteria. According to the findings, 32 prefectures of Greece are characterized by a significant mountainous area and population. SWOT analysis in these prefectures indicated that 8 of them (Fthiotida, Karditsa, Florina, Arta, Grevena, Ioannina, Arcadia and Evrytania) contain, according to the study, the most problematic mountainous areas of the country. All 8 prefectures have declining income and declining population.

It should be noted that the community of Nymfeo, which is our case study, belongs to one of these prefectures, to the prefecture of Florina.

## **4. The revival of Nymfeo**

Nymfeo has been a major center of silversmithery and goldsmithery for three centuries, during the years 1630 – 1930. Rich merchants and scientists originated from Nymfeo were living in major cities of the Ottoman Empire, of the Habsburg Empire and in Western Europe. The permanent population amounted to 3,000 persons and the village, high up in the mountains, had a perfect network of paved roads, drainage and lighting.

Since 1932, gradually the residents left the village and by the late 1980s Nymfeo has been devastated. Those houses that have not collapsed remained empty and deserted. The roads became turfy and some 45 elderly were waiting for the end.

The ecosystem of the area is remarkable and is characterized by the presence of a variety of habitats and rare species of flora and fauna. Abandoned fields, forests of oaks and beeches, alpine meadows, and wetlands of streams and lakes form a beautiful mosaic of landscapes. This is the reason that a large part of the Nymfeo region is a Natura 2000 region. The importance of the region is supported by: the small population of bears that live there permanently, the beech forest which contributes to the retention of the gaseous pollution and the International Mountaineering path E4.

### **4.1. The strategic plan to revive the community**

Nymfeo in the late 80's was declared by a ministerial decree as a “preservable traditional settlement and preserved historic place”. During this period a group of successful people who originated from the Nymfeo began to visit their homesteads on weekends and created a small and vibrant society of the «Weekenders». In October 1994 the group «New Perspective» elected in the administration of the community and took the initiative to resurrect the ancestral village and to lead it to guarded growth.

The main objective was the continual sustainable development of the historic settlement with mild interventions, adapted to local environment, as well as the protection and enhancement of cultural heritage.

The only available means to potential job creation and restoration of the active population in

the desolate village was the “development of ecotourism”. The core pillars of the strategic plan were the following:

- ♣ Respect and enhance the unique architectural heritage and the surrounding topography of the settlement, according to tradition and history, i.e., the restoration of all the houses and the building of new, according to tradition.
- ♣ Respect and enhance the natural scenery of the Nymfeo region, the organic connection of nature with the settlement and the constant flow of visitors - tourists from Nymfeo to the surrounding nature by creating visitable sites.
- ♣ The total renovation of the traditional street-layout with a gradual annual reconstruction of the damaged paved roads after the previous installation of underground infrastructure networks (water - sewage – telephone network - central electricity) and the imposition of architectural characteristics and rules in reconstructing or building new houses.
- ♣ Interconnection of Nymfeo with the triangle Florina – Kastoria – Prespes by blacktopping the two forest roads Nymfeo – Ydrousa and Nymfeo Perikopi – Polykeraso, in order to spread visitors in both directions through the Vitsi mountain and develop the entire mountainous area.
- ♣ Finally, the continuous but reliable information and visibility of the settlement through newsletters, dispersed at thousands; publications for Nymfeo; permanent exhibitions; hospitality of high guests (President of the Republic, Archbishop, ministers, rectors, bishops), but also journalists as well; TV coverage of major events and facts; production and broadcasting of documentary material; radio broadcastings; publications in newspapers and magazines.

These general outlines of the overall development strategy of Nymfeo have been presented also in the Euro-Mediterranean meeting of 9 countries in October 2004, where Nymfeo represented Greece as a pan-European Mediterranean exemplar.

#### **4.2. Application and implementation of the strategic plan**

The actions took place in stages. The prioritization of projects and tasks were:

**1. Technical Infrastructure:** Plenty of new water reservoirs, perfect drainage, strong regional electricity network, modern underground telecommunications network, new paved roads, cleaning system and removal of snow throughout the village; perimeter road and comfortable parking areas at both ends and in the center of the village.

**2. Promotion of Cultural Heritage:** Educational Conference Center at the Aristotle University of Thessaloniki in the imposing Nikeio School, Library and large permanent exhibitions of photographs from the gone village; museum of silversmithery and goldsmithery; open stone amphitheater with 300 seats, the highest of its kind in the Balkans, at an altitude of 1500 m (Antonis K. Doudos donation); renovation of the historic three-aisled Basilica of St. Nicholas (Nicholas J. Sossidis donation); Community guesthouse (house for a doctor, a policeman, a priest, volunteers environmentalists) as well as a community clinic (Fanoula Boutaris family donation).

**3. Promotion and Protection of Natural Resources:** The European Center for the protection of brown bears, Mountain Center of the Thessaloniki YMCA, Park for the Wildlife and Outdoor Recreation with bears and many rare species of fauna in 445 acres of forest; Community stalls and twelve pureblood horses for steeplechase and riding; marked paths; mountain lake - biotope.

**4. Society – Human factor:** Firm solidarity and social cohesion, traditional festivals and renaissance of fairs, traditional marriages and joint excursions; basketball court and tennis court; blockade of political rivalry; rapidly responding administration.

**5. Communication:** Continuous updating of the citizens, publicity responding always to an important event; thousands of newsletters and pamphlets; publishing quality books for the tradition, history, folklore and society of the village; production of documentaries and CD-ROMs.

**6. Solidarity – Collaboration:** Dissemination of the tourist flows to the whole region and networking with other traditional communities of Greece as well as with neighboring municipalities.

#### **4.3. Management tools and approaches of the strategic plan**

All available forces of the Nymfeo region have been utilized, exploited and assisted in the plan.

The Community improved its finances, by managing in a sustainable way its lumber trade and thus saved the necessary resources for participation in European programs (40% of the budget of each project). Furthermore, presenting its beautiful landscape and the strategic plan for its development, Nymfeo mobilized all available human resources inside and outside the village.

The European Union has provided generous opportunities and the Greek Government separately was willing to help, and indeed helped, decisively when a credible plan was presented, characterized by a deep planning horizon and authoritative studies of projects, motivated by real data and information.

The strategic plan was implemented gradually from 1995. So far there are: Twenty hostels around the same size (capacity up to 20 beds) in traditional houses, three cafeterias, three traditional cafes, five restaurants, three shops of traditional handicrafts, central market, whereas around ninety new jobs were created and more than sixty thousand visitors per year are coming to the village.

The small but enhanced Community Management with the ability to organize and operate without a strong state interventionism, supports social, and productive activities and services. In this direction we have the activation of A.K.E.ME.K.A.N (Unmingled Community Enterprise for Design and Development of the Nymfeo region), which manages the Community Forest, the Nikeio School, the Museum, the Community stables and horses; it organizes exhibitions and events, prepares studies, etc. The mechanism of administration achieves offers from bodies without public support (donations in labor and capital). Through its entire design and operation it seeks the sustainable exploitation of natural sources of wealth, showing respect to the parameters of endogenous development, and with the collaboration of a very successful non-governmental organization. The self-confidence of the local people is given; this is the reason that it utilizes its full potential. The development initiative which it fosters is widespread and allows for handling great projects (private or community).

Finally, the Nymfeo Community participated as a partner with the Prefectural Authority to the competition EDEN 2007 (European Destinations of Excellence) and was chosen as one of the “10 best emerging rural destinations in Europe.

## **5. The Research**

### **5.1. Purpose and methodology**

In 2008 field research conducted in the community of Nymfeo in the Prefecture of Florina. The purpose of the investigation was the assessment of sustainable development of the settlement, i.e. the assessment of economic, social and environmental sustainability and the control for maintaining the sustainability of the region.

The survey was based on the method of “economic, social and environmental footprint”. This method reflects the situation of a region, based on the principles of sustainable development and should not be confused with the method of “ecological footprint” (Simmons et al., 2000; Monfreda et al., 2004). There were completed 284 questionnaires with personal interviews with visitors/tourists in the community of Nymfeo.

### **5.2. Results of the survey - conclusions**

Nymfeo managed to create a successful system that protects the environment, creating and advancing economic opportunities, promoting local cultural features with important social and economic benefits. The success of Nymfeo is important because it relates to a community which, although abandoned in 1990, has regenerated through a strategic planning of sustainable management of local development resources.

Nymfeo and its wider region have environmental characteristics, which are simultaneously local development resources.

The strategic plan for the development of Nymfeo was defined by the respect and promotion of the region’s architectural heritage and the surrounding topography of the village; the respect for and promotion of nature; the overall regeneration of the traditional street-layout with reconstruction of paved roads after the previous installation of underground network infrastructure connecting Nymfeo with the triangle Florina – Kastoria – Prespes and finally, continuous but reliable information and the promotion of the village mainly through satisfied visitors.

The interventions, which were conducted during the period from 1994 until today, managed to achieve the objectives of strategic planning and to keep its terms. Business options today continue to comply with the management principles laid down with the plan.

The economy of the village acquired identity and environmental harmonization, where growth is in line with the characteristics of the natural environment. The development is characterized by a connection of the landscape, identity and quality of the final tourism product supplied.

The statistical analysis of the 284 questionnaires indicated that Nymfeo, with its strategic plan for sustainable development, has become a unique tourism destination, which welcomes and hosts more than 60,000 visitors annually.

The viability of this development is considered to be secured largely because visitors:

- ♣ Are satisfied with the sights, architecture and nature («Arcturos», Museums, Nikeios School, St. Nicholas Greek Orthodox Church).
- ♣ Are satisfied by the tourist services provided (accommodation and catering services).
- ♣ Are forming a positive view of the supplied tourism product, because of the overall organization of the settlement, the behavior of residents and operators, and the immediacy in communication
- ♣ Consider very important the provided possibility to conduct various activities related to the countryside, and may visit additional destinations and engage in activities in the wider region
- ♣ Are satisfied by the variety of printed publications (or luxury binded books, books for the village and its history, literature, etc.) and local traditional products (wine, noodles, sweets, peppers etc.)
- ♣ Are satisfied by the range of pricing options offered for their accommodation and food
- ♣ Are satisfied by the reasonable pricing of services, which meet all social strata

The majority of visitors has good education, belong to the active population with medium to high income, and have high recreation standards which they are willing to express. Most of them want and intend to visit Nymfeo again. They also intend to recommend to friends and acquaintances to visit Nymfeo.

Therefore, sustainability seems ensured since:

- ♣ The standard of the village as a destination has been determined by the local peculiarities of Nymfeo as shaped by its history, its people, nature and the local tradition.
- ♣ The model of the settlement is related to the quality of infrastructure, namely accommodation, road access, water, lighting and the recreational activities that can be made in the village and in its surrounding area.
- ♣ The tourism business is shaped with key features of hospitable behavior, safety, hygiene, cleanliness and quality food.
- ♣ The model of the tourism product offered refers to a diverse and original product, which is absorbed by the viewer through various activities in the broader mountainous, but hospitable, environment and the realization of the past with modern comforts.

Despite the European and national priorities, in practice the mountainous regions presented weaknesses in achieving integrated and sustainable development. The level of the endogenous mechanisms available to these areas is not sufficient for the full utilization and exploitation of the funds provided by the various programs. Thus, sustainable revival of the small mountain communities has been problematic, with only a few exceptions one of which is the case study of this research, the community of Nymfeo in Florina.

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