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Apuseni Nature Park, a park for nature and people

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Abstract

Together with a number of other protected areas, Apuseni Nature Park forms one of the largest continuous protected areas in Romania. The total area comprises 1 nature park, 3 Natura 2000 sites and 55 small protected areas of national interest. The integration of the sites with each other provides the framework to preserve landscapes, natural values and biodiversity, in the context of sustainable development and of increasing the resilience of local communities, by using an adaptative management plan to face social and economic challenges.

Profile

Protected area

Apuseni Nature Park

Mountain Range

Carpathians, Romania

Figure 1 – Land of the Moți. © Alin Moș

Introduction

The Apuseni Mountains are a branch of the Carpathian Mountains, located in the west of Romania, in Transylvania. Not being connected by to the rest of the Carpathian chain, the Apuseni have the appearance of an island. This makes them more memorable but, at the same time, perhaps more vulnerable. The maximum altitude is 1,848 m a.s.l. (Bihor peak), so compared to the Carpathian Mountains as a whole, the Apuseni are of moderate altitude. Their slopes are less pronounced, making the highest areas easily accessible. Geologically, limestones are widely distributed, which, in the presence of abundant precipitation, have over millions of years formed the most important karst area of Romania.

In the very heart of these mountains, the Apuseni Nature Park (ANP) was created in an area where the abundance of unique natural values determined the creation of other protected areas (55 nature reserves and natural monuments, and 3 Natura 2000 sites). By overlapping, these various protected areas form an integrated and unitary surface. Their most important natural values that argued the need for protection and conservation and determined the protected areas' creation were the karst areas.

More than 1,500 caves, which form a well-preserved subterranean environment, fossil ice blocks in some caves, and a large number of boglands have preserved the remains of ancient plants, including pollen, and animals that lived tens of thousands of years ago. These are unique environments that are of inestimable value to science, contributing to knowledge of the evolution of life and of climate dynamics. Caves have created and maintained the best conditions for preserving evidence of human presence, such as footprints, artefacts, ritual arrangements, cave paintings, and fossils of now-extinct creatures.

The local communities preserve their traditional values and lifestyle; the Moți are recognized today nationally as a characteristic population of the Apuseni mountains, whose long-term interaction with nature has created a distinctive landscape, known as the Land of the Moți (Figure 1).

Historical evolution

The most crucial evidence of the more distant past has been preserved in the caves as fossils of animals that have been extinct for thousands of years, such as the cave bear (*Ursus spelaeus*), the Eurasian cave lion (*Panthera leo spelaea*), the cave hyena (*Crocuta crocuta spelaea*) and many others. The caves also preserve the oldest traces in Romania of human presence: the footprints of the Neanderthal man in the Vârtop Glacier Cave (Onac et al. 2005) is among the oldest known human footprints in caves in the world (Figure 2); the paintings from Coliboaia cave are thought to be the oldest in the area between the Alps and the Urals (Clottes et al. 2011, 2013). For further details, see Infobox 1.

Roughly two thousants years ago, the Dacian tribes who lived in the lower areas of the Apuseni mountains began to exploit the gold that was found in abundance in the eastern part. This led the Romans to conquer Dacia and to develop the gold mining in Apuseni, thus increasing the local population by supplementing the labour force.

Figure 2 – Neanderthal footprint from Vârtop Cave. © O. Guja

Figure 3 – The Fortress of Ponor Cave. A karst phenomena. © Peter Lengyel

However, until the middle of the second millennium of our era, the higher central areas of the Apuseni mountains were uninhabited. The first human settlements began to appear in what is now the ANP area at the end of the 16th century; thus, we can talk about a permanent human presence only from that period (Netea 1977).

The resources necessary for the first communities were the gold for which they panned in certain rivers, the wood from the forests, and meadows for raising animals. With the depletion of accessible gold resources, the local economy became based more on exploiting and processing wood and animal breeding, and the small human communities began to move from the cold, humid valleys to warmer, drier areas at higher altitudes with southern exposure. Because forests initially covered about 95% of the territory, areas had to be cleared to establish habitation. Land for livestock – for grazing or hay – was also required, and thus meadows appeared.

The villages in the high areas of the Apuseni Mountains have preserved their early structural characteristics: typically, successive generations of a family cleared new areas of forest next to the original family home's land, to build new houses and create secondary meadows. The result is landscapes comprising forests spread over hilltops sprinkled with meadows, and households at some distance from each other, a pattern that is typical of the Land of the Moți (Figure 1).

Establishment of the Apuseni Nature Park and operationalization of management

The terrain and the lack of roads in the higher mountain areas limited the access of people from outside the local communities. It was only in the 19th century that the first descriptions highlighting the area's beauty and uniqueness appeared, attracting the attention of a hiking enthusiast, Czaran Gyula, at the end of that century. He spent an important part of his fortune creating the first visitor infrastructure which, at the beginning of the 20th century, facilitated the general public's access to the places of natural beauty that he had discovered.

Shortly after, the area was visited and researched by the great Romanian scientist Emil Racoviță (Onac & Murariu 2016), the father of biospeleology worldwide and President of the Romanian Academy in the interwar period. He understood the vulnerability of these places, especially the caves, and their importance for understanding evolution. He also understood the need for the development of human society in the 20th century, and at the First Congress of Romanian Naturalists, which took place in Cluj in 1928, he formulated the first proposal for a national park in the

Infobox 1

Karst superlatives from Apuseni Nature Park

- *Scărişoara Glacier Cave*
  The largest underground block of ice in the world, with a volume of over 130,000 m^3.
- *Vârtop Glacier Cave*
  The oldest footprints of Neanderthal man in Romania and among the oldest in the world, over 62,000 years old (Onac et al. 2005).
- *Coliboaia Cave*
  The oldest cave paintings between the Alps and the Urals, over 35,000 years old.
- *The cave of Bad valley*
  The presence of more than 35 minerals in the speleothems place the cave among the top 10 of its kind on Earth.
- *Fortress of Ponor Cave*
  The highest cave entrance in Romania, with a height of over 76 m, see Figure 3.
- *Onceasa Cave*
  One of Europe's most important paleontological sites, containing tens of thousands of fossils of Ursus spelaeus.
- *Cold Cave*
  Archaeological remains, consisting of the ritual placement of four Ursus spelaeus skulls, among the oldest in Europe.
- *Altar Stone Cave*
  The most beautiful and diverse speleothems in Romania.
- *Sighiştel Valley*
  The highest density of caves in Romania: over 200 large caves in an area of less than 10 km^2.
- *Hodobana cave*
  The most labyrinthine cave in Romania, with a total known length of 22.142 m over an extension of 820 m.

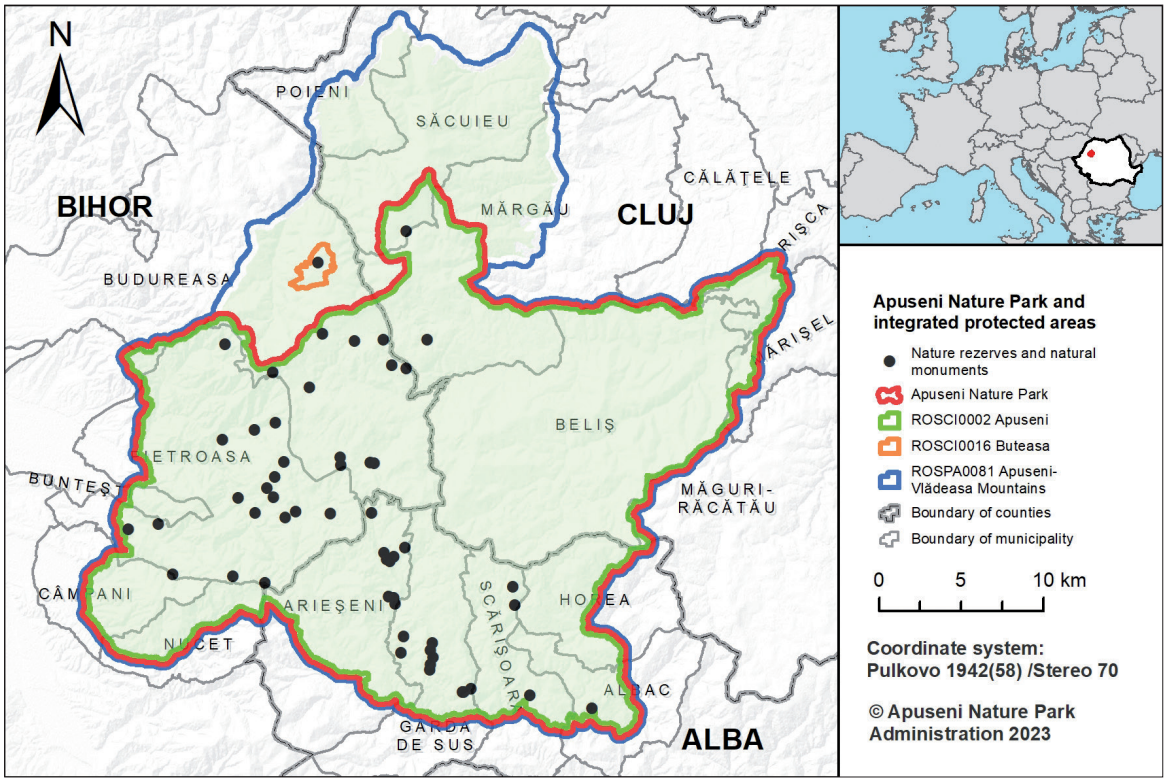

Figure 4 – Apuseni Nature Park and integrated protected areas.

Infobox 2

Management structures

- *Apuseni Nature Park Administration*
  The Administration was formed in 2004, based on a Law and a Government Decision, by which the Ministry of the Environment, as the responsible authority, decided that the National Forests Administration – Romsilva should ensure the human, material and financial resources necessary for the Park to function. The Administration ensures the management of the Park based on a Management Plan and a Regulation, carrying out mainly inventory, monitoring, analysis, planning, supervision and control activities.

- *Scientific Committee (Consiliul Științific)*
  The Scientific Committee comprises scientists and specialists in fields relevant to the management of the Park; it guides and supervises the Park Administration. The Committee's composition is proposed by the Park Administration, endorsed by the Romanian Academy – Committee for Nature Monuments. Finally, both the Committee and its rules of operation are approved by ministerial order. The decisions adopted by the Scientific Committee must be enforced by the Park Administration.

- *Advisory Board of Administration (Consiliul Consultativ de Administrare)*
  The Advisory Board brings together key stakeholders who own or manage land, or who have interests in the Park or its immediate vicinity, and who are interested in implementing management measures. The Board's composition is proposed by the Park Administration, and both its composition and its rules of operation are approved by ministerial order. Its decisions carry weight as advice only for the Park Administration.

Apuseni. However, the unfavourable sociopolitical context at the time led to the postponement of the declaration of the park. Later, in 1947, with the installation of the communist regime in Romania, the conservation of nature and the creation of protected areas were considered counterproductive and in contradiction with the need for unrestricted access to the natural resources necessary for economic development.

The initiative of Emil Racoviță was taken up in the 1950s by the great Romanian geologist Marcian Bleahu, the father of Physical Speleology. Following systematic research and exceptional discoveries (especially in the underground environment), both personal ones and ones made by others whose work he directed (Pătrașcu et al. 1990; Bleahu et al. 1984), Bleahu became the most fervent, and lifelong, promoter of the ANP's creation.

Until Romania's return to a democratic regime in 1989, there were occasional initiatives to create national parks, but none came to fruition. The most important of these initiatives occurred in the mid-1970s, when the state appointed the forest management specialist Zeno Oarcea to prepare the documentation for the declaration of the first national parks (NFA Romsilva 2023). Unfortunately, this further proposal for ANP again remained on paper, along with 12 other park proposals.

In 1990, Order No. 7 was drawn up by the Ministry of Water, Forests and the Environment in an endeavour to create one or more national parks. This, however, failed to ensure all the legal conditions necessary

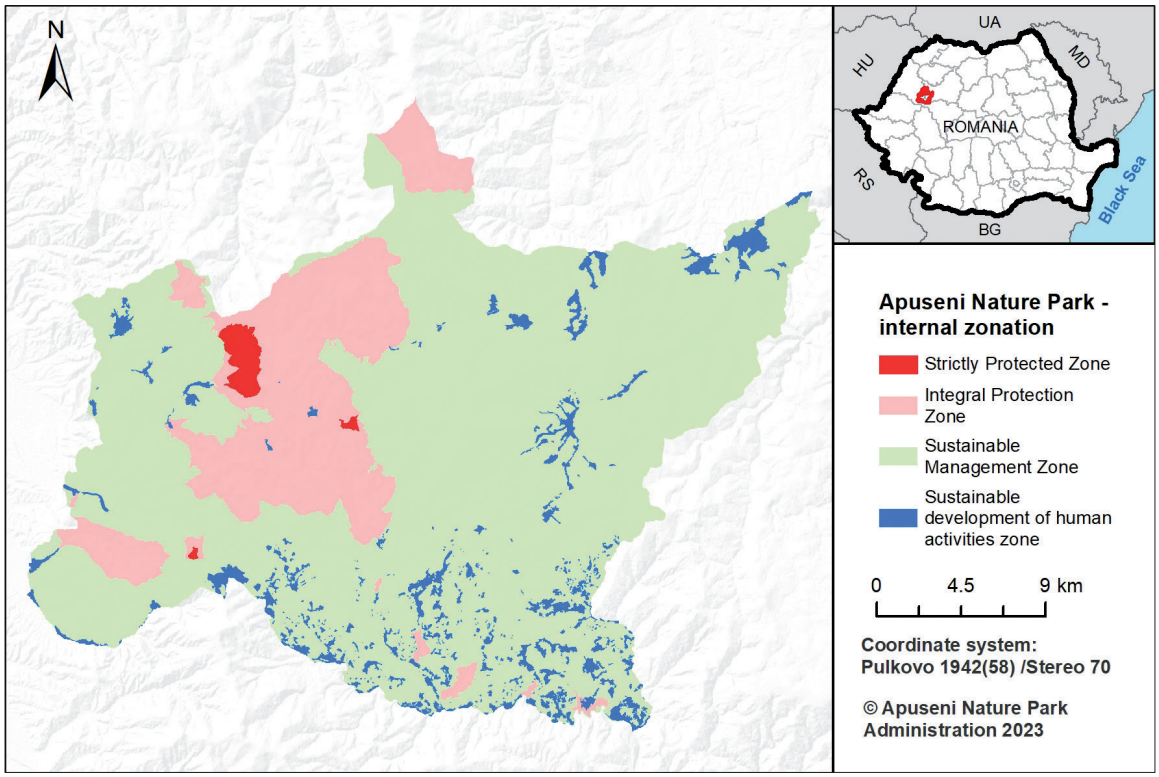

Figure 5 – Apuseni Nature Park – internal zoning.

to create the parks. Hence, the Apuseni park had to wait another ten years, until Law No. 5 of 2000, by which it was declared a protected area of national interest, but as a *natural* and not a *national* park, following the recommendations of the IUCN, notably because of the presence of human communities on its territory (Romanian Parliament 2000). This law established the surface area and the management category, but not the precise location and limits. For these to be agreed, there was a further wait, of three years, until Government Decision No. 230 of 2003 (Romanian Government 2003), when the ANP finally came into existence, no less than 75 years after the first initiative. Also in 2003, Order No. 552 of the Ministry of Agriculture, Forests, Water and the Environment established the first (provisional) internal zoning of the ANP until the approval of the management plan (Ministry of Agriculture, Forests, Water and the Environment 2003).

The ANP is a protected area of national interest, with a total area of 75,784 hectares, the third largest of Romania's 29 nature and national parks. It is categorized as a Nature Park to protect its particular landscape, which is the result of the long-term interaction between man and nature, equivalent to IUCN management category V. The ANP includes areas from 3 counties (Bihor, Cluj and Alba), and 17 territorial administrative units (Figure 4). One third of its territory belongs to the state. As the ownership of the remaining two thirds is in various other hands (including local communes, owners' associations and private individuals), biodiversity conservation is a great challenge for management.

Infobox 3

Functional zoning of the Park

- *Strictly Protected Zone - 0.89%*
  Includes scientific reserves and wilderness areas. Scientific research activities, ecological education and ecotourism are allowed in this zone only exceptionally.

- *Integral Protection Zone – 22.10%*
  Protects the most important values of the natural capital of the Park, including all nature reserves and nature monuments. Activities permitted inside this area include research, education, ecotourism, use of meadows for grazing and mowing by members of local communities under certain conditions, ecological reconstruction, forest pest control and firefighting.

- *Sustainable Management Zone – 71.98%*
  Scientific and educational activities, ecotourism, and sustainable use of resources through traditional activities are allowed inside this zone subject to approval by the Park Administration.

- *Zone for Sustainable development of human activities – 5.03%*
  Urbanization of the territory is permitted in line with the principles of sustainable development; negative impacts on species and natural habitats must be avoided. Activities allowed include traditional agricultural practices, animal husbandry, fish farming, forestry and hunting, as well as the controlled exploitation of non-renewable mineral resources, construction, and investments on a larger scale.
  This area is the only one where building is permitted. In all other zones, they are allowed only under exceptional conditions, mainly in the interests of managing the Park.

Figure 6 – Traditional settlement. © ANP archives

In 2004, the conditions were created for the establishment of the administrative structure and the operationalization of the ANP's management. The Ministry of the Environment decided that most parks would be administered and financed by the National Forests Administration – Romsilva, a structure within the same Ministry. The ANP Administration was formed in 2004 as a unit within Romsilva; in addition, a Scientific Committee was established. This Scientific Committee has a guiding role in relation to the ANP Administration, and supports management decisions. Alongside the ANP administration is the Advisory board, which is made up of key stakeholders. The Advisory board provides analysis, facilitates debate, and formulates proposals regarding the management of the ANP. The ANP's ten-year management plans and the regulations are drawn up in collaboration with the Advisory Board, are then analysed and approved by the Scientific Committee, and subsequently given final approval by the relevant Minister. (See Infobox 2.)

Apuseni Nature Park and integrated protected areas. New challenges for the management

The first proposal for a management plan for ANP was developed in 2005–2006 as part of a project with European funding within the Phare CBC programme. It was the first exercise to involve local communities directly in establishing the purpose and objectives of the plan and, as a result, of incorporating their vision for the future. It was also then that the first internal zoning was carried out (see Infobox 3 and Figure 5).

Following scientific data and studies, the internal zoning combines the needs of local communities with the protection and conservation of a wealth of valuable or unique elements of the natural capital: no fewer than 55 nature reserves and nature monuments have been declared in this area, most of them being endokarst and exokarst elements, with areas ranging from 1.23 ha to 1,609 ha. It is therefore no coincidence that the ANP includes 54 of these, which fall within the most heavily protected zones, namely the zone with strict protection and the zone of integral protection. Only one nature reserve is located outside the ANP, but it is in the ANP's immediate vicinity. This particular site was later included in the Natura 2000 site ROSCI0016 Buteasa (EEA 2023b).

In 2007, with Romania's integration into the European Union, the Natura 2000 network was established in Romania, when all the component sites were declared protected areas by law. Thus, within the ANP itself, due to the high biodiversity values according to the Habitats Directive 92/43/EEC, two Sites of Community Importance were declared: ROSCI0002 Apuseni, with an area of 75,943 ha (EEA 2023a), which includes the entire ANP; and ROSCI0016 Buteasa, with an area of 396 ha, which is located near the ANP (EEA 2023b). At the same time, according to the Birds Directive, a Special Protection Area was declared, ROSPA0018 Apuseni Mountains – Vlădeasa, with an area of 93,082 ha. This covers the entire ANP, and in the north extends beyond it into the Vlădeasa Massif (EEA 2023c).

In 2014, the Ministry of Environment, Water and Forests decided that the ANP Administration would take over the management of the 55 natural reserves and nature monuments, as well as the 3 Natura 2000 sites, in addition to the ANP, by integrating all their surfaces with each other, a total area of 96,608.40 ha resulting from the overlap of the polygons that represent their limits. At the same time, an Integrated Management Plan and the Regulation become applicable to the entire area. In some situations, as many as 4 management categories overlap (for example, a nature reserve, a natural park, a site of community importance, and a special protection area). In cases of overlap, the most restrictive of the relevant categories' requirements are applied. Thus, if we consider the restrictions imposed by the ANP's internal zoning, the ANP's management requirements apply to the entire surface, regardless of the management categories of the territories with which it overlaps.

As a management category and as a protected area of national interest, the ANP is therefore an umbrella area for protected areas of community interest in the Natura 2000 network. However, it has not always worked; thus, as a result of monitoring the application of measures regarding the restoration and maintenance of the favourable conservation status for species and habitats of community interest, the requirements of the European Commission have often led to the appearance of an attitude of the authorities by which they consider Natura 2000 sites taking priority for protection over protected areas of national interest.

Natural and cultural capital

The ANP is located in the Alpine biogeographical region, of which the Carpathian Mountains are also a part. The ANP is in vicinity of 2 of the 5 biogeo-

graphical regions of Romania, namely Continental and Pannonian.

The area's particular characteristics have determined the existence of a vast number of plant and animal species, in a wide variety of ecosystems and natural habitats, especially forests that often include grassland areas, giving a mosaic appearance. The mountains range from relief with altitudes located between 340 m in the western area in the Beiuş depression to 1,785 m at the peak of Păltiniş in the northern extremity; much of the relief is karst; climatic conditions vary according to altitude, with average annual temperatures between 2 and 10 °C, and relatively high levels of precipitation (800–1,400 mm).

The most recent inventory of biodiversity carried out by the ANP Administration (2021–2022) with the involvement of more than 100 specialists, within a project financed by the European Union, resulted in the identification of 5 categories of ecosystem, and 33 natural habitats of community interest, 8 of which are priority in terms of protection and conservation. 1,550 plant species were inventoried, of which 6 are of community interest, 1 species being priority; 96 are species protected at various levels. 1,380 animal species were identified, of which 32 are of community interest, 5 are priority, and 147 are protected at various levels (Apuseni Nature Park Administration 2023a).

The karst relief, which includes numerous sinkholes, and narrow, deep valleys, favour a thermal inversion specific to these areas. The heavier cold air that remains captive in the lowlands during the warm season determines an inversion of the vegetation, such that the coniferous forests are located at lower altitudes than the deciduous ones – one of the main characteristics of the karst landscape in the ANP.

The water courses are relatively numerous. The main springs are in the central area of the ANP and most flow radially to the east, south and west. The most important form the rivers Arieş, Someşul Cald, Crişul Băiţei and Crişul Pietros. Some watercourses located in the Padiş and Ocoale karst plateaus, due to the presence of karstifiable rocks such as limestone, go underground after flowing just a few hundred metres on the surface, via *sinkholes* (*ponoare*), returning to the surface as springs known as *outbursts* (*izbucuri*). Some of these watercourses go underground and resurface two or three times, making the areas' hydrogeology extremely complex. In addition to a few small karst lakes, the eastern part of the ANP also fully includes the Fântânele reservoir, with a total area of up to 10 km², on the course of the Someşul Cald river.

The evolution of the species found in the Apuseni was affected when these mountains became separated from the rest of the Carpathian chain. Certain species, including some birds, bats and large carnivores, have maintained connectivity with neighbouring areas using corridors for occasional or seasonal migration. However, many species of fish and invertebrates have evolved in isolation. Thus, species that are endemic to the Apuseni mountains appeared, such as the Idle Crayfish (*Austropotamobius bihariensis*) (Pârvulescu 2019), or the Biharian barbel (*Barbus biharicus*) (Antal et al. 2016). There are also numerous species of troglobitic invertebrates that are dependent on life in the underground environment of caves. Their isolation makes them highly vulnerable to environmental changes, including those caused by human activities.

Figure 7 – Traditionally exploited pasture. © Alin Moş

The local climatic conditions influenced by the karst relief favoured the continuity here of some species that disappeared in neighbouring areas with the last glaciation, the best example being the Transylvanian lilac (*Syringa josikaea*) (Lendvay et al. 2016), which grows here in the southernmost location in the northern hemisphere and has a population of only a few hundred individuals. Another example is the Banatian snail (*Drobacia banatica*). However, there are also species that, even if they have a broader regional distribution, are present in population sizes that are minimal, which makes them highly vulnerable. An example of this is the yellow forest lily (*Lilium jankae*), which grows here in the northernmost location of the entire distribution area in the Balkan region. Various carnivores – such as the bear (*Ursus arctos*), the wolf (*Canis lupus*), the lynx (*Lynx lynx*), and the otter (*Lutra lutra*) – are present in high enough numbers for them to be indicators of balanced, well-functioning ecosystems.

The main ecosystem categories throughout the ANP are: forests 74.05%, meadows 19.03%, wetlands 1.24%, cliffs, grottoes, and subalpine vegetation 1.16%, and permanently inhabited areas 4.52%. Land use categories correlate closely with the main areas of activity in the local economy.

A unique and well-represented cultural capital at the territory level complements the variety of natural capital elements. The Moți inhabitants of the Apuseni Mountains have a cultural and historical identity related to living in these mountains that is recognized at national and international levels. The human-inhabited areas spread from the medieval period onwards, especially in the south of the ANP in the upper Arieş basin, up to altitudes of 1,400 m. Here, we find 43 settlements, mostly of traditional type, with households

spread along the slopes. The majority have fewer than 100 inhabitants. Settlements also developed in the north-eastern area as more compact villages (just 7 in number) with several hundred inhabitants. There are only 6 localities in the western part, but they are much more highly developed. They are located in the marginal areas of the ANP up to 400 m above sea level; 2 are completely inside the ANP and 4 partially so. These permanently inhabited areas are integrated into the sustainable development zone of the ANP, where the rules regarding human activities have been adapted to the needs of the communities.

In recent decades, the local populations have decreased. In 2010–2020, the phenomenon became more marked, with a decrease of up to 1% per year. According to the statistics, in 2010 there were 41,042 inhabitants, in 2015 there were 39,424, and in 2020 there were 37,386. Approximately 10,000 live within the ANP's territory, in 55 localities. Population decline is driven mainly by three closely related factors: the migration of young people to large urban centres in search of well-paid employment opportunities, declining birth rates, and the ageing of the resident population (Apuseni Nature Park Administration 2023b).

The local economy: pressures, threats and opportunities

The main pillars of the local economy are the exploitation and processing of forest resources, animal husbandry and tourism. Tourism has been developed mainly in the last three decades.

Because forests have always covered the most significant area, wood was the primary local resource exploited by local communities, forming a so-called *wood culture* over time. Buildings and most everyday domestic objects were made of wood. The Moți gained fame as producers of the best and most durable wooden barrels (called *ciubere*). Their fame in past centuries often exceeded the territory of today's Romania, with a vast market for their goods in the Balkans and central Europe. The spruce wood (*Picea abies*) used in the production of wooden vessels has a unique quality here due to the ecological conditions in certain karst areas, which result in a higher wood density and better resistance over time. Thus, a family needed approximately five spruce trees per year for the production of wooden vessels, the sale of which ensured their livelihoods for the whole year.

With the widespread emergence of materials such as metal, glass and plastic, the demand for wooden vessels decreased until the market for these products disappeared. As a result, the crafts had to reorient themselves, and starting in the 1990s a new category of demand appeared: wood for construction. However, this generated much less added value, resulting in as much as 10 times more wood needing to be exploited to ensure a family's livelihood. At the same time, private companies appeared with the capacity for exploitation on an industrial scale. In most cases, these big companies were in competition with the local communities, or even eliminated them from the market.

The exploitation of wood both from forests belonging to local communities and from those owned by the state has increased massively, significantly increasing the pressure on forest habitats, which until the arrival of mechanization and technology were in an excellent state of natural preservation. Because these pressures on forests could lead to a significant deterioration of the natural capital and an unprecedented erosion of the primary local resources, with severe effects on the socio-economic development of local communities, state authorities have taken measures in the last decade to reduce the pressures significantly.

Unfortunately, from an ecological point of view, the pressures are still felt in imbalances of the water regime, degradation of the natural composition of the forests, reduced vitality of the trees, and exposure to extreme meteorological phenomena such as gales, mainly generated by climate change. As elsewhere in Europe, climate change has resulted in ecological conditions favouring species considered harmful, such as the spruce bark beetle (*Ips* sp.) (Netherer et al. 2019). One of the main challenges for forest management in vulnerable karst areas is to adapt management measures to a constantly changing reality in order to restore or maintain a high degree of resilience of forest habitats.

Livestock breeding still takes place mainly to provide food for the families of local farmers. The continued viability of this sector is due largely to subsidies from the European Union. Unfortunately, the limited opportunities for the sale of animal products are not favourable for the sustainability of this field in the medium and long term; the decrease in animal numbers in conjunction with the decrease in the local population have led to significant transformations in the composition and distribution of natural habitats through the abandonment of secondary meadows.

According to the results of the latest studies (Apuseni Nature Park Administration 2023a), there are almost 3,000 hectares of abandoned secondary meadows where the succession of vegetation has led to a change of species composition and the loss of essential populations of characteristic plants. Many of the grasslands, especially hayfields, are endangered in the absence of the owner's interest in raising livestock in the future or even abandoning the settlement in favour of large urban centres on the plains. Traditional properties are being sold to buyers outside the local communities to use as holiday homes, guesthouses, or simply as real estate speculation.

The development of built-up areas must take into consideration the need to provide both living spaces and those related to work that ensure the sustainable use of resources without irremediably eroding the natural capital. The number of residential and commercial constructions in karst areas is primarily limited by the availability of water, a resource whose volume has

been decreasing in recent years due to climate change and unsuitable long-term management solutions in the case of the forests located in karst areas. New pressure on biodiversity must be managed by measures that limit the total area of development to approximately 5% of the ANP's area so as not to affect the integrity of the natural habitats or to degrade their state of conservation.

The first initiatives regarding the enhancement of exceptional local natural resources took place at the beginning of the 20th century, as we have seen, through the private actions of nature enthusiast Czaran Gyula. Initially, the groups of visitors were small and few in number due to inadequate infrastructure. Only in the 1960s and 1970s, with the construction of roads, did the development of visitor infrastructure and related services begin, but without the direct involvement of the local communities.

After 1990, numerous initiatives, especially from outside Romania, supported the development of local tourism as an alternative to the tendency to overexploit resources. In the first decade of the 21st century, which saw the development of knowledge of the natural values of the area and their sustained promotion in conjunction with the improved living standards of the urban population, investments in the infrastructure for accommodation and hospitality increased. In some areas, the need for development was overestimated and speculation on property generated high pressures on the natural environment, threatening the very values of the destination that currently attract visitors. In recognition of the efforts to prevent the deterioration of the area's natural values, and of initiatives that contributed to the promotion of sustainable development and responsible tourism, in 2009 the ANP was awarded the title of European Destination of Excellence (EDEN) by the European Commission.

Tourism, the youngest sector of the local economy, can ensure a constant infusion of financial resources into local communities, especially when tourism services are provided by local companies using local human resources and products. Thus, tourism can become a tool through which visitors can materially contribute to the development of the local communities while helping them to maintain the beauty of the ANP and the local economy for the future.

In support of traditional and sustainable ways of using resources, the ANP Administration may offer the right to use the ANP logo for products that sustainably use local raw materials, or services that sustainably enhance local natural values and maintain environmentally friendly traditional activities. Further, the ANP Administration facilitates the creation of partnerships between local actors to establish the production of local goods. Examples of traditional products include those using plants (infusions, tinctures, syrups, ointments and jams). Other sustainable services include tourist guides, or even the organization of major events such as the Smida Jazz Festival, which uses the image of the ANP as a marketing tool to attract spectators.

Conclusions

Local communities' access to forest resources must be a priority to ensure the needs of households or small wood-processing businesses. The resumption of old, less invasive methods of exploitation, such as the use of horses to remove wood from the forest, can help to ensure the long-term sustainability of the exploitation of forest resources.

Future practice and policies should be informed by the results of studies on the carrying capacity of ecosystems and on ecosystem services to ensure the sustainable consumption of local resources and development of the local economy, and to prevent erosion of natural capital. These studies should be updated periodically by monitoring the use of resources and reassessing their status. As two thirds of the protected area does not belong to the state, it follows that private landowners should be compensated for any losses resulting from the limitation or prohibition of the use of resources due to management measures.

Replacing the local population by new occasional residents from urban areas areas, the so called gentrification phenomenon, is not a viable solution, because the loss of continuity of traditional activities results in significant transformations of the landscape and of the composition and distribution of natural capital, entailing the potential loss of species and natural habitats.

The development of tourism must continue to take place within a considered management framework in order to ensure the protection of species and natural habitats. Development plans must take into account the capacity of the ecosystems, and direct the benefits derived from tourism to local communities.

The vision of the stakeholders formulated in 2006 still remains the guideline for the co-management of the ANP: *The ANP should be an internationally important area, with a mountain karst landscape, with well-preserved biodiversity, a specific and quality tourism, sustainable use of resources, an infrastructure that supports sustainable development and local communities that maintain their unique traditions and a good standard of living.*

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