

## Ecotourism in Rodna Mountains National Park, Between Wishfulness and Reality

Muresianu, M.

Faculty of Geography, Babes-Bolyai University, Clinicilor Street, No. 5, Cluj-Napoca, Romania

Received 2 Oct. 2014;

Revised 22 Dec. 2014;

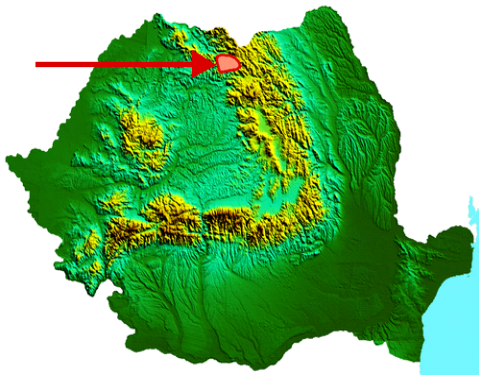
Accepted 23 Dec. 2014

**ABSTRACT:** Established in the nucleus of the Scientific Reservation Pietrosu Mare and set up in 1932 on a surface of 183 hectares, Rodna Mountains National Park (R.M.N.P.) witnessed a remarkable spatial evolution, reaching today a 46 399- hectare territory. The management of this protected area is conducted by the employees of A.R.M.N.P., an administrative structure located in Rodna, Bistrița-Năsăud County Even though R.M.N.P.'s values are among the most representative ones, both in Romania and internationally, being included in the worldwide network of biosphere reservations, tourism in this area has not benefitted from an accurate development proportional to its highly varied natural and anthropogenic potential. Based on statistics and research conducted personally or together with the representatives of the Administration of Rodna Mountains National Park (A.R.M.N.P.), the current study aims at emphasizing the significant contrast between the wishfulness of intense tourism characterized by major touristic influxes and its relatively scarce reality.

**Key words:** Rodna Mountains National Park, Protected area, Ecotourism, Biodiversity, Sustainable development

### INTRODUCTION

R.M.N.P. is located in the North of Romania in the Oriental Carpathians, (Ciangă, 2002) covering a two-third surface of the highest mountains in the Carpathians' group, Pietrosu Mountains with Pietrosu Peak-2303 m (see fig. 1).



**Fig. 1. Positioning of Rodna Mountains National Park in Romania's geographical space**

(source: [http://commons.wikimedia.org/wiki/File:Muntii\\_Rodnei.jpg](http://commons.wikimedia.org/wiki/File:Muntii_Rodnei.jpg))

The management of this protected area is conducted by the employees of A.R.M.N.P., an administrative structure located in Rodna, Bistrița-Năsăud County. Access

in R.M.N.P. is made possible via international airports Bucharest-Henri Coandă (465 km), Cluj-Napoca (140 km), Târgu-Mure (150 km), train stations Ilva-Mică, Vișeu, while road transport is accessible on the routes Baia-Mare-Dej-Rodna (180 km, E58), Baia-Mare-Borș (150 km, DN18D) and Bistrița-Rodna (64km, DN17D).

The reality of the place reveals the existence of habitats and ecosystems that are representative of the alpine area specific to high mountain territories. The geodiversity and the geographical specificity consist of 6 516 flora species (some of them, being endemic items, are under strict preservation) and over 3000 fauna species (Iușan, 2011a), with several invertebrate species that have not been studied yet (due to their endemic and relic condition they are under special protection). (Iușan, 2011b) The mountain peaks Ineu (2 279 m) and Pietrosu (2 303m) preserve a glacial landscape of rare beauty and diversity (20 glacial lakes, cirques, valleys with distinct types of moraines and glacial passages, waterfalls whose rapid waters fall over staggering abysses. The morpho-landscape arsenal of the protected area is completed by an endokarst consisting of over 20 caves, Rodna Mountains holding the record of absolute interchange, the cave at Izvorul Tâșoarelor being the deepest in the country (nearly 350 m deep) (Cocean & Dezsi, 2001; Chintăuan, 2000).

\*Corresponding author E-mail: mmuresianu@geografie.ubbcluj.ro

From the perspective of the anthropogenic tourism potential in R.M.N.P. benefits from a series of objectives, which through their artistic and historical content add value to this geographical space. Among the anthropogenic tourist objectives in the park's area we may mention the memorial complexes in Co buc, Moisei, Maieru, with valuable ethnographic museums: the Ethnographic and Mining Museum in Rodna, The Museum of Contemporary Art (MACSB) in Sângeorz-Bâi, the Border Regiment Museum, the Wooden Churches in Borșa, Moisei, Sângeorz-Bâi and the numerous folkloric local events, genuine and spectacular elements of traditional clothing (Păiuș, 2003). The villages located on the marginal frame of the park maintain their ancient agripastoral traditions and the folds settled in the alpine pasture areas preserve ecological practices of cheese making. In such a geographical framework, generous in its natural and anthropogenic elements of wide interest for visitors, ecotourism finds some of the most ideal conditions for development.

But in addition an environmental education should be started among the local peoples, and then continued in kindergarten, school, university etc. This is because a real protection of nature will be possible only when the people will change their mentality and are aware that they live in nature and not vice versa (Sabo, 2011).

## MATERIALS & METHODS

Outside a fair, coherent and productive managerial system, the development of tourism in protected natural areas may present a threat to the integrity of ecosystems and local communities. (Mureșianu & Schuster, 2012; Cocean *et al.*, 2005). As an answer to the growing interest in knowing nature and to the alarm signals triggered in different corners of the world (similar case in Columbia and South Korea) (González, 1995; Choo and Jamal, 2009), a new ethics of travelling was shaped, under the name of ecotourism, a particular form of tourism that stems from the biosphere preservation trend (a possibility of agro-tourism with a promotion of a good marketing system) (Leco and Hernández, 2008; McGehee, 2007; Mediano, 2002).

In the case of R.M.N.P. the ecological dimension of any form of tourism practice is a reality in which ecotourism has become a fundamental landmark of the sustainable development concept and the protected natural areas must attract visitors, these is important for the cultural facts and for the people (Leco *et al.*, 2008) who share such a culture of preservation and conservation of nature (Vlădică, 2003). In our attempt to analyze the "state of tourism" in R.M.N.P. and to disclose the link between possibilities and reality, we focused on the managerial and pragmatic documents

of A.R.M.N.P. (their Management Plan) (Kastenholz *et al.*, 1999), the Monograph of A.R.M.N.P.- Biosphere reservation, projects regarding the redressing of some vulnerable reservations in the park, monitoring of the chamois, studies about rare elements of biodiversity, tourism studies etc., all of them providing correct and relevant conclusions about ecotourism in protected areas.

The most important and significant elements of our research consist in our personal investigations, both as an active member in the Scientific Board of the R.M.N.P. and as a contributor of the rangers, with whom I conducted various investigations throughout the 10 years of existence of the A.R.M.N.P (2004-2014). The questionnaires distributed to 850 people who visited the park via the through the 8 gateways took into consideration some relevant aspects for the dimension and typology of the ecotourism phenomenon in this geographical area.

There was one question with the purpose of identifying the main weaknesses of the area from the tourists' point of view, and it was addressed in the following manner:

Which do you consider to be the main vulnerabilities of the Rodna Mountains National Park considering the following aspects?

1. Access to the protected area
2. Retreat possibilities in case of severe weather conditions
3. Accommodation facilities
4. Barriers in the case of tourists wanting to spend more leisure time in the area
5. Disturbing aspects within the park area during the visiting of key attractions and sights
6. Occurring dangers along the trail blazes in the protected area
7. Field discovery opportunities of significant details related to the RMNP values.

All of these attempts to measure the "pulse" (Devesa *et al.*, 2010) of ecotourism in the area of R.M.N.P. were accompanied by various bibliographical resources that refer to the geographical area of this protected park, materials that are included in the bibliography section.

## RESULTS & DISCUSSION

The monitoring and quantification of tourist influxes in the area of R.M.N.P. is an extremely difficult and complicated operation, but, equally important, a very relevant one, as it provides the opportunity to obtain a reasonable image of a degree of ecotourism development in the area, based on a few synthetic indicators similar in Spain (Fuentes, 1995). Both personal actions and the rangers' initiatives, students from dif-

ferent universities along with students assembled in "Darwin"-type groups allowed us to establish some constant observations throughout the 10 years that have passed since the initiation of the A.R.M.N.P. in March 2004 until 2013, the last year having complete statistics. The situation can be presented as follows in the below table and fig. 2.

It is obvious that, when we compare these figures to the surface of the park, the 300 km of forest roads and marked pathways and the real support capacity of the protected area the statistics are modest. The calculations of the A.R.M.N.P representatives and the experts in the Ministry of Environment indicate that the area has an optimum capacity to accommodate 4 636 visitors per day (Samad, 2008). But our research together with the rangers' revealed that during a peak day, on 15th August 2013, the entrances of the 8 gates "counted" 850 visitors.

Based on the calculations of the same experts, when we look at the indicators for the two poles of tourism in R.M.N.P. -Pietrosu Peak with the complex of glacial lakes Iezerele Pietrosului, having the accommodation capacity of 459 visitors per day and the Ineu Peak with the complex of Lala Mare and Lala Mica , having a real accommodation capacity of 417 visitors per day, the reality of under 45 visitors in the first case and 39 visi-

tors in the second case indicate that only 10% of the tourist influx is covered.

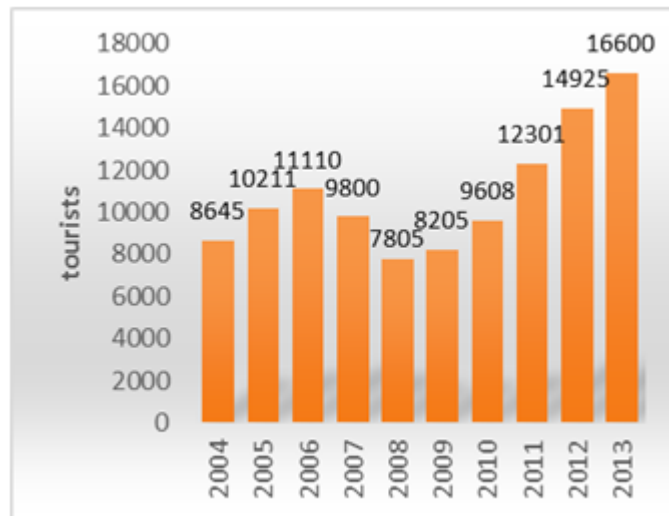
The analysis and interpretation of the average values regarding the number of visitors must take into account the phenomenon of tourist seasonality in P.M.N.R., given the fact that tourists may only benefit from a 6- month access to the park and the winter season has occasional tourists, especially in the buffer zone and the peripheral areas. During the cold season (November-April) with large amounts of snow certain areas of the park are populated by winter sports practitioners (especially skiers). On Christmas and New Year the chalets and guesthouses located at the border of the protected area are animated by tourists willing to celebrate in fairytale mountainous scenery.

Year 2013, considered the phenomenon of tourist seasonality, highlights the existence of a "peak" throughout July and August (as it show fig. 3), when the majority of visitors benefit from paid holidays and students are on holiday."

On August 15th 2013, together with the rangers and a group of voluntary students, we applied questionnaires to the tourists who visited the R.M.N.P.'s geographical space, in view of knowing the following aspects: the frequency of tourists, the type of prac-

**Table 1. Number of tourists in R.M.N.P. (2004-2013)**

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of tourists	8645	10211	11110	9800	7805	8205	9608	12301	14925	16600



**Fig. 2. Evolution of tourist influxes in R.M.N.P. (2004-2013)**

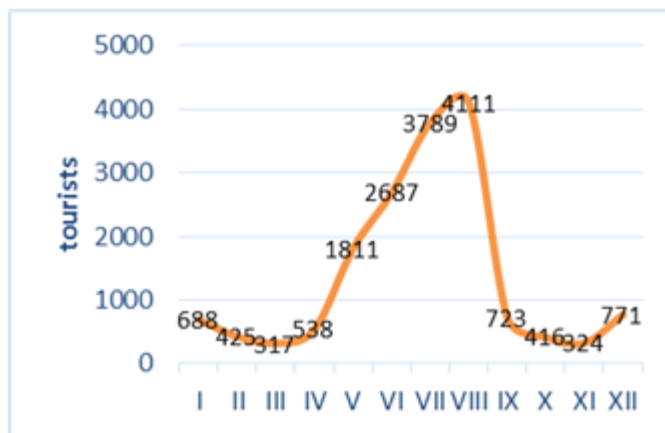


Fig. 3. Tourist seasonality in R.M.N.P. (2013)

ticed tourism, and the motivational intentions of the visit and the discouraging factors of visiting the protected area.

This way, after verifying the answers of the surveyed tourists we estimate that, in a geographical space confronted to a number of visitors far beyond the real accommodation capacity, it is rejoicing that 53% of the surveyed tourists have visited R.M.N.P. several times, 26% of them have seen the park twice and only 21% were visiting the reservation for the first time. This is how the ecological values of the environment determined the loyalty of more than two thirds of the visitors and with a many benefits from tourism in this segment (Frochot, 2005).

From the perspective of motivational resorts and, implicitly, of the type of practiced tourism, we can observe that over half of the 850 surveyed tourists choose hiking due to the incredible scenery beauty (51%), secondly about a fifth (18%) of the visitors includes sci-

entists, undergraduates, graduates and PhD candidates, who visit the park in order to research geodiversity (geological and geomorphological studies regarding the glacial environment, observations and investigations about flora and fauna, observation of ecotourism influxes in distinct reservations of the park, study of aspects regarding forestry.) With reference to the purpose of scientific research, the analysis of the questionnaires (the 18% surveyed tourists) indicated that 61% of them are researching the area in view of designing and writing articles and scientific studies for various magazines, 19% were doing research for their graduation theses, 11% for Master dissertations, and 6% for European funded research projects and 3% were carrying out investigation for doctoral theses.

The section in the questionnaire referring to discouraging factors in visiting the protected area provided interesting answers from the following categories of responders (see fig. 4):

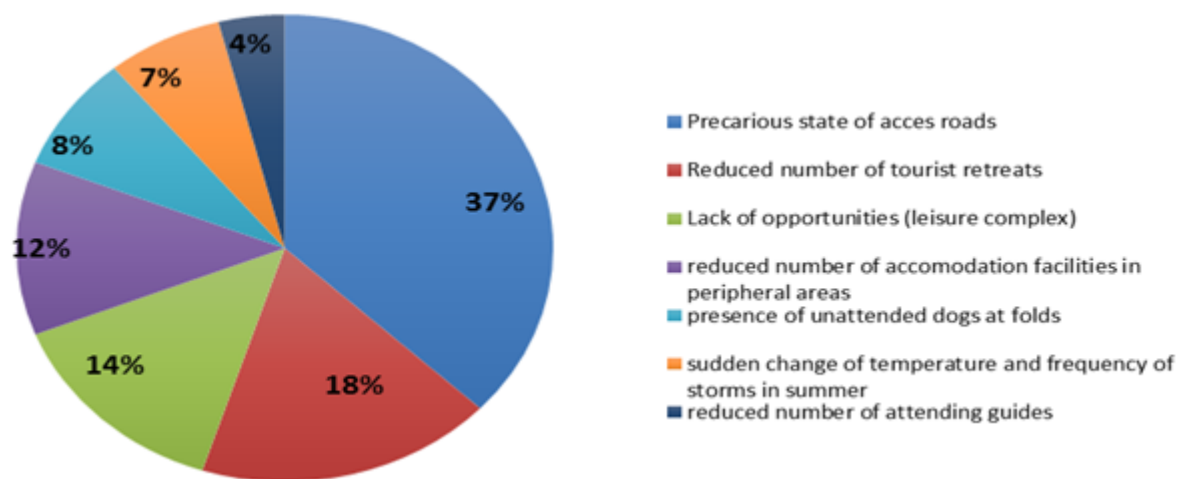


Fig. 4. Discouraging factors in visiting R.M.N.P.

- precarious state of access roads and the unsuitable maintenance of trail blazes: 37%;
- the reduced number of tourist retreats 18%;
- lack of opportunities (leisure complexes in the buffer areas): 14%;
- the reduced number of accommodation facilities in some of the peripheral areas of the park: 12%;
- the presence of unattended dogs at sheep and cattle folds: 8%;
- the sudden change of temperature and the frequency of storms in summer: 7%;
- the reduced number of attending-guides (rangers, employees of A.R.M.N.P.): 4%

As a playing ground for the practitioners of ecotourism, R.M.N.P. is at a stage when, as a result of promotion and marketing actions of the A.R.M.N.P. employees, there was significant increase in the tourist influxes between 2011 and 2013. However, this is far from the exceptional ecotourism potential of the protected area, as well as its support capacity and it didn't show a development of agro-tourism (Hernández *et al.*, 2011).

## CONCLUSIONS

Being part of the highest mountains in the Northern Carpathians of Romania, R.M.N.P. is a biosphere reservation characterized by numerous, varied and unique elements of geodiversity, having, implicitly, an enormous ecotourism potential.

The relatively precarious state of access elements in the area (roads, trails, trail blazes etc.) along with the scarce funding of A.R.M.N.P. and implicitly with the existence of a reduced number of employees, together with the central and local authorities' indifference (from the Ministry of Environment) generates the lack of investment in tourism infrastructure of the protected area (tourist retreats, ecology research bases, leisure facilities for sports and leisure tourism, belvedere turrets, rare fauna observation points and, as a consequence, the diminishing of ecotourism influxes.

The significant contrast between the surface of the park, enormous ecotourism potential, increase accommodation capacity (all representing wishful intentions) and the reality of 10% influxes can only be averted through the above-mentioned measures identified as vulnerabilities of R.M.N.P.

## REFERENCES

Chintuan, I. (2000). Bistrița-Nâsăud: Natura și monumentele sale. Carpatica Publishing, Cluj-Napoca, 2, 24-25.

Choo, H. and Jamal, T. (2009). Tourism on organic farms in South Korea: A new form of ecotourism? *J. Sustain. Tour.* **17** (4), 431-454.

Ciangă, N. (2002). România. Geografia Turismului (I). Presa Universitară Clujeană Publishing, Cluj-Napoca, 67-69.

Cocan, P., Dezi, Ș. (2001). Prospectare și geoinformare turistică. Presa Universitară Clujeană Publishing, Cluj-Napoca.

Cocan, P., Vlăsceanu, G., Negoescu, B. (2005). Geografia Generală a Turismului, Meteor Press, București, 52-54.

Devesa, M., Laguna, M. and Palacios, A. (2010). The role of motivation in visitor satisfaction: Empirical evidence in rural tourism. *Tourism Manage.*, **31** (4), 547-552.

Frochot, I. (2005). A benefit segmentation of tourists in rural areas: A scottish perspective. *Tourism Manage.*, **26** (3), 335-346.

Fuentes, R. (1995), Análisis de las principales características de la demanda de turismo rural en España [Analysis of the main characteristics of the rural tourism demand in Spain], *Estudios Turísticos*, **127**, 19-52.

González, P. (1995). Western Mediterranean land-use systems as antecedents for semiarid America. (In B. L. Turner II, A. Gómez, F. González & F. Di Castri (Eds.), *Global land use change. A perspective from the Columbian perspective* Madrid: CSIC, 131-149.

Hernández, J. M., Campón, A. M., Leco, F. and Pérez, A. (2011). Agricultural diversification and the sustainability of agricultural systems: Possibilities for the development of agrotourism. *Environ. Eng. Manag. J.*, **10** (12), 1911-1921.

Iușan, C. (2011a). Ghidul speciilor și habitatelor de interes comunitar din R.M.N.P., Cluj-Napoca.

Iușan, C. (2011b). Monography-Biosphere Reservation. Todesco Publishing House, Cluj-Napoca, 10-11.

Kastenholz, E., Davis, D. and Paul, G. (1999). Segmenting tourism in rural areas: The case of North and Central Portugal. *J. Travel Res.*, **37** (4), 353-363.

Leco, F. and Mateos, A. B. (2006). Sistemas agrarios tradicionales, medio ambiente y desarrollo sostenible: la dehesa como hecho geográfico y cultural [Traditional farming systems, environment and sustainable development: pasture as geographical and cultural fact]. *Norba. Revista de Geografía*, **11**, 165-182.

Leco, F., Pérez, A. and Hernández, J. M. (2008). Agrotourism Strategic Plan for the Region of Extremadura. Regional Government of Extremadura.

McGehee, N. G. (2007). An agrotourism systems model: A weberian perspective. *J. Sustain. Tour.*, **15** (2), 111- 124.

Mediano, L. (2002). Un caso de marketing turístico: el agroturismo en el País Vasco, A case of tourism marketing: agrotourism in Basque Country. *Cuadernos de Gestión*, **1** (2), 55-68.

Mureșianu, M. and Schuster, E. (2012). Ecogeografia Turismului Sportiv și Agremental. Napoca Star Publishing House, Cluj-Napoca, 7-8.

Pâiș, M. (2003). Monografia comunei Rodna Veche. George

Coș buc Publishing, Bistrția, 30-33.

Sabo, H. (2011, February). Environmental Education and Sustainable Development- General aspects (Paper presented at the International Conference on Social Science and Humanity - ICSSH 2011, Singapore).

Samad, S. J. (2008). Managementul turismului în ariile naturale protejate, Cluj-Napoca.

Vlădică, M. (2003). Sangeorz-Băi – veche vatră de credință și cultură românească. Napoca Star Publishing, Cluj-Napoca.

[http://commons.wikimedia.org/wiki/File:Muntii\\_Rodnei.jpg](http://commons.wikimedia.org/wiki/File:Muntii_Rodnei.jpg)