

## Report on the development of sustainable tourism in the Măgura - Zărnești region and its impact on the sustainability and resilience of the region



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## I. CONCEPTS

**SUSTAINABLE DEVELOPMENT** - development that meets the needs of the present without compromising the ability of future generations to meet their own needs (*World Commission on Environment and Development Brundtland Report 1987*)

**RESILIENCE** - the concept of resilience describes the extent to which a system is able to self-organise, learn and adapt, with the aim of assimilating change without moving to a new state with different properties. (*MOVING project, Conceptual framework*)

**SUSTAINABLE TOURISM** - tourism that considers the full economic, social and environmental impact, responding to the needs of visitors, the sector and local communities. The principles of sustainability address economic, socio-cultural and environmental aspects, and it is necessary to strike a balance between these three dimensions and local governance to ensure the long-term sustainability of tourism activity. Thus, sustainable tourism should:

- Make optimal use of environmental resources which are a key element in tourism development, maintaining essential ecological processes and contributing to the conservation of natural heritage and biodiversity.
- Respect the socio-cultural authenticity of host communities, preserve their built and living cultural heritage and traditional values and contribute to intercultural understanding and tolerance.
- Ensure long-term sustainable economic operations, providing socio-economic benefits to all stakeholders that are equitably distributed, including stable employment and income-earning opportunities and social services for host communities, and contribute to poverty reduction.

Sustainable tourism development requires the informed participation of all relevant stakeholders and strong governance to ensure broad participation and consensus building. Achieving sustainable tourism is a continuous process and requires constant monitoring of impacts, introducing preventive and/or corrective measures whenever necessary.

Sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience for tourists by raising awareness of sustainability issues and promoting sustainable tourism practices among tourists (**World Tourism Organization**)

## II. THE IMPORTANCE OF MOUNTAIN AREAS

In 2021, the United Nations General Assembly declared 2022 as the Year of Sustainable Mountain Development. This designation underlines the fact that mountain areas are home to unique species of fauna and flora, and the problems they face (including from climate change) are specific.

Adaptation and mitigation of climate change and sustainable development in these territories therefore require the implementation of a special set of measures to address their needs. Mountain areas cover 36% of Europe's territory and have a population representing 16% of the

total population. Europe's mountain areas have their own specific challenges and opportunities for development due to their distinct conditions:

CHALLENGES IN MOUNTAIN AREAS	OPPORTUNITIES IN MOUNTAIN AREAS
Problems with distance from and accessibility to education, health, infrastructure (paved roads, sewerage, running water, gas).	Quality of life in mountain areas: close-knit local communities, rich cultural heritage and traditions.
Difficult relations between mountain residents and non-residents.	The positive image that mountain areas have.
Declining population (low interest in seasonal work due to low income).	Conserved and renewable natural resources (air, water, forests).
Issues of economic sector development alongside environmental protection.	Production of goods and services: tourism, agriculture, crafts and industry.
Constraints on agricultural activity due to soils and climate.	Conditions for producing goods and services in a sustainable way.
Lack of business in the area.	Modern and unique governance models.
The special characteristics of the mountain area are not sufficiently integrated into regional, national and European policies.	

### III. MOUNTAIN AREAS AND THE YOUNG GENERATION - EUROMONTANA REPORT

According to the latest report of the European Mountain Areas Association (EUROMONTANA), "[Being young in a mountain area](#)", Romania is the country with the highest rate of attraction of young people to the mountains. For those living in mountain areas, the main reasons for staying there are: living close to nature, quality of life, as well as attachment to the area and the presence of family. In addition, those who do not live in a mountain area visit it frequently to enjoy the natural environment and landscapes and to hike.

However, respondents' main complaints about living in mountain areas are related to access to health services (doctors' surgeries, pharmacies), quality education services and employment opportunities. This is why the young people in the survey wanted to see more support for encouraging local entrepreneurship in mountain areas.

The ideal mountain area for the year 2040 described by the survey respondents is oriented towards sustainable tourism, which includes nature, outdoor activities, local gastronomy and relies mainly on local small businesses.

### IV. MOVING PROJECT

The importance and specificity of mountain areas, as well as our involvement in the EUROMONTANA association and our work in Braşov, a mountain town, led us to participate, together with 23 European organisations, in the MOVING project (Valorisation of mountain

regions through interconnection and green development) funded by the European Union's Horizon 2020 Research and Innovation Programme, a project that studies value chains in 23 European mountain regions.

The 2 main objectives of the project are:

- Contribution to the development of European policies.
  - Improving existing mountain value chains or creating new ones to support the resilience and sustainability of mountain regions.

The importance of the MOVING project for local stakeholders is given by the medium and long term benefits:

- Potential to influence European, national and local policies;
- Potential to influence the way mountain areas are managed and the economic activity in these areas;
- Potential to influence the way economic activities in mountain areas are financed - funding programmes to address mountain specific problems (such as SAPARD);
- Potential to strengthen the resilience of mountain areas to climate change.

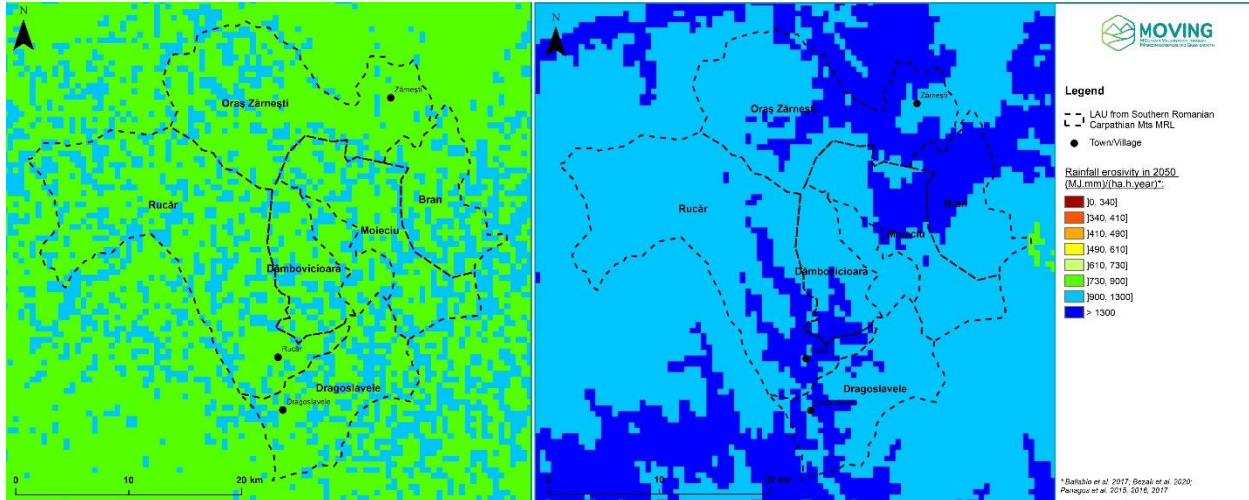
## **V. THE IMPACT OF CLIMATE CHANGE IN THE MEGURA - ZĂRNEȘTI REGION IN THE FUTURE**

The previous phase of the project aimed to identify the main factors that will influence the development of the Piatra Craiului - Zărnești mountain area: changes in land use and land cover - chaotic and uncontrolled development of buildings; abandonment of agricultural land; socio-demographic factors (depopulation and migration).

Fortunately, climate change currently has little impact on the area, the most common being extreme events (floods and heat waves), sudden temperature changes and man-made fires. However, it is important to remain aware that climate change is coming, with the possibility of an accelerated occurrence in the coming years.

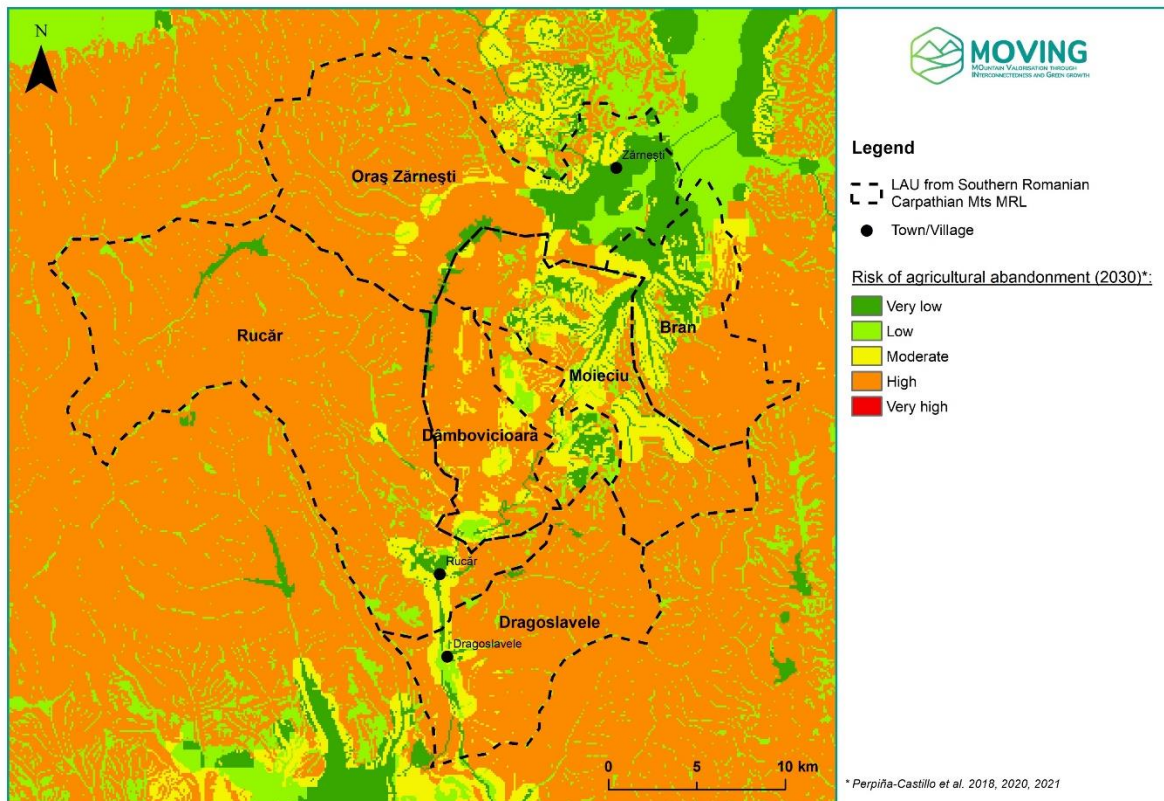
As part of this phase, our partners at the University of Evora produced a set of maps to illustrate the current and future situation regarding the impact of climate change in the mountain regions studied. In the case of the Piatra Craiului - Zărnești region, the most important changes are caused by rain erosion and abandonment of agricultural land.

In the picture below rain erosion (the ability of rainfall to cause soil loss from slopes) is illustrated. While rainfall erosion is currently at a medium level, in 2050 it will increase to high and very high levels throughout the area.



*Rainfall erosion in the study region in 2021 and 2050*

At the same time, by 2030, the risk of farmland abandonment will reach a high level in the area, meaning the cessation of agricultural activities and the emergence of grasses, shrubs and trees. Abandonment of agricultural land may also represent a more complex transition of land-use change: cessation of agricultural activity in favour of housing, tourism, forestry, etc..



*Abandonment of agricultural land in the region surveyed in 2030*

## VI. ANALYSIS OF SUSTAINABLE TOURISM IN THE PIATRA CRAIULUI - ZĂRNEȘTI REGION

Sustainable tourism in the Piatra Craiului - Zărnești region has both strengths (the area being the place where the concepts of "rural tourism" and "ecotourism" took shape and were implemented for the first time) and problems that require effective solutions. The strengths identified for the Piatra Craiului - Zărnești - Măgura area are: Prezența peisajului montan și a biodiversității specifice, care reprezintă cea mai importantă resursă pentru turismul sustenabil;

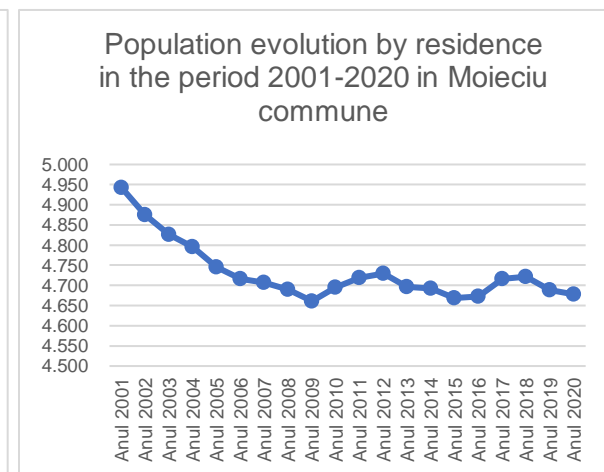
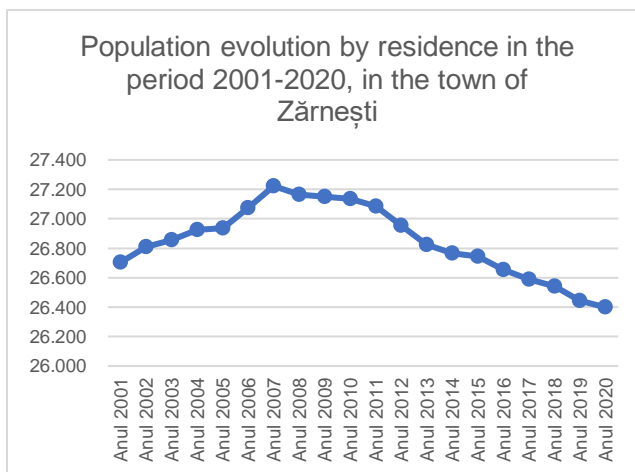
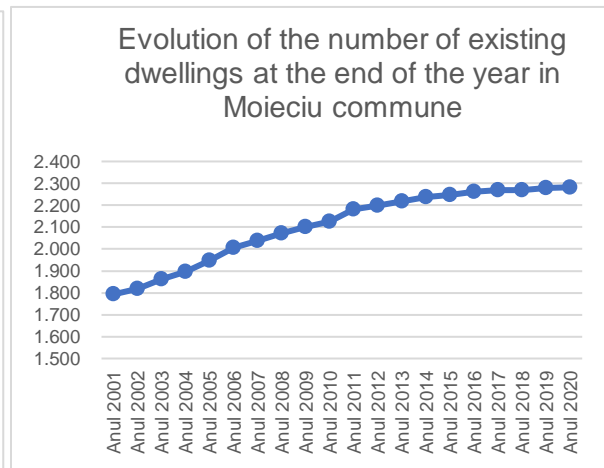
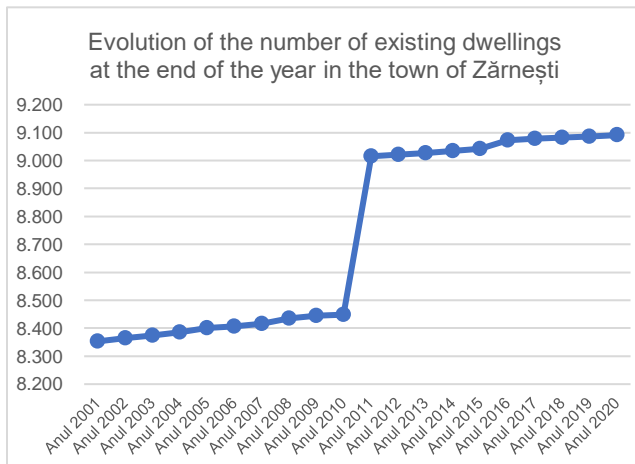
- Presence of cultural heritage, traditions and local gastronomy, considered very tasty;
- Innovative forms of governance, and here we mention the activity of ANTREC and AER, the Bran-Moieciu area being the first area with rural tourism, and "Zărnești-Piatra Craiului" being the first eco-destination certified by AER;
- There are people with vision in the area, who discover initiatives that can contribute to the development of sustainable tourism:
  - The first forms of cooperation in the area can be observed through associations: Măgura Eco-tourism Association and Zărnești-Piatra Craiului Eco-tourism Association.
  - The transformation of the centre of Zărnești into a place for small producers;
  - Creation of a gastronomic festival in Zărnești "Bunătați de la Munte";
  - Some lodgings have understood the importance of sustainable transport and organise, with the help of locals, wagon rides;
  - There will be a bus on the Măgura-Peștera-Moieciu route, which will solve part of the transport problem in the area;
  - Tour operators in the area are able to adapt to challenges and diversify their offer:
  - During the pandemic, accommodations diversified their offer with health or corporate tourism and activities for children's camps and senior camps.
- The town of Zărnești and the commune of Moieciu continue (especially after the pandemic period) to be an important attraction for tourists.

1. The problem that has been discussed with all stakeholders and that has emerged since the previous stage of research is related to the (chaotic and uncontrolled) development of real estate and/or tourist constructions.

The village of Măgura is part of the Sustainable Development Area of Piatra Craiului National Park. Although this area has been defined as larger than the urban area, in order to allow for an expansion of the community, construction is beginning to exceed these limits. In many cases, the constructions start illegally, without obtaining the necessary permits from the town halls and the Piatra Craiului National Park Administration.

According to data obtained from the National Institute of Statistics, the number of existing dwellings at the end of the year increased in the town of Zărnești by 8.84% in 2020 compared to 2001 (738) and by 27.27% in the commune of Moieciu (489). The population by residence decreased by 1.74% in the town of Zărnești and by 6.11% in the commune of Moieciu, while

migration remained at an average of 345 persons per year in the period 2001-2020 in the town of Zărnești and at an average of 62 persons per year in the commune of Moieciu. Therefore, the increase in construction was not driven by an increase in population, but rather characterised by the development of leisure and tourist accommodation facilities and holiday homes, in which inhabitants live only a few weeks a year. The problem of lack of permits is also observed in the INSSE data, where in the period 2002-2008, data appear, but after 2008 data are missing or do not reflect reality (the period when data exist corresponds to the SAPARD funding programme, where permits were required to obtain funding).



Source: National Institute of Statistics





*Development of real estate and/or tourist buildings in the centre of Magura village, 2006 and 2018 (source: Zenith Maps)*

Another problem related to the chaotic and uncontrolled construction of tourist buildings/constructions is the failure to respect local PUGs and traditional architecture, which negatively influences the mountain landscape, the main resource for tourism in the area. Lately, in addition to constructions, many modular containers are appearing in the region which inevitably destroy the mountain landscape.

This accelerated building development is also putting pressure on the water and gas resources as well as the sewage system in the area. For example, the water supply coverage in the commune of Moieciu in 2018 was only 44.71%. Although there are projects to improve the infrastructure, they are currently stalled or behind schedule (according to the Water Company, Moieciu commune should have 100% water supply coverage by 2024).

Thus, we end up in a situation where the mountain landscape is crowded with constructions that do not offer an authentic experience to tourists and, at the same time, a significant part of the accommodations operate illegally, not contributing through taxes and fees to the sustainable development of the area.

## 2. Tourist transport and parking in the Zărnești - Fântâna lui Botorog area

To reach the trails in Piatra Craiului, the vast majority of tourists choose their own car (89.5% of respondents to a survey conducted by PNPC chose this option). This option crowds the Plaiul Foi and Fântâna lui Botorog areas, where it makes it difficult for emergency vehicles to reach the Măgura area.

Although there is an option to reach Zărnești by train or bus, the road from the town centre to Fântâna lui Botorog is unpaved, muddy in the rain and dusty in the summer. The area needs cooperation from the municipalities to find an option that meets the needs of tourists without overcrowding access areas to villages and natural areas.

## 3. Stopping grazing

In addition to chaotic and uncontrolled construction, another factor influencing the landscape is grazing. In the region, pastures have shrunk and been replaced by afforestation. Grassland has also stopped being mown and has become pasture, which in the absence of grazing turns into woodland.

The grazing that still takes place in the area is carried out on an auction system, in other words, the town hall auctions off the available land and those who wish to graze the land bid for it. However, the municipality cannot require the winning bidder to have a share of the grazed animals from local people. So locals choose to cut their animals, graze them in other areas, not in the mountains, or give up livestock.

Municipalities comply with Emergency Ordinance No 34 of 23 April 2013, which allows them to auction pastures. However, there is also Law No 293 of 17 December 2020, which provides that administrative-territorial units, i.e. municipalities and towns, which own in public/private ownership

or in administration land for agricultural use, free of contract, may conclude concession/lease/rental contracts, as the case may be, by direct award, with the livestock farmers provided for.



*Afforestation in the Fața Măgurii area, 2006 and 2018 (source: Zenith Maps)*

#### 4. Lack of local products and a local brand

Unfortunately, there are no more local producers and craftsmen in the Măgura - Zărnești area. Although accommodation establishments try to work with local producers, public authorities give directives that make cooperation difficult.

There have been initiatives to stress the importance of local products:

- Attempts were made to improve local cheeses to produce higher quality products that could bring in more income, but locals were not keen to participate in the project.
- An attempt was made to set up a cheese shop together with the municipality and a local cooperative, but the project failed due to lack of cooperation.

Thus, the problems that arise in the relationship with local producers are:

- Community resistance to change.
- Their continuity is gone with the demise of the elderly.
- Unrealistic directives.

As far as local craftsmen are concerned, they still live in the area, but they need to be re-activated and the legal framework created so that they can market their products.

These issues are important to offer tourists an integrated visitor experience, to give them the chance to get to know the culture of the area closely through its gastronomy and to re-educate Romanian tourists about local and seasonal gastronomy and tastes.

#### 5. Cooperation and collaboration between accommodation establishments, tour operators, public authorities and forms of governance is often cumbersome and inefficient.

Here we can mention that the eco-destination "Zărnești-Piatra Craiului" needs to be re-accredited, but the area still has no management unit. The solution would be to create a management unit in the form of an association, without involving the town hall. Most funding projects in this area are for NGOs, so it would be an advantage to create a management unit for the destination.

#### 6. Resilience to exceptional events

The COVID-19 pandemic has greatly affected tourism in the area. While accommodation establishments have been able to diversify their activities (offering health or corporate tourism, or private event rentals), tour operators have had to stop their activities.

However, during this period, the area was re-discovered by Romanian tourists, who, due to the restrictions in force, found themselves planning their holidays in the country. The problem that arises is that Romanian tourists must be educated in the spirit of sustainable tourism, otherwise there is a risk that the area will become a destination for mass tourism that does not want to

discover the local biodiversity and cultural heritage and, let's be honest, does not invest that much in the local economy.

The year 2022 brings with it a new challenge: the war in Ukraine, which is taking place on Romania's borders and has led many foreign tourists to reconsider Romania as a tourist destination.

## VII. FUTURE SCENARIOS AND SOLUTIONS TO THE PROBLEMS IDENTIFIED

The final part of the workshop involved a forward-looking analysis exercise, involving all participants, based on two future scenarios, presented in contradiction: a scenario with positive results and one with negative consequences. The results of the exercise are briefly presented below, and the detailed scenarios can be studied in Annex 1.

No.	Category	Action plan and solutions
1	Bulding development	Public consultation on local architectural guidelines for updating the framework Increase acceptance of the principles outlined in the guidelines in local communities Address "ghost" buildings (e.g. payment of an additional fee)
2	Access and infrastructure	<b>Infrastructure - roads:</b> Upgrading access roads in communities Proper marking of tourist routes (pedestrian or bicycle) (e.g. the route between Brustureț Hut and Ciocanu Village is not properly marked) Approval of a new footpath on the route Moieciu - Măgura (through the village) Promotion of the area through information boards and maps  <b>Infrastructure - access to water sources:</b> <ul style="list-style-type: none"> <li>• Măgura Creation of a water basin in the village - rainwater harvesting</li> <li>• Zărnești Development of a drought resilience plan</li> </ul> Renewal of the network Assessment of existing water sources
3	Animal owners	Support for legalising the purchase of local products by guesthouses and tourists Support in obtaining producer certificates local community Point of authorisation of products (cheese, milk, eggs) Solutions to valorise local products (e.g. one of the most common waste products in the Park is wool, which could be used to insulate houses) Priority use of pastures for local animals Respect of animal limits on pastures and rules on creeping Electric fencing against wild animal attacks
4	Community	Activating civil society and organising it as a local action group/parliament

No.	Category	Action plan and solutions
		<p>Community respect for the authority of the Piatra Craiului National Park administration</p> <p>Facilitate community cohesion:</p> <ul style="list-style-type: none"> <li>- Preservation of the school in Măgura</li> <li>- Joint community events between Piatra Craiului National Park Administration and local community members (held in existing cultural halls)</li> </ul> <p>Creating a framework for clarifying the role of "mountain landowners" and for encouraging (or penalising, otherwise) them to take animals from local people for grazing</p> <p>Compliance by all actors involved with local council decisions</p> <p>Dissemination of good practice in communities</p>
5	Tourist typology	<p>Conditions to attract premium tourists to the area:</p> <ul style="list-style-type: none"> <li>- Quiet</li> <li>- Various recreational activities: <ul style="list-style-type: none"> <li><input type="checkbox"/> Hiking on tourist trails</li> <li><input type="checkbox"/> Cycle tours</li> <li><input type="checkbox"/> Ski touring and cross-country skiing</li> <li><input type="checkbox"/> Plant and animal watching</li> </ul> </li> <li>- Traditions and crafts</li> <li>- Mountain landscapes</li> <li>- Local products</li> </ul>

## ANNEX 1: FUTURE SCENARIOS FOR THE DEVELOPMENT OF THE PIATRA CRAIULUI - ZĂRNEȘTI REGION

Negative scenario (period: 20-30 years)	Positive scenario (period: 20 years)
<p><b>Landscape</b> - the main value of the certified ecotourism value chain.</p>	<p><b>Landscape</b> - the main value of the certified ecotourism value chain.</p> <p>General context: ecotourism is a key activity for the communities of Zărnești and Moieciu. Over the last 10 years, public-private partnerships have attracted more than 50% higher revenues, succeeded in setting up an association/cooperative of local producers and integrating them into the chain of ecotourism guesthouses - operators.</p>
<p><b>Buildings</b> are still being constructed without permits, without sewage and water networks and without gas.</p> <p>There is no group of architects committed to respecting local traditional lines. The owners do not respect the height regime or the architectural style of the area. Due to the chaotic and intense development of the guesthouses, there are frequent problems with the availability of water in toilets and kitchens, especially in the high area, and septic tanks become a source of air pollution in the area, making tourists avoid the area.</p>	<p><b>The buildings</b> respect the traditional style, have a permit, are visually pleasing and blend into the landscape, respecting the PUG and imposing limits on the development of accommodation infrastructure. Energy and heat sources are renewable, a lot of funding is accessed for solar panels, etc.</p>
<p><b>Waste</b> management is poor.</p>	<p><b>Waste</b> is managed selectively and disposed of responsibly. Fines are given to those who do not comply with the law.</p>

Negative scenario (period: 20-30 years)	Positive scenario (period: 20 years)
<p>Most of the communities will have only tourist employment, without keeping the <b>traditional population</b> in the locality (more and more of them will work abroad or move elsewhere). The sense of traditional community will disappear.</p>	<p>Locals are increasingly valuing their own <b>community</b>, collaborating and young people are deciding to stay in the areas, with many opportunities for sustainable development and green businesses.</p> <p>The <b>community has an identity</b>, organises local events, accesses projects, has a visitor centre and outlets selling local products.</p>
<p><b>Open spaces between houses, pastures and orchards</b> will gradually disappear.</p>	<p>The importance of <b>grasslands</b> to the landscape including as a tourist attraction is recognised and there are regulations to protect the traditional natural landscape.</p>
<p>Many <b>tour operators</b> focus on other areas of the country.</p>	<p><b>Eco-tour operators</b> promote the area and bring in premium, high-priced, responsible tourists who can bring in more revenue for the community.</p>
<p><b>Responsible tourists</b> attracted by the landscape and wildlife will choose other destinations in the country or in other countries and will be replaced by another category of tourists, who stay only one night maximum two - three, who have no interest in discovering the area, come with their products, do not pay local taxes, do not buy anything.</p>	<p><b>Premium tourists</b> will choose the area for its scenery, quality of service, variety of certified local products, quality of life (peace and quiet, clean air, environmentally responsible activities), and stays will be longer and longer (more than 3 nights).</p>
<p>It puts pressure on the relationship between <b>APNPC</b> and locals, and there will be conflicts.</p>	<p><b>APNPC</b> is part of the community and is involved in all its initiatives, with the National Park recognised as the main attraction and source of income for the community.</p>
<p><b>The lack of a long-term strategy</b> to support nature protection as a valuable asset for the community and its future will affect the integrity of the protected area.</p>	<p>The community is actively involved in actions <b>to protect and promote the protected area</b>.</p>



Negative scenario (period: 20-30 years)	Positive scenario (period: 20 years)
<p><b>Access to Magura and Botorog's Fountain</b> is easy, the road is paved, anyone can drive in without any rules or tolls, and keeps traffic levels above the bearable limit of transport infrastructure and parking.</p>	<p><b>Access to the Magura</b> is restricted, through fees or other methods (e.g. barriers, passes), and all fees are collected by the community for other projects. The car parks are set up in suitable areas so as not to put pressure on the community and nature and are all chargeable.</p>
<p><b>The lack of water sources</b> in the area will become more acute and there will be increasing problems with access to drinking water for accommodation, especially in the summer season. Conflicts between guesthouses and locals are being created.</p>	<p>The community has <b>access to safe drinking water</b> through the implementation of large infrastructure projects that ensure the sustainability of this resource. There are methods of water recycling or micro-treatment plants. Other green technologies are implemented in the area and ensure the health of the area is maintained.</p>
<p><b>The drought</b> will further affect the area.</p>	<p>There is a <b>resilience plan</b> for dry years, rainwater storage ponds or other solutions to avoid water shortages in the area.</p>
<p><b>Vegetation fires</b> (including forest fires) will become more frequent.</p>	<p><b>Fire safety measures</b> are implemented, penalties and fines are increased for those who burn vegetation or create conditions for fires</p>
<p>Many of the guesthouses will be <b>illegal</b> and continue not to pay taxes to the community, making relations between people in the community tense.</p>	<p><b>All accommodation establishments operate legally</b>, with a permit, are controlled by ANAF and the town hall, all have an operating permit and comply with all regulations in force. Taxes are collected by the community and redirected to other investments.</p>
<p>Although they exist, <b>PUG</b> are not respected (general urban plan).</p>	<p><b>PUG</b> are realistic strategic plans based on sustainable development without putting pressure on the area. They are all respected.</p>

Negative scenario (period: 20-30 years)	Positive scenario (period: 20 years)
<p>Everyone is developing and doing the best they can. There is <b>no Destination Management Unit</b>, no local events, no local products, the certified ecotourism value chain is no longer present.</p>	<p>There is an <b>Eco Destination Management Unit</b>, which deals with the promotion of the area, local events, coordination of local products, implementation of the local brand of the area.</p>
<p><b>Local industry</b> is having a growing negative impact through air pollution.</p>	<p><b>Local polluting industry</b> is replaced by other green businesses with no major environmental impact.</p>
<p><b>Livestock owners</b> don't see why they should continue to do the hard work, more and more are giving up and in recent years have also opened their homes to tourists. They don't feel encouraged to continue, they give up because they have nowhere else to graze or it is no longer profitable. The landscape is gradually changing by afforestation at the level above the mountain. Their products, although some traditionally certified, are not taken up by local shops or guesthouses because they do not meet standards, are either not fiscalised or there is no collaboration in the community.</p>	<p><b>Livestock owners</b> are mainly motivated to continue farming by the fact that their products are in demand among guesthouses, local shops and tourists. Producers are part of local landscape maintenance schemes and receive a share from both the municipality and tourism operators for preserving the traditional landscape, are helped to create a local product under the area's brand, are promoted at fairs and other outlets.</p>



# MOVING

MOUNTAIN VALORISATION THROUGH  
INTERCONNECTEDNESS AND GREEN GROWTH